

MANAGEMENT AUDIT OF THE GOVERNMENT PRINTING OFFICE

**FINAL REPORT
MAY 21, 1998**

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GENERAL ACCOUNTING OFFICE
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EXECUTIVE SUMMARY

The Legislative Branch Appropriations Act for Fiscal Year (FY) 1998 (P.L. 105-55) required the General Accounting Office (GAO) to conduct a management audit of the U.S. Government Printing Office (GPO). The accompanying Conference Report (H.R. 105-254) instructed GAO to make extensive use of outside consultants to accomplish this audit. In December 1997, Booz·Allen was selected, on a competitive basis, to conduct the audit.

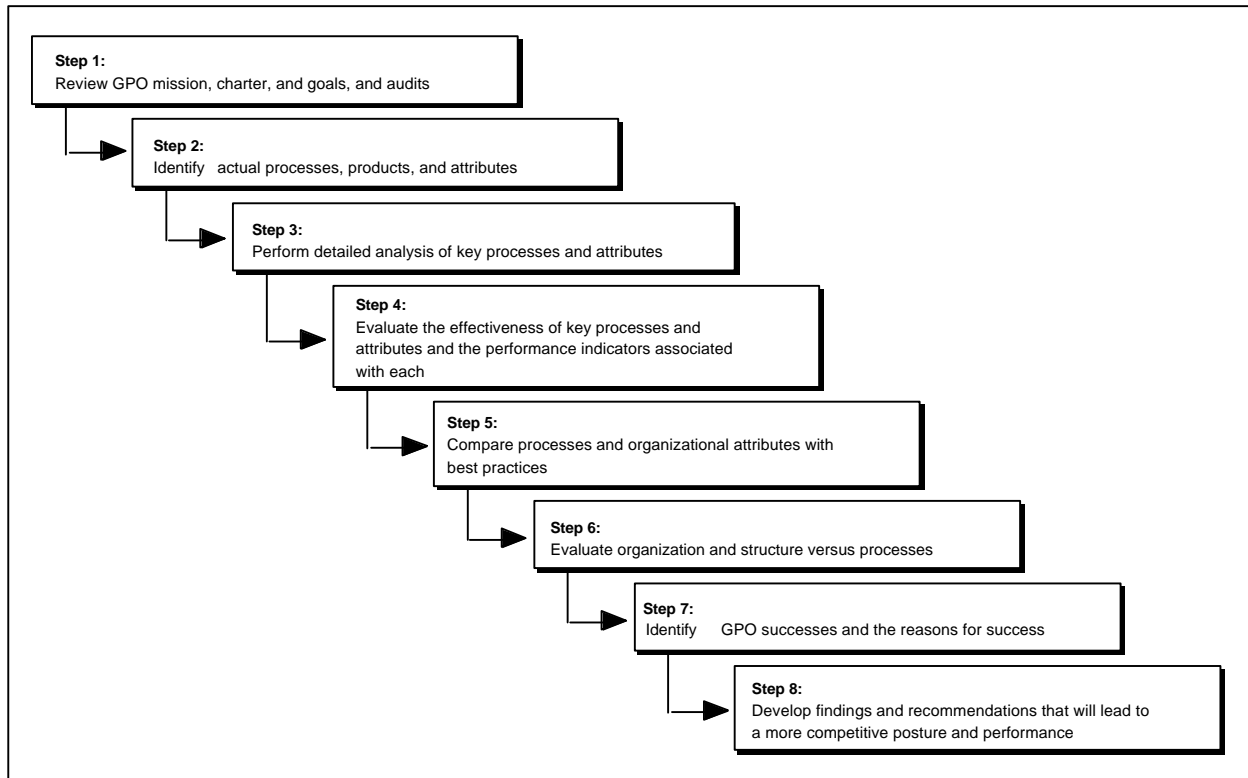
At a minimum, the audit was to provide an objective evaluation of specific activities, including recommendations to improve the GPO's efficiency and effectiveness. Specifically, the audit "should not be encumbered by presupposing that GPO's current operations, including in-house printing on the *Congressional Record* and other resource intensive congressional and executive branch publications and operating with three shifts, cannot be changed." The audit called for us to address six specific areas:

- Superintendent of Documents Sales Program—Appropriateness and adequacy of policies and procedures involving publication inventory management
- Printing Procurement Program—Adequacy and effectiveness of organization, operation, staffing, marketing, financing, procedures for contracting printing services from private vendors, and the process for determining charges for printing and other services provided to Congress and executive branch agencies
- In-plant production—Ways to improve efficiency and cost effectiveness, particularly organization, product mix, management, staffing, and processes for determining charges for printing and other services provided to Congress and the executive branch agencies
- Personnel—Adequacy and appropriateness of personnel matters including training, deployment, and supervisory structure
- Budgeting, accounting, and financial reporting systems—Adequacy and completeness of methodology, presentation, clarity, reliability, and ease of interpretation
- Financial and other management-related observations and recommendations identified during the audit of GPO's consolidated financial statement for the year ending September 30, 1995—Status of GPO's actions regarding the observations and recommendations.

ES.1 ANALYTICAL APPROACH

In conducting this audit, we employed the eight-step analytic approach shown in Exhibit ES-1 and described below.

Exhibit ES-1 Booz·Allen Analytical Approach Structure



Step 1, a literature review, examined GPO’s mission, charter, goals, and audits, focusing on the legislation from which GPO’s mission and responsibilities are derived. The review was limited to documents produced in the last 5 years. In Step 2, we conducted a series of interviews and focus groups with GPO staff and customers covering each of the operational and functional areas. These were held to determine the processes and attributes of each of the major activities, particularly key processes and attributes that are the drivers of the organization. In Step 3, we analyzed the key processes and attributes identified in Step 2, developing “as is” process flow diagrams and validating them with the staff in the operational and functional areas at GPO. We also conducted a survey of a representative sample of all GPO employees to gather additional information for further analysis. Step 4 evaluated the effectiveness of key processes and attributes based on five characteristics—quality, service, technology, innovation, and cost.

Step 5 compared the key processes and attributes with “best practices.” We identified “best practices” in both the government and commercial sectors and compared these with GPO practices. The appropriateness of best practices was weighed against GPO’s mission and operations. Based on this analysis, we developed appropriate “to be” processes. In Step 6, we evaluated the organizational structure versus processes to determine whether the existing organization supports the “to be” processes. If it did not support these processes, we recommended a change to the organization structure based on “best practices” in either the government or private sector. In Step 7, we analyzed those areas where GPO has had proven successes to determine the characteristics of those successes and how the lessons learned from

them could be applied to other parts of the organization. We also identified those processes or practices that could serve as “best practices” for others. Finally, in Step 8 we developed the findings and recommendations that will lead to a more efficient and effective GPO.

ES.2 OVERARCHING FINDINGS AND RECOMMENDATIONS

In the course of our analysis, overarching issues arose that, by their nature, affect the organization as a whole. These issues deal with the future and overall organization of GPO and the lack of strategic planning within GPO.

Although, from the customer perspective, there is little support for eliminating GPO, there is a strong desire on the part of customers to improve the efficiency and effectiveness of the organization. The congressional focus group agreed unanimously that Congress needs a printing capability over which they have control. Similarly, when we met with representatives from the executive branch agencies, we found universal support for GPO’s printing procurement services. Finally, disseminating government information to the public is an inherent government responsibility, and we found no evidence that people believe otherwise. In response to these findings, we recommend that GPO focus its energy on creating a future-oriented organizational structure and on developing and adopting new plans and business processes that focus more on where GPO and its customers want it to be and less on where it has been.

We found that GPO has no established strategic planning process and no current strategic plan that articulates where the organization wants to be in the future. GPO’s strategic planning history does not present an encouraging picture. In the mid-1970s, GPO established an agency-wide planning process involving key GPO officials. Although that process continued for several years, it died in the 1980s. In its September 1990 report, *Government Printing Office: Monopoly-Like Status Contributes to Inefficiency and Ineffectiveness*, the GAO recognized that GPO had begun developing a new strategic planning process in 1989 and recommended that GPO strengthen that process. In December 1991, GPO published a strategic plan titled *GPO/2001: Vision for a New Millennium*, followed in January 1993 by a strategic outlook titled *GPO Moving Forward in the Electronic Age*. This was the last strategic document published by GPO about GPO and its future. Without a strategic plan for the organization, there is no context in which to develop strategic plans for the functional areas such as information technology, human resources, and capital investment. We recommend that GPO institutionalize the strategic planning process and link annual budgets to a published strategic plan.

We found that GPO’s organization is highly centralized and does not facilitate communication across functional areas. The organization has a very flat structure with 21 managers reporting to the Public Printer and the Deputy Public Printer. This is an increase of 12 direct reports since 1993. In response to pressure from Congress to eliminate some senior management positions at GPO, the Public Printer eliminated all Assistant Public Printer positions, leaving all of the managers directly below that level reporting directly to him. The result is a “stovepipe” organization with all organizations reporting up. There is no established senior management or executive steering committee within GPO that meets regularly to plan strategy, discuss policy, or monitor execution across all functional areas. The result is an organization with

no strategic planning by top management and poor communication across functional areas. To correct these problems, we recommend that GPO adopt an organization model that reduces the number of senior executives reporting directly to the Public Printer, empowers senior managers to make decisions, and provides easy and effective communication across functional areas.

ES.3 FINDINGS AND RECOMMENDATIONS—MARKETING, SALES, AND DISTRIBUTION

The marketing and sales activities of GPO occur in two organizational entities—Customer Services and Retail Sales Services. Customer Services' staff are responsible for servicing printing accounts from all three branches of the Federal Government, and the Retail Sales Services staff handle customer orders for single-copy and subscription publications.

In examining how GPO services Federal Government printing accounts, we discovered a number of deficiencies. The source of these difficulties can be traced to three factors: changes in printing technology; a shift toward decentralized administration of printing requirements in Federal agencies; and shortcomings in how GPO staffs, manages, trains, equips, and rewards personnel responsible for servicing printing accounts.

Over the past few years, a revolution in pre-press printing technology, especially in desktop publishing, has been under way. Few GPO account representatives, however, are adequately prepared to advise their customers on how best to use this technology to speed and improve the printing process from the design phase through delivery of the final product. Even though less printing occurs today (as measured by the number of titles and the number of copies), government agency downsizing and decentralization initiatives have increased the workload for GPO account representatives. Compared to a decade ago, GPO account representatives now service twice as many accounts; moreover, agency personnel administering printing requirements appear to have less experience and training in printing operations and thus require more support from GPO.

Although the external factors of changing technology and government downsizing have complicated GPO's account servicing efforts, much of GPO's difficulties in this area can be traced to internal personnel matters. GPO's own attrition has left fewer account representatives to service an even larger number of accounts. Of the staff remaining, little or no training has been provided in account servicing techniques and in critical printing technologies. The staff lack the basic essentials for effective communication, including voice mail, e-mail, and computers. Sound sales management practices also appear to be lacking, along with an incentive system that rewards customer-focused account development. To rectify these internal shortcomings GPO should concentrate on filling position vacancies and providing necessary information technology support and training in sales management and account servicing methods. GPO should also reengineer and reorganize account servicing teams to include printing specialists from other areas of GPO to bolster consulting services on printing technology.

GPO's Retail Sales Services organization within the Superintendent of Documents has experienced a downturn in sales revenue, which in part has contributed to difficulties in keeping

this operation financially viable. The decline in order volume (about 30 percent over the period FY 93–FY 97) can be largely attributed to the placement of formerly paid printed version titles, primarily the *Commerce Business Daily* and the *Federal Register*, on the Internet for free access. The 16 percent decline in sales revenue over this same interval has been less steep, in part because of price increases.

In addition to slumping sales for printed documents, GPO's retail operation suffers from an array of performance problems. The root cause of these problems can be traced to three systemic factors:

- Personnel improperly trained to fill positions in a high-performance, customer-focused retail sales environment
- Organizational structure that impedes effective communication and adaptive learning
- Information systems that are failing to provide suitable and timely information to help staff effectively serve customers and manage the enterprise.

In spite of these problems, GPO's retail sales operation has had several notable accomplishments that show promise in arresting the decline in sales and in improving the performance of order processing:

- Unlike paper documents, the sales of electronic products, primarily on CD-ROM and diskette, have surged tenfold since FY 93, reaching \$2.7 million in FY 97.
- If the pending implementation of the Integrated Processing System (IPS) operates as planned, it will revolutionize order and fulfillment processing.

Recent amendments to Title 44 and other statutes have encouraged GPO and the agencies to make public documents freely available over the Internet. This accelerating trend toward free and widespread electronic access to government documents has undercut the sales base for GPO and raised concerns about the long-term viability of the retail sales operation. The prevailing trend in successive administrations and in Congress has been to seek ways to outsource or privatize government services that are not considered inherently governmental. Although the operational problems of GPO's retail sales activity can be resolved, a long-term and substantial commitment of scarce resources to this endeavor could have a negative impact on GPO's core business—government printing services and free dissemination of government documents through the Federal Depository Library Program (FDLP). Congress could propose outsourcing or privatizing the sales operation, because Title 44 does not mandate the sale of public documents, and it is not clear whether a government organization should operate a retail sales activity.

In contrast to the retail sales operation, the FDLP's mission is well defined, and its operation managed effectively. The FDLP ensures that access to government information is available to the public at large. People without the technological means to access online information can do so via public access workstations located in the more than 1,400 depository libraries located across the country. Likewise, people who cannot purchase their own copies of print materials of government information can have access to these materials at the depository

libraries. Moreover, these collections serve as a historical resource for products that are no longer available through the sales program or publishing agency. In all of the aforementioned cases, depository librarians play a critical role in helping people find the government information they need. Service at the depository libraries is consistent and of high quality. The condition of depository libraries is monitored by the FDLP through periodic inspection visits, self-studies, and a biennial survey, and librarians participate in continuing education efforts sponsored by the FDLP.

GPO's goals for the FDLP program are not clear however. GPO should refine its goals for the FDLP to include specific target dates for completion of the transition of the FDLP to a more electronic basis. GPO should also develop an action plan, including numerical targets, dates and a list of accountable parties, to transition the FDLP to a more electronic basis. Like the retail sales operation, there are opportunities for consolidation that can save resources. This opportunity exists primarily in the distribution of documents to the libraries that could be consolidated with the distribution functions performed by the retail sales operation.

ES.4 FINDINGS AND RECOMMENDATIONS—PRINTING PROCUREMENT SERVICES

The majority of the Government's printing and publishing requirements are satisfied by commercial vendors. GPO has an established infrastructure dedicated to awarding and administering printing and publishing contracts. In FY 97, approximately 380 GPO staff nationwide processed over 177,000 printing procurement actions generating over \$488 million in revenue. The staff in GPO's Printing Procurement Department (PPD) are very experienced printing specialists, many having been with GPO for over 15, 20, and 25 years. Many of these printing specialists started at GPO in the production plant, learning the printing crafts hands-on. This knowledge and skill is now being used to—

- Develop the specifications for the printing/publishing requirements, specifications that the vendors describe as the best the Government produces
- Furnish “preflight” materials to the vendors
- Perform press sheet inspections
- Evaluate and rate vendor quality levels for their various products
- Perform random and routine evaluations of vendor samples
- Resolve any problems between the vendors and the agency customers
- Maintain vendor performance database.

The PPD's operations nationwide do not generate sufficient revenue to cover its total cost allocation. Trends over the last several years show revenues declining at a faster rate than expenses. In FY 97, PPD experienced a net loss of \$2.4 million; the Central Office operations netted a positive income of \$3.9 million, but the aggregate loss of the regional offices was \$6.3 million. Although PPD has been reducing its staff, the revenue per employee has steadily

declined as expenses per employee have continued to increase. PPD should capitalize on opportunities to increase revenue and decrease cost. A complete evaluation of the location and operations of the regional printing procurement offices (RPPO) should be conducted with the intent to close or consolidate any RPPO not serving its locale in a significant way. GPO should also investigate opportunities to increase revenues per employee by employing faster and cheaper ways to process procurements, such as greater use of Term Contracts (or other contracts with “ordering” features) across a greater range of printing and publishing products and services. Improving efficiencies per employee requires cost cutting/control mechanisms such as process improvements and automated tools.

GPO Printing Procurement Regulations (PPR) have not kept pace with governmentwide initiatives to streamline acquisitions and emphasize commercial practices. Commercial practices such as “best value” awards based on superior past performance, establishment of vendor/government long-term relationships, and increased use of electronic purchasing are not common practices at GPO. These initiatives are designed to reduce costs, shorten lead times, increase vendor quality, and improve customer satisfaction, all of which would improve PPD’s efficiency and satisfy GPO’s customer agencies. The requirement to competitively bid all printing requisitions, regardless of dollar value, exhausts time and limited resources and increases costs. GPO’s focus on maximizing competition and awarding to the lowest bidder ignores the actual overall cost to the Government of processing the printing requisition and administering the contract to close-out. Printing procurement regulations and procedures should be revised to allow quicker, less costly processing of small dollar value orders and to improve overall efficiency and effectiveness within the department. The requirement to competitively bid all procurements regardless of dollar value should be canceled immediately. GPO should consider raising the threshold for awarding contracts without competitive bids to \$2,500. The PPRs should be modified to encourage the use of commercial practices in printing procurements, specifically, those relating to long-term vendor relationships and awards based on “best value.”

ES.5 FINDINGS AND RECOMMENDATIONS—IN-PLANT PRODUCTION

In-plant production is defined as all parts of the organization that directly contribute to product generation, either as core in-plant processes or as key support processes. Core processes assessed include planning and scheduling, electronic photocomposition (preparation of jobs in electronic format), pre-press press, and binding. Key support services evaluated were customer service, engineering/maintenance materials management, and quality control.

GPO in-plant operations are responsible for the production of approximately 25 percent of the printing and information products requisitioned from GPO. The remainder of requisitions are procured from the private sector through the Printing Procurement Program. GPO retains, for internal production, requisitions that cannot be procured on a controlled, timely, and/or cost-effective basis. As of 1997, the Production Department has a staff of 1,692 full-time equivalents (FTE)—approximately one-half the total personnel employed by GPO.

The primary mission of the in-plant production operation is to meet the printing demands of Congress. Congressional revenue accounts for 41 percent of total in-plant revenue. To meet

congressional printing needs, GPO has developed an extensive array of information-gathering capabilities, including direct electronic linkages between a variety of offices on Capitol Hill and GPO's central facility and dedicated GPO staff assigned to congressional offices to support generation of daily congressional products.

The remaining 59 percent of in-plant production revenue is generated from executive branch departmental work. The largest recurring departmental products produced in-house are the daily *Federal Register* and the *Code of Federal Regulations (CFR)*. Additional agency work includes U.S. Passports for the State Department; postal cards for the U.S. Postal Service; the U.S. Budget; and other jobs that agencies authorize for in-plant production.

GPO effectively satisfies its priority congressional customers and meets the variable demands and outputs requested by Congress. Similarly, the Production Department is taking steps to modernize its printing capabilities and information technology to more effectively meet the needs of its customers and to provide important information access and dissemination capabilities. Specifically, GPO offers products to the public over the World Wide Web, assists Federal customers in disseminating their information on the Internet, and receives congressional and other jobs electronically so that they go directly into production. In addition, CBDNet, the Commerce Business Daily publishing service, developed in partnership with the Department of Commerce, received a 1997 Hammer Award from the National Performance Review for its successful design, implementation, and utilization.

To fully capitalize on these improvements and successes, and to continue to operate in the Federal marketplace by efficiently providing high-quality products to its customers, GPO needs to solve a number of in-plant production problems. Most of these problems are the result of poor cross-functional knowledge and communication, a fragmented organization, lack of documentation and standard procedures, poor information management, and ineffective management and control of production processes.

In-plant batch processing focus does not promote cross-functional knowledge sharing, accountability, or effective communication. Therefore, production must break down functional stovepipes to establish cross-functional, process-focused operations.

The current in-plant organizational structure impedes production efficiency and should be realigned to integrate all production-related services and streamline production department divisions to improve in-plant operations. Also, in-plant production does no strategic manufacturing planning, which limits the ability to effectively integrate plant operations and use plant resources. Finally, GPO In-plant does not effectively use systematic manufacturing approaches to control process capability, quality, and cost. By combining existing craft-based knowledge with systematic manufacturing methods, in-plant performance could be improved.

Existing information management systems fail to provide the types of information needed for accurate process planning, control, and improvement. The necessary changes should be made through implementation of next-generation systems. In addition, paper-based production information is poorly structured, disseminated, and controlled. Evaluating information needs and

ensuring that consistent, accurate information reaches the right users at the right time would allow more proactive management and control of the production process. Furthermore, production management should more effectively use available financial information to identify opportunities to improve operational performance, reduce costs, and increase production accountability.

Production lacks consistent methods to properly select, train, promote, and retain personnel in critical skill areas. This requires aggressive corrective action to ensure that appropriately skilled workers are available to meet future production demands and requirements.

GPO's large diverse paper inventories require large amounts of warehouse space, multiple suppliers, and a complex paper procurement process, offering opportunities to reduce ordering and carrying costs through alternative inventory management and contracting practices.

ES.6 FINDINGS AND RECOMMENDATIONS—HUMAN RESOURCES

The Booz-Allen team examined issues pertaining to the adequacy and deployment of the GPO workforce. As with any organization, knowledge of its human resources capability and its associated programs, policies, and procedures is vital to understanding overall organizational effectiveness.

To ensure a more balanced approach to our analysis, we distinguish between the “providers” and “customers” of GPO's personnel services. Providers are those individuals and organizational entities within GPO comprising the human resources community, including the Office of Personnel, Occupational Health and Environmental Services, Office of Equal Employment Opportunity, and Office of Labor/Employee Relations. Customers consist of those remaining individuals and organizational entities that are the recipients of human resources services; in effect, this was “the agency-at-large.”

We reviewed human resources issues from both functional and workforce effectiveness perspectives. From a functional perspective, we reviewed GPO's Office of Personnel and associated departments/services in relation to meeting the agency's overall mission with respect to organizational structure, personnel systems, and organizational processes. From a workforce effectiveness perspective, we examined how the Office of Personnel's associated practices, policies, and procedures contribute to selecting, developing, and retaining a quality workforce.

Our employee survey results showed that there are several strengths in which GPO can take pride and build on, such as in the areas of teamwork, satisfaction with pay, and loyalty and dedication to one's work and the agency. However, we found that there are many areas on which GPO can improve its human resources capability. In some cases, programs and policies exist but are not applied consistently. In other cases, effective human resources programs have been designed but never implemented because of lack of funding or termination of the programs for various reasons.

We found that, to a large extent, GPO's human resources function responds reactively to problems and issues. There is no strategic plan, and many opportunities for preventing problems

and preparing the workforce for the future are not being seized. Interestingly, as part of the GPO 2001 effort, a thorough human resources strategic plan was developed in October 1992. However, the failure to implement this plan, combined with the elimination or lack of funding of various personnel programs and practices since the early 1990s, has had a negative impact on employee morale, and ultimately, on organizational effectiveness. This reactive posture is evidenced by the following and covers areas of training, position classification, staffing, and succession planning:

- Training is only provided if it is directly related to an employee's current position; GPO no longer conducts needs assessments to determine current and future training requirements.
- Personnel does not conduct succession planning to manage attrition and develop high potential employees.
- Workload and staffing analyses are not conducted to forecast future staffing needs.
- GPO does not have a framework for integrating the personnel cycle (e.g., selection, performance evaluation, training and career development).
- Position Management no longer conducts proactive position reviews or classification audits as was done in the 1980s.

To address this deficiency, GPO should design and implement an updated human resources strategic plan, incorporating information from the 1992 GPO 2001 human resources plan and recent management audits.

One area in particular that has suffered from a strategic perspective is training and career development. We found that the provision of training at GPO is largely reactive rather than strategic. Despite general instructions in GPO to conduct a training needs assessment every year, such assessments are no longer routinely conducted. The lack of a strategic training needs assessment prevents GPO from providing the right training to meet current and future skill requirements. Additional examples of the reactive nature of training at GPO include—

- Employee Relations does not conduct preventive training on pervasive problems (e.g., abuse of the leave policy); training is typically in response to organizational/governmental mandates (e.g., violence in the workplace).
- Equal Employment Opportunity (EEO) training is no longer routinely provided to managers.
- Employees are not routinely trained in new technologies until they encounter problems.

GPO should re-institute a strategic training needs assessment with an annual review to identify current competencies of staff, needed competencies, and appropriate training interventions. GPO should also re-institute mandatory training for supervisors, managers, and executives, including guidance on Employee Relations and EEO issues.

We found that GPO's Office of Personnel maintains an excellent inventory of written instructions for implementing effective human resources programs, but there is a lack of consistency and accountability in their application. A review of the GPO instructions falling under the responsibility of the Office of Personnel revealed numerous examples of beneficial policies and programs not currently followed or funded. For example, training required for supervisors and managers is not conducted; classification surveys are not conducted by Position Management; and the awards and incentives program has not been funded for many years. The discontinuation of these vital programs, for whatever reasons, has had a devastating impact on the workforce's morale and capability to be effective. We also determined that there is a lack of standardization of GPO's recruitment and selection process, which puts the agency at risk for complaints of employment discrimination and unfair treatment.

GPO should review its existing personnel instructions and implement policies and programs that address the goals and priorities outlined in the new strategic plan for human resources. This should be followed by a regular review and updating process to ensure that GPO's human resources function maintains a strategic posture and proactive role within the agency. To address the lack of standardization in the recruiting and selection process, it should be standardized to ensure consistent application through communication and training, and GPO should make a concerted effort to increase awareness of the selection process and the rationale behind hiring decisions.

Insufficient opportunities and vehicles exist for effective organizational communication at GPO. The lack of communication can be attributed to structural and reporting changes that have occurred at GPO over the years, as well as day-to-day procedures that are followed. Our focus groups and interview sessions determined there is a lack of formal cross-functional meetings between department/service heads at GPO and the Public Printer. Also, interviews revealed a lack of meetings and communication among high-level officials has had a spillover effect at all levels within GPO, as well as between labor and management. While formal communication between GPO labor and management have proven to be very successful both in the past and in recent policy negotiations, changes need to be made to help improve informal communication efforts.

GPO should implement strategies and tools to ensure sufficient inter- and intra-organizational communication throughout GPO, including regular cross-functional meetings among department/service heads, meetings between department/service heads and the managers and supervisors that report to them, and meetings between supervisors and their employees. These meetings should be supplemented with improved two-way communication, as well as improved written media, such as the *Typeline* newsletter, to discuss issues of a more strategic and informative nature.

Employees are not given incentives for achieving individual or organizational performance standards. Virtually no mechanisms are in place to reward and recognize the outstanding performance of GPO employees. Lack of an adequate reward and recognition system is a major inhibitor in achieving optimal productivity and performance. The Incentive Awards and

Recognition System, as well as the awards that are directly related to performance ratings, have not been funded since 1992. Lack of awards and incentives is a major source of frustration among all employees. Lack of incentives for supervisors and managers to achieve performance objectives negatively affects the perception of the usefulness of all personnel functions. Findings from interviews and focus groups reveal that the quality of performance appraisals, the provision of training to employees, the quality of selection decisions, and the willingness to use the discipline process, all suffer from the failure to reward supervisors and managers for achieving performance standards. GPO should provide incentives to reward and recognize outstanding performance and re-institute performance awards and the Incentives and Awards Recognition System.

ES.7 FINDINGS AND RECOMMENDATIONS—BUDGETING, ACCOUNTING AND FINANCIAL REPORTING SYSTEMS

GPO receives funding from two appropriations, the Congressional Printing and Binding Appropriation (used for in-house printing of congressional activities) and the Salaries and Expense Appropriation (used for certain Superintendent of Documents activities). In addition to these appropriations, GPO has a large Revolving Fund, a business-oriented fund, that finances a continuing cycle of departmental operations, such as the contracted printing program, with receipts derived from operations. The agency's budgeting, accounting, and financial reporting systems (referred to as "financial management" for brevity) are organized to support the funding sources. GPO's financial management functions are conducted with a comprehensive cost accounting system, using accrual-based accounting.

The Booz-Allen team's analysis focused on the budgeting function, which includes establishing rates and prices, and on the accounting function, which includes financial reporting. The analysis assessed GPO's financial management in three areas: staff and organization; processes; and systems associated with each function. These were evaluated against two major criteria: effectiveness and efficiency.

The present financial management organization is capable of supporting major GPO initiatives to become more efficient. GPO's financial management organization possesses a high level of knowledge and expertise in its staff capabilities. This capability is backed by existing business-oriented processes, such as a comprehensive cost accounting system and a revolving fund that provides considerable management flexibility to undertake change and to increase efficiency. Although there is a need for considerable modernization of systems and processes, the existing organization has the capabilities today to support major departmental change.

To increase the effectiveness of its financial management, GPO should correct data compromises in several areas. The integrity of data captured by the time reporting system for in-plant production (Production Operations Budgeting and Expenditures [PROBE]) is subject to compromise by system obsolescence and by the adjustment process. GPO should—

- Replace the PROBE time reporting system with focused systems that address time and attendance tracking, print job activity tracking, and machine usage

- Evaluate the factors contributing to the need for corrections such as inadequate shop floor data
- Evaluate the barriers that have prevented past planning efforts to replace the time reporting system from being acted upon
- Structure the planning effort to achieve the necessary change.

GPO also needs to modernize processes and systems to improve the efficiency of financial management. Numerous unintegrated spreadsheets and databases are required to produce budget documents and financial reports. To rectify this, GPO should—

- Expand the Oracle conversion beyond the general ledger to include all applicable budgeting and accounting functionalities
- Implement an executive information system to systematize reporting and accountability for budget expenditure performance
- Simplify processes and workflows as part of system upgrades.

GPO has several basic management processes that serve cost reimbursement goals well but do not increase operating efficiencies. Substantial resources are expended to produce, update, and disseminate overly complex data. For both expenditure tracking against multiple annual appropriations and rate establishment and monitoring for approximately 2,000 print activities, significant staff and system resources are consumed in a process that produces funding tracking or cost reimbursement, but does not address other management concerns, such as cost reduction or greater operating efficiencies. GPO should—

- Consider moving to an annual appropriation for Congressional Printing and Binding to be used in the fiscal year of appropriation
- Conduct an 80–20 (Pareto) analysis to reduce pricing the number of activities to an optimal level.

Rather than developing prices for in-plant production based on target costs, GPO uses actual costs from past years. GPO would be better served if, for the development of rates and prices for in-house printing, it developed a plan for periodic time and motion studies and statistical analysis of production activities that meet criteria. It should then update standards based on analyses and incorporate in price calculations.

ES.8 FINDINGS AND RECOMMENDATIONS—INFORMATION TECHNOLOGY

Information technology (I/T) plays an increasingly important role in supporting GPO's core missions. In addition to the traditional administrative functions, GPO uses I/T extensively to support core mission functions, including in-plant production, printing procurement, and document sales and dissemination. New information technologies (e.g., computer-to-plate printing, electronic publishing, and Internet/World Wide Web) have revolutionized the printing industry, creating new opportunities but also challenging old business practices. GPO faces a

constant challenge to use new technologies to improve operations and become more efficient and effective.

GPO's current I/T environment is characterized by a distinct split between past and future operations. The Office of Information Resources Management (OIRM) maintains GPO's legacy business systems including a mainframe processing complex and a large inventory of extremely old, nonintegrated COBOL applications. The Production Department operates most of the modern I/T resources at GPO, including *GPO Access* and related Internet services, automated support to the in-plant production process, and local and wide area network services. Significant I/T capabilities also exist in the Superintendent of Documents and Printing Procurement departments. GPO currently has approximately 240 staff dedicated to I/T functions, with the majority located in OIRM and the Production Department. Total I/T spending in FY 97 was about \$40 million, or approximately 5 percent of GPO's total budget.

New technology accomplishments at GPO have been significant; for example, *GPO Access* is one of the Government's largest and most active Web sites, and as mentioned previously the *CBDNet* project was selected for the prestigious Hammer Award. GPO's recent introduction of the IPS and computer-to-plate printing technologies is also representative of best practices. Despite these successes, GPO's I/T operations are also characterized by an extremely old and obsolete set of legacy applications, which consume a disproportionate share of resources to maintain. Finally, management of the I/T function is lacking in several key areas, and management reforms are needed to improve the overall GPO I/T operation.

We focused on seven key I/T management issues (organization, Year 2000, management processes, information management, electronic document management, I/T workforce, and information security) and compared GPO operations with best practices in government and industry.

GPO's I/T organization is highly decentralized with limited centralized management leadership, coordination, or oversight. I/T operations at GPO occur at the departmental level, but lack an effective coordination mechanism across departments. The Public Printer and Deputy Public Printer lack the technical expertise to fulfill this requirement. Lack of central oversight and coordination creates isolated stovepipe operations and inhibits I/T service delivery in some areas. Poor communications between departments undermine I/T planning and technical integration. The organizational split between OIRM and the Production Department is particularly harmful because these major I/T operations compete for resources and do not always work together for the common good of GPO. The lack of an I/T strategic plan further complicates the efforts of separate departments to work together to achieve common goals and objectives. This organizational structure undermines GPO's I/T operation and is inconsistent with industry and government best practices. The basic structural flaw should be corrected if GPO wants other aspects of the I/T operation to be fully successful. GPO should strengthen the centralized component of its I/T organization by following government and commercial best practices, appointing a Director of Information Technology (DIT) reporting to the Public Printer with the same responsibilities normally assigned to a chief information officer, and developing an I/T strategic plan.

GPO faces substantial business risks associated with Year 2000 issues relating to its mission-critical legacy systems. Most of GPO's mission-critical business systems are functionally and technically obsolete and have extensive Year 2000 compliance problems. Although GPO has done a great deal of work addressing these problems, it is at least a year behind the Office of Management and Budget's (OMB) recommended timeline, and its approach is not fully responsive to GAO and OMB guidelines. For example, GPO management has stated their assessment phase is scheduled for completion in July 1998, while OMB's completion date for this phase was June 1997. They acknowledge some of the limitations in their Year 2000 plans but firmly believe all their mission-critical systems will be fixed on time. GPO needs to apply a more rigorous project management approach to its Year 2000 efforts and develop and test contingency plans for all mission-critical systems.

GPO faces many challenges in maintaining modern technical skills in its I/T workforce. These are the same challenges all organizations face in attracting and retaining a skilled I/T workforce. GPO's challenges may be more difficult because of the state of their legacy systems environment, limited job classification structures and pay scales, and lack of internal training and career development opportunities. In this environment, GPO cannot compete effectively for modern I/T management and technical skills. GPO should plan on outsourcing a significant portion of its I/T operations to ensure a more reliable supply of modern technical skills. Certain key I/T management functions need to be retained within GPO, but all other operational and technical support functions can be outsourced.

A copy of the draft final report was provided to GPO for comment. A copy of those comments is provided in Appendix R of this report.

Exhibit ES-2 presents a complete list of the Booz-Allen team's findings and recommendations. Refer to the complete report for further explanation and details regarding each finding and its associated recommendation.

**Exhibit ES-2
Findings and Recommendations of the GPO Audit**

Finding	Recommendation
Overarching	
1. From the customer perspective, there appears to be little support for eliminating GPO; there is, however, a strong desire on the part of customers to improve the efficiency and effectiveness of the organization.	1. GPO should focus its energy on creating an organizational structure that is future oriented, and on developing and adopting new plans and business processes that focus more on where GPO and its customers want it to be and less on where it has been.
2. GPO has no established strategic planning process and no current strategic plan that articulates where the organization wants to be in the future.	2. GPO should institutionalize the strategic planning process and link annual budgets to a published strategic plan.

Finding	Recommendation
3. The organization of GPO is highly centralized and does not facilitate communication across functional areas.	3. GPO should adopt an organization model that reduces the number of senior executives reporting directly to the Public Printer, empowers senior managers to make decisions, and provides easy and effective communication across functional areas.
Marketing, Sales, and Distribution	
1. GPO's customer service account representatives are inadequately trained, understaffed, and lack adequate tools to improve and strengthen GPO's relationship with Federal agency printing customers.	1. GPO should revitalize customer service and reengineer the approach to customer communications.
2. GPO's Customer Services operation has little marketing or business development under way.	2. GPO should create a focused marketing and business development group under the leadership of a trained marketing professional.
3. The retail document sales program could be outsourced, privatized, or remain with GPO.	3. GPO should continue with steps to modernize its retail sales operation, but Congress should determine the long-term, viable direction for GPO's retail sales operation.
4. The lack of a strategic plan has left the retail sales operation without a shared vision to guide management's efforts to serve its customers while remaining financially viable.	4. The retail sales operations should evolve a strategy from a planning process directly linked to an overall GPO plan.
5. The current structure of the Superintendent of Documents organization is excessively complex with too much functional redundancy.	5. The SupDocs organization should be streamlined to more efficiently accomplish its stated mission and goals.
6. As currently configured and staffed, the retail sales central order processing operation suffers from numerous problems and requires a complete overhaul.	6. GPO should proceed as planned with the implementation of the IPS software system, but it should also institute a rigorous customer service performance measurement program and develop and execute a new streamlined staffing plan for the Central Order Division.
7. The implementation of GPO's long-awaited IPS in spring 1998 offers the potential for dramatic productivity improvements in order processing and inventory management.	7. GPO should proceed with IPS implementation but develop and implement a new staffing plan to capitalize on the productivity improvement potential inherent in IPS.
8. GPO has established cooperative distribution and marketing initiatives with various public and private sector organizations to achieve expanded distribution of its published products.	8. GPO should be more proactive in seeking cooperative ventures to package, promote, and sell its publications.
9. The process for selecting, pricing, and promoting products for the retail sales program is inefficient and poorly coordinated.	9. GPO should revamp the process for selecting, pricing, and promoting products.
10. GPO's Internet Web site, <i>GPO Access</i> , has become a primary source for free public access for Federal Government documents.	10. GPO should continue with its efforts to place more documents on its <i>GPO Access</i> Web site and, if necessary, seek additional funds from Congress to expand this program.
11. Although sales of printed documents have declined, the sales of information products in electronic format have risen dramatically.	11. GPO should accelerate its product development and marketing efforts in the electronic products area and modify its accounting practices to show how sales of these products have increased.

Finding	Recommendation
12. Through more effective use of delivery services, GPO has reduced the postage cost for shipping documents to customers from an average of 24 percent of sales to 16 percent, saving at least \$5 million in FY 97.	12. GPO should explore the possibility of adopting the common practice among mail-order operations of charging an additional standard shipping and handling fee to the customer's invoice.
13. GPO's aggressive actions to eliminate excess, obsolete, and unsalable stock during the past 2 years has freed up about 25 percent of the floor space at Laurel, making it possible to proceed with consolidation from other locations.	13. GPO should take action to reduce its supply of paper stock and other materials at the Springbelt Warehouse in anticipation of an eventual consolidation of the warehouses into a single location. GPO should dispose of or sell excess material handling equipment at the Laurel Warehouse.
14. Even though the overall shipping and receiving volume has declined by 34 percent during the last 2 years, the staff at the Laurel Warehouse has decreased by only 13 percent (from 160 to 140 staff).	14. GPO should further adjust staff through reassignment or attrition to levels more in keeping with current and projected workload.
15. Storage rates charged to agencies for their consigned publications and periodicals have not been updated since FY 92, and reporting discrepancies exist on the number of pallet spaces and bins that should be charged for agency consignment.	15. GPO should reconcile the number of available and assigned storage spaces (pallets and bins), and review and adjust as necessary the storage rates charged to the agencies.
16. Some GPO bookstores have developed a niche by recognizing the needs of their local markets and capitalizing on them through creative marketing.	16. GPO needs to institutionalize the process of fostering and sharing innovative, local, market-specific initiatives among staff managing the retail book stores.
17. About 60 percent of stores' revenue is generated through mail and telephone orders, raising questions about the need for stores.	17. GPO should develop a mechanism to track sales based on the origin of the order and perform a cost and benefit analysis of the bookstores.
18. Although GPO's bookstores are financially viable as a group, some are unprofitable and most fall short of industry performance standards.	18. After a thorough review, GPO should close or relocate all stores with unprofitable futures and set up a performance measurement system to closely monitor the performance of all open stores.
19. Little standardization of practices exists across stores, and most stores lack the basic necessities to achieve their true market potential.	19. GPO Headquarters should support the bookstores with the necessary resources and guidance to maximize their revenue potential.
20. FDLP's mission is well defined and includes a specific set of goals addressing the increasing amount of government information available in electronic formats.	20. GPO should refine the goals of the FDLP to include target dates for completing the transition of the FDLP to a more electronic basis.
21. GPO has begun partnering with several institutions to share the burden of preservation and dissemination of government documents and to ensure public access to government information in electronic formats.	21. GPO should develop additional depository partnerships with libraries and other government agencies.
22. The FDLP is well managed, provides a valuable public service, and is respected by the library community. Constituency support, including the support of the American Library Association and depository librarians, enhances FDLP's ability to conduct its mission.	22. GPO should expand marketing efforts to all potential stakeholders.
23. Opportunities exist to reduce staff in the Library Programs Service through consolidation.	23. GPO should consolidate functions and reduce staff as necessary to address the duplication of efforts in the library program and the retail sales operation.

Finding	Recommendation
24. The roles for the preservation of electronic documents are ill-defined, leading to gaps in the information available to the public and potential problems for permanent access to government information.	24. GPO should continue to pursue changes to Title 44, which require government agencies to provide all documents to the FDLP.
25. The existence of “fugitive” documents undermines the public’s ability to access government information.	25. GPO should hold an information campaign to make agencies aware of their compliance responsibilities.
26. FDLP staff are insufficiently trained, thus impeding the transition to a more electronic FDLP.	26. GPO should endorse a training plan to manage FDLP participants’ changing roles and provide managers with more authority over personnel decisions affecting their areas.
27. Problems with the acquisition, classification, ordering, and production processes leave numerous opportunities for human error.	27. GPO should institute a formalized quality control system to improve FDLP processing activities.
Procured Printing Services	
1. The PPD’s operations nationwide do not generate sufficient revenue to cover its total cost allocation.	1. PPD must capitalize on opportunities to increase revenue and decrease cost.
2. Workload trends for the PPD indicate that breaking even under the current pricing structure is becoming increasingly difficult.	2. GPO should establish a pricing structure that more realistically addresses the cost of operations.
3. The PPD’s hierarchical structure appears geared to justifying positions as opposed to efficient management and optimum utilization of resources.	3. GPO should reorganize the PPD to eliminate current inefficiencies and increase customer focus and communication.
4. The PPD is running on tradition and experience, supplemented by pockets of energy and enthusiasm, not by management and leadership that focus on strategic planning or process improvement.	4. The PPD’s management should begin now to establish a vision for the PPD and to develop plans to ensure that the PPD can continue to operate as a viable entity.
5. The PPD’s personnel attrition will affect the department’s ability to accomplish its mission if corrective action is not adequately planned and implemented.	5. Staffing skills and levels should be reviewed and plans should be prepared to properly manage personnel attrition and workforce transition.
6. GPO PPRs have not kept pace with governmentwide initiatives to streamline acquisitions and emphasize commercial practices; the PPRs require major revisions.	6. Printing procurement regulations and procedures need to be revised to allow quicker, less costly processing of small dollar value orders and to improve overall efficiency and effectiveness within the department.
7. GPO’s procurement processes require automation to reduce time and cost.	7. PPD should make a significant investment in automated tools and processes to more efficiently manage printing procurement actions.
8. GPO’s vendor database, as currently maintained, is of limited value and use by procurement specialists.	8. GPO should maximize the online availability and impact of using past performance data.
In-Plant Production	
1. Production has established important information access and dissemination systems and capabilities.	1. GPO should leverage knowledge gained through internal I/T accomplishments in the development of an in-plant information technology plan.
2. The Production Department is implementing industry state-of-the-art printing technology, computer-to-plate (CTP) to improve quality and throughput and reduce operating costs.	2. GPO should use the experience gained in CTP implementation to guide other technology acquisition and process improvement initiatives.

Finding	Recommendation
3. The Production Department consistently meets a demanding congressional production schedule.	3. GPO should combine lessons learned from Congressional Printing Management Division with customer-focused marketing strategies to continuously improve overall customer service.
4. In-plant batch processing focus does not promote cross-functional knowledge sharing, accountability, or effective communication.	4. The Production Department must break down functional stovepipes to establish cross-functional, process-focused operations.
5. Current in-plant organizational structure impedes production efficiency.	5. GPO should realign the organizational structure to integrate production-related services, and streamline Production Department divisions to improve in-plant operations.
6. In-Plant Production does no strategic manufacturing planning.	6. GPO should develop an in-plant strategic manufacturing plan.
7. GPO in-plant does not effectively use systematic manufacturing approaches to control process capability, quality, and cost.	7. GPO should improve in-plant performance by combining existing craft-based knowledge with systematic manufacturing methods.
8. Existing information management systems fail to provide the types of information needed for accurate process planning, control, and improvement.	8. The Production Department needs to improve information management capabilities in next-generation systems.
9. Paper-based production information is poorly structured, disseminated, and controlled.	9. GPO should evaluate information needs and ensure that consistent and accurate information reaches the right users at the right time and facilitates proactive management of the production process.
10. Production lacks consistent methods to properly select, train, promote, and retain personnel in critical skill areas.	10. Production must take aggressive action to adequately recruit, train, and retain staff in critical skill areas.
11. GPO's large diverse paper inventories require large amounts of warehouse space, multiple suppliers, and a complex paper procurement process.	11. GPO should improve inventory management practices by reducing ordering and carrying costs.
12. In-Plant Production has operated at a financial deficit during the period FY 93 to FY 96, earning a profit in FY 97.	12. GPO should improve financial performance by reducing costs and improving operational performance.
13. There is interest among commercial printers to produce the <i>Congressional Record</i> .	13. GPO should conduct an outsourcing study to more accurately assess the feasibility of outsourcing the <i>Congressional Record</i> .
Human Resources	
1. To a large extent, the personnel function responds reactively to problems. There is no strategic plan, and many opportunities for preventing problems and preparing the workforce for the future are not being seized.	1. GPO should implement a human resources strategic plan and partner with line managers.
2. The Office of Personnel maintains an inventory of written instructions for implementing effective human resources programs, but there is a lack of consistency and accountability in their application.	2. GPO should review existing personnel instructions and implement policies and programs that address the goals and priorities outlined in the new strategic plan for human resources.
3. The lack of automation in the Office of Personnel leads to inefficiencies in its function. The development of the intranet is a positive first step toward improving communication and effectiveness.	3. GPO should implement an automated human resources information system that integrates personnel-related functions and provides improved functionality.

Finding	Recommendation
4. There are insufficient opportunities and vehicles for effective organizational communication at GPO.	4. GPO should implement strategies and tools to ensure sufficient inter- and intra-organizational communication throughout GPO.
5. GPO's aging workforce leaves the agency at risk of instability and loss of organizational knowledge.	5. GPO should implement a system for transferring organizational knowledge to help ensure a smooth and effective succession planning process.
6. The Position Management Branch lacks the resources necessary to ensure effective position management across GPO, causing it to be reactive.	6. GPO should prioritize proactive activities in the Position Management Branch and increase the accountability of supervisors and managers to ensure effective position management.
7. The lack of formal workload and staffing analyses at GPO leads to inconsistencies in the amount of work required across different departments/ services.	7. GPO should conduct formal workload and staffing studies and promote cross-training opportunities to ensure appropriate distribution of work across GPO.
8. GPO supervisors and managers do not have the authority to make critical and timely personnel-related decisions.	8. GPO should increase the authority of managers and supervisors to make critical and timely personnel-related decisions.
9. GPO's use of formal and informal teams provides examples of success.	9. GPO should capitalize on successes realized from past team efforts and seize opportunities to implement team-based work units to improve communication and agency effectiveness.
10. The lack of standardization of GPO's recruitment and selection process places the agency at risk for complaints of employment discrimination and unfair treatment.	10. GPO should standardize recruitment and selection processes and ensure consistent application through communication and training.
11. The rating and ranking panels, which provide opportunities for employee involvement and accurate selection decisions, are not being used in a consistent and effective manner.	11. GPO should conduct ongoing assessments of the role and effectiveness of the rating panels.
12. The Office of Personnel is not strategically involved in staffing decisions.	12. GPO should develop a long-term strategy for recruiting and staffing, including a succession plan.
13. GPO's compensation program consists primarily of base pay and merit increases. No major component considers individual employee performance.	13. GPO should consider implementing a pay-for-performance compensation plan with a variable component to reward and recognize employee performance.
14. A majority of GPO employees are satisfied with their base pay packages.	14. GPO should conduct a formal benchmarking or best practices study regarding the compensation practices of other manufacturing organizations in a unionized environment.
15. There are no clear and measurable performance standards for work areas, departments, or services.	15. GPO should clearly define performance objectives and corresponding standards for all work areas and departments/services.
16. Employees are not provided incentives for achieving individual or organizational performance standards.	16. GPO should provide incentives to reward and recognize outstanding performance. GPO should reinstitute performance awards and the Incentives and Awards Recognition System.
17. The performance appraisal process does not serve its purpose of recognizing high performers, identifying the development needs of employees, and providing career progression opportunities.	17. GPO should improve the performance appraisal process to make it a better indicator and motivator of high performance.

Finding	Recommendation
18. In general, the provision of training at GPO is reactive rather than strategic.	18. GPO should reinstitute a strategic training needs assessment with an annual review to identify current competencies of staff, needed competencies, and appropriate training interventions.
19. Supervisory and management training is not provided on a routine basis, which results in decreased morale and the risk of violation of employee rights.	19. GPO should reinstitute mandatory training for supervisors, managers, and executives, including guidance on Employee Relations and Equal Employment Opportunity issues.
20. The Training and Career Development Branch lacks sufficient financial resources and personnel qualifications to meet GPO's training needs.	20. GPO should allocate the resources and personnel that the Training and Career Development Branch must have to play a major role in developing needed skills among GPO's workforce and be positioned to meet the challenges of developing future capabilities.
21. Despite a few effective training practices, adequate training is generally unavailable to the majority of GPO employees.	21. GPO should increase access to training by updating course offerings and delegating approval authority to managers.
22. Lack of training in labor relations and employee relations leaves the agency at risk of violating employees' rights under the existing union contracts.	22. GPO should reinstitute the employee relations training for supervisors.
23. Effective formal communication between labor and management has led to successful outcomes. Little informal communication occurs between labor and management outside that required for negotiation of high-impact issues.	23. GPO should develop systematic ways to increase communication between labor and management.
24. Labor and Employee Relations takes an overall reactive stance when dealing with disciplinary issues.	24. GPO should adopt a proactive Labor and Employee Relations stance to address repetitive disciplinary issues.
Financial Management	
1. The Office of Budget Personnel have a high level of subject matter expertise.	No recommendation.
2. Budget formulation is not linked to a formal, comprehensive strategic plan.	2. GPO should implement a systematic strategic planning process that provides the basis for current-year operating and capital investment budget requests.
3. Functional managers are not systematically held accountable for budget expenditure variances.	3. GPO should implement an executive information system that provides disciplined reporting and variance analysis response accountability.
4. Substantial resources are expended to produce, update, and disseminate overly complex data.	4. GPO should evaluate costs and benefits of data precision relative to actions that can be taken.
5. Prices for in-plant printing reflect "as-is" costs rather than "should-be" rates.	5. GPO should evaluate data used for standard price calculations and incorporate periodic work measurement studies.
6. The basis for allocating labor and other costs for organizations that charge to more than one funding source cannot be substantiated.	6. GPO should evaluate more quantifiable processes to measure actual costs that will produce more accurate and auditable results.
7. Numerous unintegrated spreadsheets and databases are required to produce budget documents and reports.	7. GPO should implement an integrated online accounting and financial reporting system.
8. Office of Comptroller personnel have a high level of subject matter expertise.	No recommendation.

Finding	Recommendation
9. Separate budget and comptroller organizations hinder effective communication.	9. GPO should create a Director of Finance position to provide unitary accountability for the spectrum of planning, financial management, and pricing functions.
10. The integrity of data captured by the time reporting system for in-plant production is subject to compromise by system obsolescence and by the adjustment input process.	10. GPO should replace the PROBE system with focused systems that address time and attendance tracking, print job activity tracking, and machine usage.
11. Some inaccuracies in billing to customers have been documented.	11. GPO should strengthen internal controls and implement a quality control program for billing.
12. Cost allocation methodologies are based on traditional measures.	12. GPO should revise cost allocation methodologies to more closely reflect present-day operating conditions.
13. Numerous unintegrated spreadsheets and databases are required to produce financial statements and reports.	13. GPO should implement an integrated on-line accounting and financial reporting system.
14. Some financial systems are not adequately documented.	14. GPO should complete the documentation of financial systems and update documentation where appropriate.
15. GPO's business-oriented financial systems make substantial contributions to managing product line operations.	15. No recommendation.
Information Technology	
1. GPO has successfully implemented new I/T capabilities in many parts of the organization.	1. GPO needs to leverage its I/T strengths as it prepares for the future.
2. GPO's I/T organization is highly decentralized with limited centralized management leadership, coordination, or oversight.	2. GPO should strengthen the centralized component of its I/T organization by following government and commercial best practices.
3. GPO faces substantial business risks due to Year 2000 issues relating to its mission-critical legacy systems.	3. GPO needs to apply a more rigorous project management approach to its Year 2000 efforts.
4. GPO lacks consistent I/T management processes.	4. GPO should reengineer key I/T management processes, drawing on government and commercial best practices.
5. Information management capabilities are inhibited by GPO legacy systems.	5. GPO needs to improve information management capabilities in its next-generation systems.
6. GPO's continued reliance on XYWrite software for electronic document management frustrates many congressional users, but the solution to this problem does not lie solely with GPO.	6. GPO should continue working closely with congressional SGML and electronic document management initiatives while beginning to develop its own SGML capabilities.
7. GPO faces many challenges in maintaining modern technical skills in its I/T workforce.	7. GPO should plan on outsourcing a significant portion of its I/T operations to ensure a more reliable supply of modern technical skills.
8. GPO's information systems security program has been undermined by staff reductions and budget cuts.	8. GPO needs to strengthen its information systems security program.

1. INTRODUCTION

The Legislative Branch Appropriations Act for Fiscal Year (FY) 1998 (P.L. 105-55) required the General Accounting Office (GAO) to conduct a management audit of the U.S. Government Printing Office (GPO). The accompanying Conference Report (H.R. 105-254) instructed the GAO to make extensive use of outside consultants to accomplish this audit. In December 1997 the GAO selected on a competitive basis Booz·Allen to conduct this audit.

The audit was commissioned to provide, at a minimum, an objective evaluation of specific activities with recommendations that will improve the efficiency and effectiveness of GPO. The Conference Report specifically stated that the audit “should not be encumbered by presupposing that GPO’s current operations, including in-house printing on the *Congressional Record* and other resource intensive congressional and executive branch publications and operating with three shifts, cannot be changed.”

The audit called for us to address six specific areas:

1. Superintendent of Documents Sales Program—Appropriateness and adequacy of the policies and procedures involved in the management of publication inventories
2. Printing Procurement Program—Adequacy and effectiveness of the program’s organization, operation, staffing, marketing, financing, procedures for contracting for printing services from private vendors, and the process for determining charges for printing and other services provided to Congress and executive branch agencies
3. In-Plant production—Ways to improve efficiency and cost effectiveness of the program, particularly its organization, mix of products, management, staffing, and processes for determining charges for printing and other services provided to Congress and the executive branch agencies
4. Personnel—Adequacy and appropriateness of personnel matters including training, deployment, and supervisory structure
5. Budgeting, accounting, and financial reporting systems—Adequacy and completeness of methodology, presentation, clarity, reliability, and ease of interpretation of these systems
6. Financial and other management-related observations and recommendations identified during the audit of GPO’s consolidated financial statement for the year ending September 30, 1995—Status of GPO’s actions regarding the observations and recommendations.

1.1 BACKGROUND

Title 44, United States Code (U.S.C.), and other laws and regulations determine the mission of the GPO. According to recent testimony of the Public Printer, the mission of GPO under these laws is to “fulfill the needs of the Federal Government for information products and to distribute those products to the public.” A more definitive statement was published in 1991

and again in 1993 when GPO initiated its short-lived strategic planning initiative. The mission as stated then was—

To assist Congress and the Federal agencies in the cost-effective creation and replication of information products and services, and to provide the public with the most efficient and effective means of acquiring Government information products and services.

This mission is consistent with the intent of Congress when it established the Government Printing Office under Congressional Joint Resolution 25 dated June 23, 1860. GPO began operations on Inauguration Day, March 4, 1861.

GPO is unique in that it belongs to the legislative branch of government but works for both the legislative branch and executive branch agencies. It must function in an environment where not only do the two branches of government have their own legal interpretations of Title 44, but GPO has no power to enforce the details of Title 44. GPO is also unique in that the Joint Committee on Printing (JCP) serves as its board of directors exercising a great deal of power over what GPO can and cannot do.

An additional unique characteristic of GPO is the composition of the workforce. Thirteen unions represent the majority of GPO workers. The unions negotiate salaries and benefits for the employees and directly affect policy decisions and operating procedures within GPO. It is not a homogeneous workforce and it is structured neither like a typical government agency nor a commercial industrial plant.

This combination of characteristics—charter, customers, workforce, and governance—make GPO a complex organization and unique among agencies of either the executive or legislative branch.

Although the printing of government documents can be traced back to colonial times, prior to 1860 printing was performed solely by the private sector with no checks and balances on printing contracts. As a result, graft and corruption were a normal part of doing business. GPO was established as part of an attempt to reduce the cost of printing to the Government and eliminate waste, fraud, and abuse in obtaining printing services for government documents.

GPO demonstrated early that it could save the Government money in printing services, and although it grew slowly in size, by 1977, GPO had grown to almost 7,700 employees. Over the years, its relationship with Congress reflected a constant struggle between the Public Printer, who wanted to modernize plant and equipment, and the congressional committees, which were concerned about high costs and high wages.¹

¹ For a more detailed historical discussion of GPO, see United States General Accounting Office, *Government Printing Office: Monopoly-Like Status Contributes to Inefficiency and Ineffectiveness*, Report No. GAO/GGD-90-107 (September 1990).

This struggle continues today. Congress, primarily through the JCP and the Legislative Sub-Committees of the Appropriations Committees, continues to pressure GPO to reduce costs, reduce the size of the workforce, and provide more effective and efficient services. Since 1977, the workforce at GPO has decreased from 7,676 Full Time Equivalents (FTE) to 3,599, a decrease of 53 percent. Although the decline has been continuous over that 20-year period, the greatest decline in any 5-year period occurred from 1992 to 1997 when the workforce declined by 25.5 percent. During that same 5-year period, however, the cost per FTE decreased in real terms from \$250,000 in 1992 to \$212,000 in 1997, a real decrease of 15 percent. Thus although Congress has seen a steep decline in the workforce size, the real cost of operations per employee has not declined as steeply. This can be attributed to several factors including the following:

- The increasing seniority of the workforce
- GPO’s inability to decrease the overhead cost pool as quickly as it reduces the size of the workforce
- The failure to significantly reengineer GPO operations as the amount of work and the workforce size declined.

Congress is currently revising Title 44, the governing legislation for GPO. The Committees solicited comments from the Public Printer and others on changes they would recommend to the current law. Congress also instructed that the GAO commission an audit of GPO to develop recommendations that will improve the efficiency and effectiveness of GPO operations. Booz·Allen & Hamilton conducted this audit with the full cooperation of the GAO and GPO.

1.2 METHODOLOGY

This subsection describes the organization of the Booz·Allen audit team and the approach we used in conducting the audit.

1.2.1 Audit Team Organization

Initially, we organized the audit team into five sub-teams that were closely aligned with the audit requirements, as shown in Exhibit 1-1.

**Exhibit 1-1
Integrated Teams and Activities**

GAO Specified Activities	Sales and Marketing Team	Contracting and Procurement Team	Production Team	Personnel Team	Financial Management Team
Sales Program	•	•		•	•
Printing Procurement Program	•	•		•	•
Production			•	•	•
Personnel	•	•	•	•	
Budgeting, Accounting, FM Systems	•	•	•		•

GAO Specified Activities	Sales and Marketing Team	Contracting and Procurement Team	Production Team	Personnel Team	Financial Management Team
Audit	•	•	•	•	•

There were three operational teams—the sales and marketing team, the in-plant production team, and the printing procurement team. There were also two functional teams—the personnel team and the financial management team. The functional teams were matrixed with the operational teams to ensure that personnel and financial issues were considered in each of the functional areas.

Information technology (I/T) was not explicitly called out for analysis in the charter for the audit. Our initial approach was to consider I/T in the context of the other teams, because it was not the responsibility of any one organization within GPO. However, as we progressed in the study, it became clear that the issues associated with I/T were GPO-wide issues and a separate Booz·Allen team could best treat these issues. This team was also matrixed with each of the operational teams to ensure that all I/T issues for these functional areas were captured.

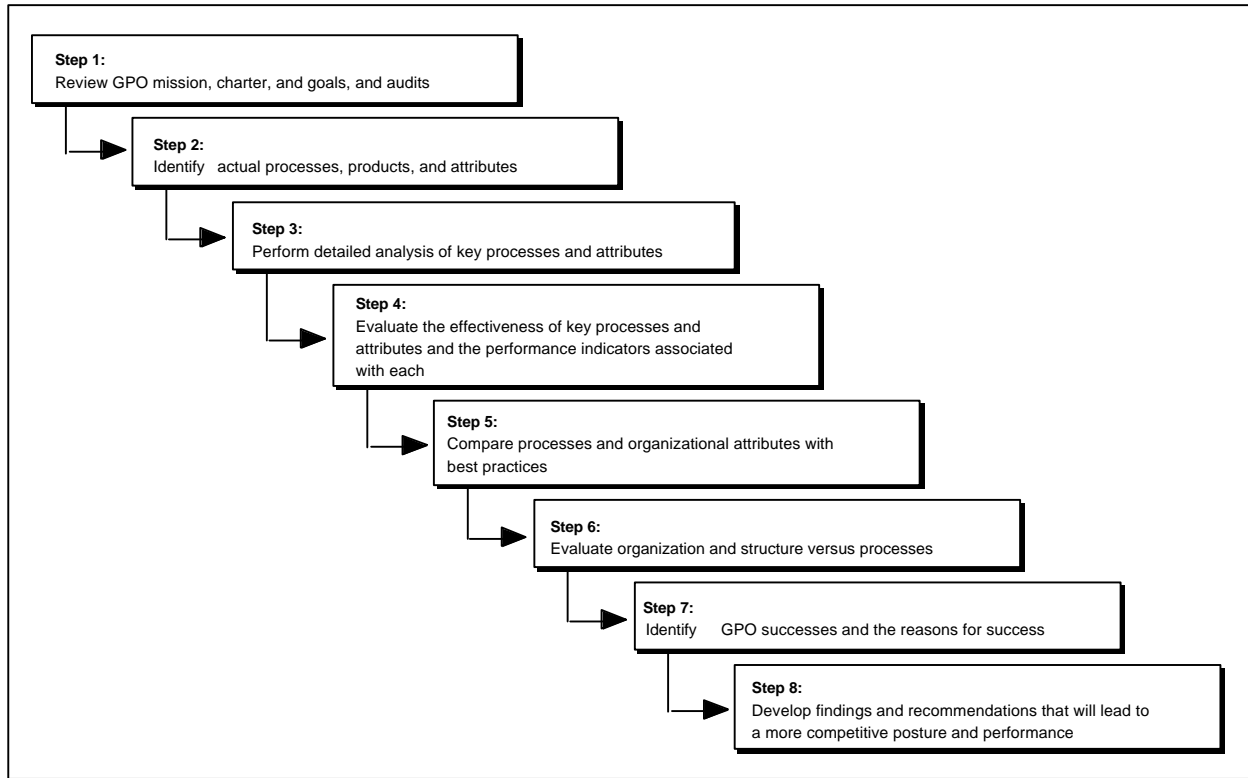
Many of the issues raised in the September 30, 1995, financial audit of GPO pertained to the operational and functional areas where our teams were focusing. Rather than establish a separate team to focus explicitly on these issues, we examined them in the context of our management audit of the operational and functional areas.

1.2.2 Analytical Approach

In conducting this audit, we employed the eight-step analytic approach shown in Exhibit 1-2 and described below:

- Step 1 was a literature review that examined GPO’s mission, charter, goals, and audits. This review focused on the legislation from which GPO’s mission and responsibilities are derived. We looked at internal documents relating to the mission that specified the goals and objectives of the organization. Because of the voluminous amount of material that we had to examine in the short period of time available, we generally limited the review to the last 5 years. Also, we reviewed any internal and external audit reports that were completed over the past 5 years. See Appendix A for a list of documents reviewed.

Exhibit 1-2 Booz·Allen Analytical Approach Structure



- Step 2 consisted of a series of interviews and focus groups with GPO staff and customers covering each of the operational and functional areas. These were held to allow us to determine the processes and attributes of each of the major activities. We were particularly interested in determining the key processes and attributes that were the drivers of the organization and therefore would require more detailed analysis in later steps. We conducted interviews and focus groups with external stakeholders, the customers of GPO. Specifically we met with representatives of the executive branch agencies and with staff of the committees and officers of the House and Senate. We were particularly interested in learning which GPO services they valued the most and which GPO services and processes they thought could be improved.
- Step 3 consisted of an analysis of the key processes and attributes identified in Step 2. In this step we developed the “as is” process flow diagrams and validated them with the staff in the operational and functional areas at GPO. We also conducted a survey to gather information for further analysis. The survey was distributed to a representative sample of all GPO employees including GPO executives. In this step we began to develop the links between key processes and attributes that could lead to a more effective and efficient organization.
- Step 4 evaluated the effectiveness of key processes and attributes. We examined these with respect to five characteristics—quality, service, technology, innovation, and cost.

This step became the foundation upon which some of the findings and recommendations were developed in the last step.

- Step 5 compared the key processes and attributes with “best practices.” We identified “best practices” in both the government and commercial sectors and compared these with GPO practices. Rather than apply “best practices” arbitrarily to GPO, we weighed the appropriateness of these practices against GPO’s mission and operations. Based on this analysis, we developed appropriate “to be” processes.
- Step 6 was an evaluation of the organization structure versus processes. Specifically, we wanted to determine whether the organization as it exists supports the “to be” processes. Where it did not support these processes, we recommended a change to the organization structure based on “best practices” in either the government or private sector.
- Step 7 was an analysis of those areas where GPO has had proven successes. We wanted to determine the characteristics of those successes and how the lessons learned from them could be applied to other parts of the organization. We also wanted to identify those processes or practices that could serve as “best practices” for others.
- Step 8 developed the findings and recommendations that will lead to a more efficient and effective GPO. These were developed based on the work completed in Steps 1 through 7 and reflect not only areas where GPO can improve its operations, but also those areas where they have had successes. In addition to findings and recommendations for each of the operational and functional areas, we developed findings and recommendations that pertained to the organization as a whole based on the analysis of all of the teams.

Much of the work in each of these steps was done concurrently. We conducted weekly reviews of each team’s efforts to ensure that our work was fully coordinated. These reviews included representatives from GAO. In addition, we provided GAO with formal program reviews in late January and early March. The remainder of this report reflects the analysis we conducted.

FINDINGS AND RECOMMENDATIONS

The approach we took to arrive at our findings and recommendations was a bottom-up approach. In the course of our analysis some issues arose that affected the organization as a whole. These we referred to as overarching issues because, by their nature, they affect the entire organization. These issues dealt with the future of GPO, the overall organization of GPO, and the lack of strategic planning within GPO. The following findings and recommendations address these issues.

Finding 1. From the customer perspective, there appears to be little support for eliminating GPO; there is, however, a strong desire on the part of customers to improve the efficiency and effectiveness of the organization.

We conducted focus groups with congressional and executive branch representatives who are regular users of GPO services. The congressional focus group consisted of

representatives of the offices of the officers of the Senate and the House, representatives of the Appropriations and other committees, and representatives of congressional agencies. These are primary users of GPO's in-plant production capability. There was unanimous agreement in this focus group that the Congress needed a printing capability over which they felt that they had control. The in-plant production capability of GPO serves this function today.

Cost of printing services is not the most important factor to Congress. Rather, Congress is more concerned with the timeliness and quality of the printed product than they are with the cost. This is consistent with the way that in-plant production operates. It is set up to meet the needs of Congress. The highest priority of the in-plant production team is to deliver the *Congressional Record* to the Congress by 11:00 a.m. each morning that Congress is in session, regardless of when they receive input from Congress or the amount of input. Some part of the *Record* will be delivered on time.

There are areas where Congress believes that GPO can improve: They do not always understand what they pay for GPO services; they do not always get the quality people from GPO that they would like; and they do not understand why GPO does not adapt better to congressional standards for word processing software. But the bottom line is that they want GPO available to them when they want them. However, they also want them to be more efficient and effective.

Similarly, when we met with representatives from the executive branch agencies, we found universal support for printing procurement services that GPO provides. Approximately 75 percent of the printing and information products requisitioned from GPO are contracted to the private sector and the majority of these are for the executive branch agencies. These agencies viewed this service that GPO provides as an example of "government at its best," and none of them felt that they wanted to or could do this function better than GPO. There were changes that they would like to see in the program, including more use of direct term deal contracts and changes in the pricing structure, but there was no support for eliminating GPO or the service GPO provides to these agencies.

Disseminating government information to the public as an inherent government responsibility. We found no evidence that people believe otherwise. There is strong support for the Federal Depository Library Program and increasingly making government information available electronically, free of charge, over the Internet. Disseminating information will remain a GPO responsibility—how that information is disseminated and the cost of that dissemination continue to be topics of discussion.

Recommendation 1. GPO should focus its energy on creating an organizational structure that is future oriented, and on developing and adopting new plans and business processes that focus more on where GPO and its customers want it to be and less on where it has been.

Senior leadership at GPO indicated that the focus of GPO during the past 5 years has been on providing its services to customers while managing a 25 percent reduction in its

workforce. Energy was directed more toward defending against the threat of elimination than planning for the opportunities in the future. The strategy employed by the leadership was more reactive than proactive.

Although there will be continued pressure on GPO to become more efficient and effective in delivering its services, and this may include further reductions in the workforce, GPO should adopt a more proactive strategy. Specifically, GPO should implement a rigorous strategic planning process, reengineer its core business processes, and establish an organization that supports the vision that GPO has for the future. The leadership should focus its energy not on ensuring that GPO survives, but rather on what GPO should be in the future.

Finding 2. GPO has no established strategic planning process and no current strategic plan that articulates where the organization wants to be in the future.

The history of strategic planning at GPO does not provide an encouraging picture. In the mid-1970s, GPO established an agency-wide planning process that involved key GPO officials. Although the process continued for several years, it was not sustained and died in the 1980s. In its September 1990 report, *Government Printing Office: Monopoly-Like Status Contributes to Inefficiency and Ineffectiveness*, the GAO recognized that GPO began developing a new strategic planning process in 1989 and recommended that GPO strengthen its strategic planning process. In December 1991, GPO published a strategic plan titled *GPO/2001: Vision for a New Millennium*. This was followed in January 1993 with a strategic outlook titled *GPO Moving Forward in the Electronic Age*. This was the last strategic document published by GPO about GPO and its future.

The following issues regarding strategic planning raised by the GAO in its 1990 report are still issues today:

- Past attempts at strategic planning have been unsuccessful
- Planning process lacks direction from top management
- Key players need to participate in the planning process
- Strategic planning should drive budget development.

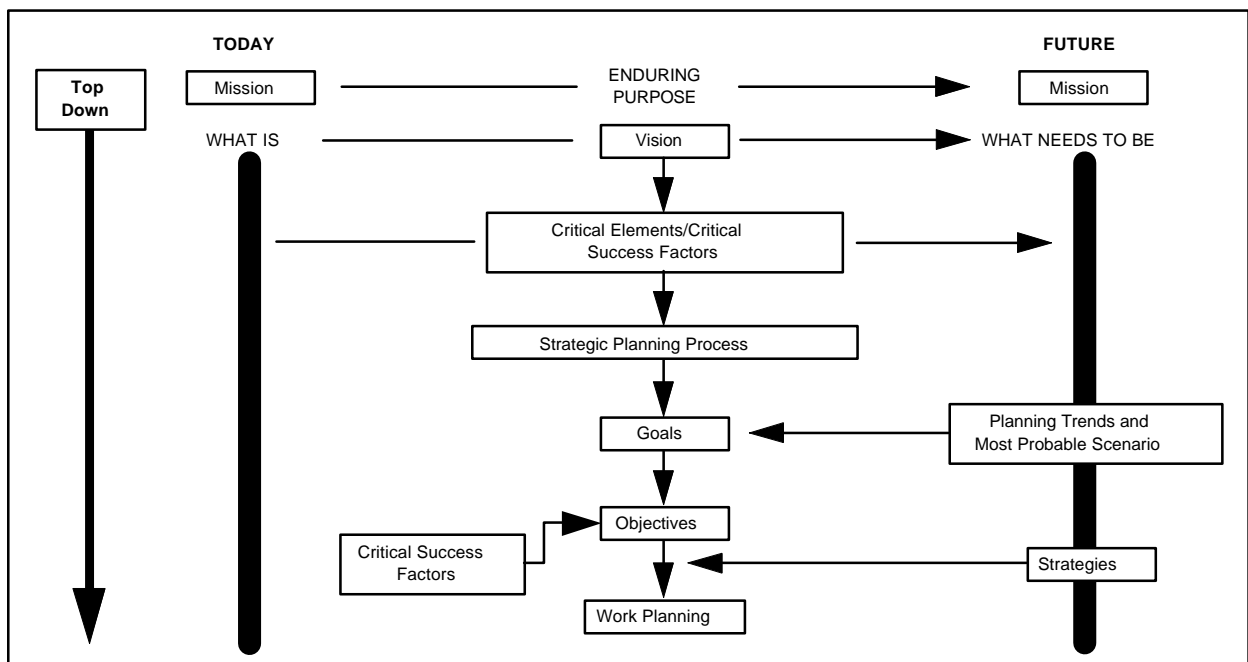
Without a strategic plan for the organization, there is no context in which to develop strategic plans for the functional areas such as information technology, human resources, and capital investment. Furthermore, planning then tends to be driven by the budget, where the planning horizon is 1 year. As stated in the 1990 GAO report, strategic planning should drive the budget.

GPO senior management recognizes that they need to reestablish a strategic planning process. They recently sent a letter to the JCP indicating that they wished to move forward with this initiative.

Recommendation 2. GPO should institutionalize the strategic planning process and link annual budgets to a published strategic plan.

The strategic planning process focuses an organization on the future. It reflects the “best practices” of organizations facing challenges similar to those GPO faces. It provides a logical, sequential process for GPO to plan its future requirements. The process begins with the mission of GPO today and a vision of where it wants to be in the future. Key to the process is identifying success factors that will allow GPO to achieve its vision and overcome its challenges. Exhibit 1-3 depicts the strategic planning process that we recommend.

**Exhibit 1-3
Strategic Planning Process**



The first step in the strategic planning process is to validate the mission statement and develop a vision statement of what needs to be. The mission statement is a statement of “what is”—what GPO is doing to provide service to its customers. Validating the mission statement requires the management to critically compare what GPO is actually doing with what the existing mission statement says it should be doing. The vision statement captures GPO’s leadership’s thoughts on what is required of GPO as it moves into the future. The vision statement may reflect the current path or it might reflect a new direction based on environmental trends that affect GPO. It must be a clear statement of purpose because it is the link between where GPO is and where it will be in the future. Without a clear vision, it is difficult to construct a credible strategic plan that encourages “buy-in” from both people within GPO and customers outside of GPO.

GPO also needs to define the critical success factors necessary to meet its future vision. Defining the critical success factors early in the process allows GPO to develop a plan that it can execute. For GPO some of these critical success factors might be—

- Freedom to manage the workforce to a budget level rather than to an FTE level
- Willingness of the key customers—Congress and executive branch agencies—to participate in the strategic planning process
- Willingness of Congress to invest in new capital that will allow GPO to exploit new technology.

Equally important, however, GPO must identify challenges as part of this process. Challenges are the known factors that must be overcome to achieve a vision. Some of these might include—

- Willingness of the workforce to embrace new processes and new technologies
- Political pressure to retain operations at locations that are operating at losses
- Increasing trend among executive branch agencies to provide or procure their own printing services.

A key part of the process is to identify specific goals and objectives to address the identified obstacles and impediments. Goals GPO establishes should support and help achieve the vision, should be realistic but challenging, and should serve as steps toward getting where GPO expects to be at the end of the plan. The objectives should be intermediate tasks that, when taken together, allow those responsible for providing GPO's services to accomplish the goals. Finally, a series of actions necessary to accomplish the objectives or tasks should be identified and incorporated into the implementation plan.

The environment in which GPO works and will work in the future provides the backdrop against which it should develop its goals and objectives for the strategic plan. The environmental analysis should be conducted from three perspectives:

- Current environment—a snapshot of the political, technological, and business environments in which GPO operates
- Current trends—an analysis of the direction that relevant elements of the current environment have been taking over the past several years and an assessment of the likelihood that these trends will continue
- Future drivers and trends—an evaluation of what the critical elements of the environment will look like in the time frame over which the strategic plan will be operative.

Changes in the environment that do not have an effect, direct or indirect, on the key functional areas should not be considered part of the environmental analysis. One key

aspect of the environment that must be considered is the financial aspect. Failure to correctly evaluate the fiscal environment can damage the credibility of an otherwise sound strategic plan.

After GPO develops its strategic plan, it should then develop an implementation action plan to ensure that what is proposed in the strategic plan is executed. The implementation plan should be the final step in the strategic planning process. It should be an action plan in that it should lay out the responsibilities of the organizations within GPO for executing the plan and it should display timelines for when different planned phases and tasks will begin and complete. While the strategic plan should define the “what,” the implementation plan should describe the “how.”

A strategic plan should be a “living document” in that it is updated periodically to account for changes in the environment or other factors. The planning horizon can vary, but we recommend that GPO follow the same planning horizon that the Senate adopted in its strategic planning process. The plan should be a 6-year plan that is updated every 2 years at the beginning of a new Congress. Because the GPO is a legislative branch agency, this schedule allows them to have a current plan available for each new Congress. Once approved by that Congress, it will be operational for at least 2 years.

Responsibility for developing the strategic plan should lie with the Public Printer. We recommend that an executive steering committee comprising the Public Printer and his senior managers develop the plan to ensure that it is fully coordinated across all functional areas of GPO. This will help ensure buy-in within GPO and by outside stakeholders because it will represent the coordinated position of GPO’s management.

The strategic plan should be the document that drives the budget. Budget justification should be linked to the strategic plan. This is consistent with “best practices” in government and with the recommendations made by the GAO in 1990.

Finding 3. The organization of GPO is highly centralized and does not facilitate communication across functional areas.

As shown in Exhibit 1-4, the GPO organization has a very flat structure with 21 managers reporting to the Public Printer and the Deputy Public Printer. This is an increase of 12 direct reports since 1993.

² Characteristics of this organization model include—

- Tight management control
- Minimal executive interaction with employees more than one level below
- Clear and fixed functional areas
- Downward-directed control and accountability

² Miles H. Overholt, "Flexible Organizations: Using Organizational Design As a
Resource Planning 20, No. 1 (1997).

-
- Downward-directed information flows on a need-to-know basis
 - Little need for employees to share job information with their peers
 - CEO-generated information technology decisions
 - Pre-determined, routinized, and standardized work-processes.

It is an organization model that does not encourage innovation or communication and does not make efficient use of the intellectual capital that is resident in an organization.

Furthermore, the span of control within GPO is not consistent with “best practices” either within government or within the private sector. For example, a 1996 Watson Wyatt survey of various organizations found that the number of managers reporting directly to the CEO averaged 10.5, with 13 the maximum and 8 the minimum.

Recommendation 3. GPO should adopt an organization model that reduces the number of senior executives reporting directly to the Public Printer, empowers senior managers to make decisions, and provides easy and effective communication across functional areas.

A more appropriate organization model for GPO is one that Overholt refers to as the “moderately centralized, moderately cross-functional” model. Characteristics of this

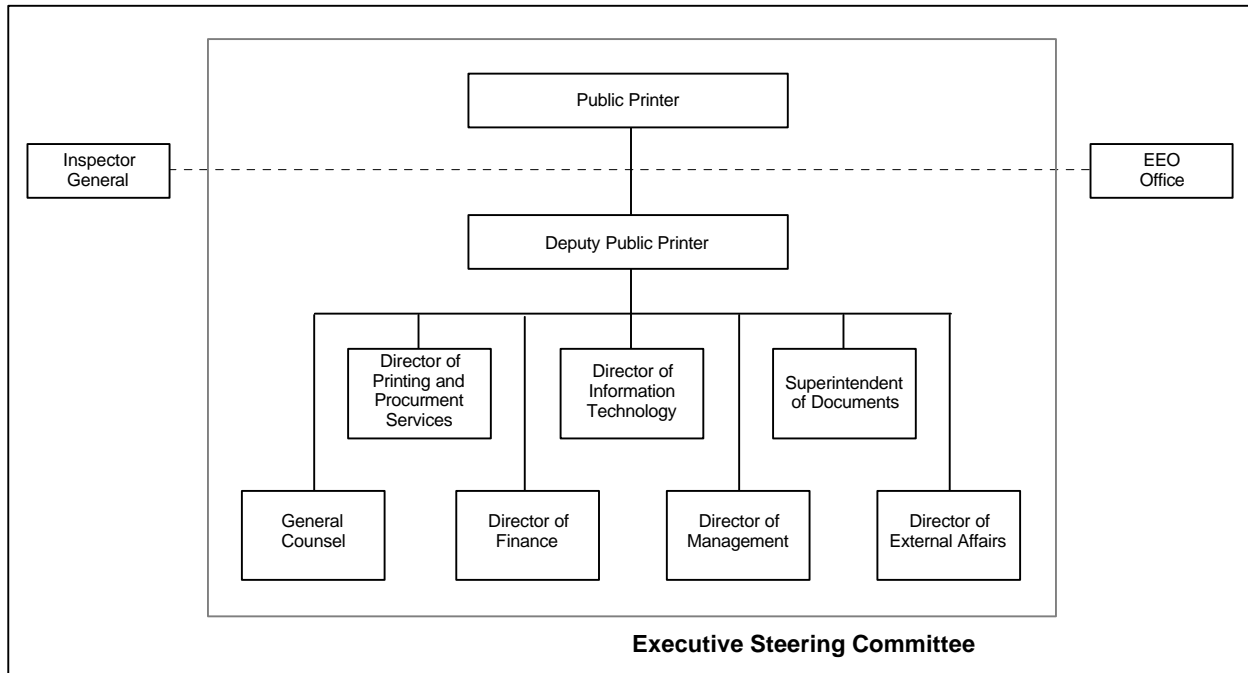
- A small core of executives make key strategic decisions.
- Organizational philosophy follows preset rules and procedures but incorporate individual judgment.
- Cross-functional cooperation is stressed.
- Strategic plan, key budgetary information, and performance measures are shared with all employees.
- Information technology is designed to encourage cross-functional cooperation.
- Employees recommend changes in work processes to managers when processes need to be revised.
- Employees frequently discuss job-related issues with their peers.

This type of model increases communication across the organization, encourages employee input to solving problems, and yet maintains the structure necessary for GPO operations.

Exhibit 1-5 is an alternative top-level organization for GPO that is consistent with the tenets of the “moderately centralized, moderately cross-functional” model. It provides a core management staff—the Executive Steering Committee—that makes the key strategic decisions. It is this committee that would be responsible for developing and implementing the strategic plan and ensuring that the budget and implementation actions are consistent

with the strategic plan. It also works to ensure that execution across all functional areas is consistent with the GPO mission and vision of where the organization wants to be.

Exhibit 1-5 Alternative GPO Organization



Rather than creating a new management layer on top of the current management scheme, this organization is based on a consolidation of functions under a single director. For example, the Office of Comptroller and the Office of Budget in the current organization would be consolidated under a single executive, the Director of Finance. Rather than having two offices headed by different executives, there would be one office headed by a single executive. Similarly, the Printing Department, the Customer Service Department, and the Printing Procurement Department would be consolidated into a single organization under the Director of Printing and Procurement Services. This will reduce the number of senior managers and will open the avenues of communication between Printing Procurement and Production while including customer service as an integral part of these core operations.

Only one new management position will be required under this organization alternative. The Director of Information Technology will have management responsibility for I/T policy and planning for all of GPO. This office should result from the consolidation and streamlining of all of the pockets of information technology that exist throughout GPO. Because we recommend that most of the I/T operations at GPO be outsourced in the future (see Recommendation 7 in Section 7, Information Technology), this office will primarily be a policy, planning, and management office for I/T.

Recommendations in other sections of this report address the reorganization of different sectors of GPO (Recommendation 2 in Section 5, 3 in Section 3, 5 in Section 4, and 2 in Section 7). These alternatives, we believe, will lead to a more efficient and effective GPO oriented toward helping GPO provide better service to customers in the future. Consistent with any reorganization, GPO should engage in a reengineering effort designed to bring the new organization and work processes into alignment.

The remainder of this report assesses the various functions and activities of GPO:

- Section 2—Marketing, Sales, and Distribution
- Section 3—Procured Printing Services
- Section 4—In-Plant Production
- Section 5—Human Resources
- Section 6—Financial Management
- Section 7—Information Management.

Each section contains the Booz-Allen team’s findings and associated recommendations concerning that subject area. Relevant appendixes are included in the end of the report.

2. MARKETING, SALES, AND DISTRIBUTION

In an era of reinventing government, few if any public sector organizations today can escape the mandate to improve services to their citizen or government customers. Many have found that proactive marketing and selling initiatives are critical to meeting their performance goals, especially under the 1993 Government Performance Results Act (GPRA).³ This chapter deals with the various sales, marketing, and distribution activities of the Government Printing Office (GPO). While most of these activities occur within the retail sales operation of the Superintendent of Documents, various other entities within GPO also engage in these activities. We conducted a series of interviews with GPO staff to determine the processes and attributes of the marketing, sales, and distribution activities. Appendix B lists the areas in which interviews were held.

Two organizational entities within GPO conduct sales and marketing efforts, Customer Services and the Superintendent of Documents. As the name implies, Customer Services includes staff engaged in servicing Federal Government printing accounts, including Congress and over 150 agencies and other organizations within the executive and judicial branches of government.

The second major organization entity, the Superintendent of Documents, includes the Document Sales Service and the Library Programs Service organizations. Document Sales performs all the important marketing functions of researching, promoting, packaging, pricing, order-processing, servicing, and distributing publications to consumers. While GPO staff have in-person and indirect contact (via telephone, fax, and mail) with retail customers, “selling” activities by Customer Account Representatives are limited primarily to order taking and occasionally suggesting titles in response to customer inquiries.⁴ The Library Programs Service organization performs all the functions that fulfill GPO’s statutory obligation to catalogue and distribute free-of-charge Federal Government publications. Although Library Programs Service staff perform some limited outreach and awareness building activities, we chose the word “distribution” in this section to apply principally to their activities, and to a lesser extent to the fulfillment function of warehouse operations in retail publication sales.

2.1 MARKETING AND SALES ISSUES FOR AGENCY AND CONGRESSIONAL PRINTING

Within the GPO Customer Services organization resides the Departmental Account Representative Division (DARD). As the name implies, this Division provides agencies and others in the executive and judicial branches with account representatives who act as liaisons between GPO and the respective agencies. There are 17 account representatives who provide technical advice on printing, including information on the status of printing jobs performed or procured by GPO. These representatives are organized into six teams, with each team led by a

³ This law applies only to executive branch agencies and departments, and does not apply to GPO, which operates under the legislative branch (although the President appoints the Public Printer).

⁴ GPO Retail Sales Service does have a job classification for customer service representatives, although some of the functions performed by the order processing and supply clerks could be considered appropriate for a customer service representative.

senior account representative and assigned specific agencies to serve. In addition, the senior account representatives on each team are expected to engage in customer outreach efforts, making regular visits to the printing contacts at agencies assigned to their team.

FINDINGS AND RECOMMENDATIONS

Finding 1. GPO's customer service account representatives are inadequately trained, understaffed, and lack adequate tools to improve and strengthen GPO's relationship with Federal agency printing customers.

During interviews with the senior account representatives, we discovered the following:

The six senior account representatives have been employed in the printing industry most of their careers, and all have at least 10 years of service with GPO. Despite their extensive experience with GPO and other printing organizations, we discovered shortcomings in the training and experience of these representatives. For example—

- With the shift toward electronic prepress work, senior account personnel considered themselves ill-prepared to discuss with and advise their clients on this technology, which is widely used in the industry and at GPO.
- Little or no formal training has been offered to senior account personnel in best practices for key account development and management—a primary responsibility of senior account representatives.

The drop in workload attributed to a downsized Government has been offset by account staff attrition and a trend toward decentralization in printing requirements at Federal agencies.

As a result of decentralization in printing among Federal agencies and GPO staff attrition, each GPO account representative now has 23 to 29 agency accounts to service. This number has increased by 10 to 12 accounts from a decade ago.⁵ According to GPO senior account representatives, the decentralization and downsizing in Federal agencies has produced more inexperienced agency contacts in need of printing advice from GPO. Thus, it takes more time on the part of the account representatives to properly service these accounts than it did several years ago. (Under the current system, all agency contact is channeled through GPO account representatives who are responsible for providing printing advice, responding to complaints and inquiries, and clarifying requirements for printing procurement requisitions.)

⁵ We did not independently verify these accounts-to-account-representative ratios, but we do know that the account representatives in total are responsible for more than 150 agencies, departments, and commissions in the executive and judicial branches. Moreover, the *Customer Agency Telephone Book* (January 1998) contains in excess of 500 contacts dispersed among the 150 organizations these GPO account representatives serve. We were also told that at the Department of Interior, GPO interacted with a single, central printing office until 3 years ago when this office created 15 agency points of contact.

Because of these demands on account representatives' time, and the lack of adequate telecommunication services, most of their days are spent at their desks, leaving little time to engage in proactive account development. Account representatives do not have reliable telephones, and lack computers, voice mail, and other similar tools to improve their performance and free up more time for their account development tasks.

Account representatives and their managers contend they have difficulty recruiting and retaining staff from other groups within GPO, primarily because of high stress and poor pay (i.e., low grade levels) relative to their counterparts in other areas of GPO. A related reason given for the attrition is that Federal agencies, confronted with decentralized printing requirements, have been hiring away experienced GPO account representatives.⁶

The account representatives, either individually or as a team, do not produce any sales reports describing their activities, nor do they have any sales or account development plans to guide them or measure their performance. The account representative teams also appear to have difficulty establishing and adhering to priorities based on the monetary value of their accounts. Regardless of value, all accounts are to receive the same level of service, despite the limited resources and staff available.

Account representatives stated that their goal was to visit agencies at least once per month, but we could find no evidence that is occurring. It also appears that, based on the apparent need to remain in their offices, account representatives rarely meet their monthly goals.

Recommendation 1. GPO should revitalize customer service and reengineer the approach to customer communications.

We recommend GPO take the following actions:

- Place a high priority on filling the vacancies in Customer Services
- Modernize and provide essential tools for account representatives to perform their tasks, e.g., telecommunications and information technology (I/T)
- Provide training, both technical and customer service, so that GPO's frontline representatives present a positive image of the agency
- Require that each senior account representative managing a team create a sales and account development action plan, and involve senior management in monitoring the progress in achieving those plans
- Reengineer the customer relations approach in a manner consistent with the overall marketing plan

⁶ At the time of our interviews with staff in DARD, one key staff member had an offer pending from another agency.

- Create customer-focused teams by including printing specialists from the Printing Procurement Department with account representatives from DARD to increase and strengthen effective communication with customers
- Leverage customer access to GPO's largest account, Department of Defense (DoD). Through extensive teaming with account representatives of the Defense Automated Printing Service (DAPS).⁷

About 90 percent of all agency print requisitions are outsourced. Account representatives and others in the printing procurement process interact constantly. Much of the communication between the account representatives and the agency involves clarifying the printing requirement, tracking status, responding to printing complaints, and billing errors. The customer-focused teams could ease some of this workload, freeing the single senior account representatives to pursue high priority customer relationship building.

Finding 2. GPO's Customer Services operation has little marketing or business development under way.

Although GPO management intends to be the "Printer/Publisher of Choice" for Federal agencies and others, its underlying approach and expectation is that Title 44 should be enforced, enabling GPO to simply manage the accounts.

There is no marketing group, marketing plan, or stated goals and objectives to maintain or improve GPO business and support procured printing operations. The Public Printer recently appointed a new Director of Customer Services, however, who has begun several initiatives, including—

- Developing new displays and marketing materials
- Developing a brochure detailing GPO services
- Developing a presentation, "Making Effective Use of GPO"
- Creating interagency agreements to strengthen and broaden GPO's publishing services on behalf of its agency customers.

The new Director of Customer Services also intends to meet with senior management in each agency on their priority needs, and take action on proposed marketing initiatives.

⁷ DAPS and GPO have been active participants in the Printing Acquisition Reengineering Team (PART) initiative begun in 1996 to improve the printing acquisition process for DoD customers. During these meetings, GPO and DAPS agreed on the need for more teaming to educate and better serve DoD customers (e.g., refer to the 12–13 March 1997 PART Session Report, pp. 7–8). In spite of these intentions, however, action in this area has been minimal.

Recommendation 2. GPO should create a focused marketing and business development group under the leadership of a trained marketing professional.

Our recommendations in this area are—

- GPO needs more professional talent in the field of marketing and sales. If necessary, GPO should hire the appropriate talent to lead this new initiative.
- Customer Services must develop a comprehensive marketing strategy that sets goals and objectives and assigns responsibility for accomplishing them.
- Most importantly, Customer Services needs to develop a budget to support this initiative and invest the appropriate resources.

GPO should continue to include the Customer Service and Account Representative functions as elements of its overall marketing plan.

GPO's Institute for Federal Printing and Electronic Publishing, which is under the management of Customer Services, has the potential to be an effective business development and customer relations entity. We recommend that this entity become more involved in developing and executing customer outreach efforts.

2.2 RETAIL SALES OPERATION

Production and dissemination of printed matter have historically been complementary functions of the GPO. Title 44 serves as the legislative foundation that mandates and governs these two vital functions within GPO. Although Title 44 does not mandate that GPO sell publications, it does grant the Superintendent of Documents the authority to determine what, if any, publications can be sold, subject to certain restrictions, notably pricing.⁸

Over the years, retail sales has evolved into a substantial and elaborate enterprise, with GPO managing more than one million orders and collecting receipts in excess of \$70 million in Fiscal Year (FY) 1997. Exhibit 2-1 summarizes characteristics for GPO's retail sales.

Today, customers and prospects have several ways to reach GPO to obtain information and purchase publications. Customers and prospects can inquire and place orders via telephone, mail, the Internet, or fax-on-demand to GPO's central order processing center in Washington, DC, or they can deliver orders to one of GPO's 23 bookstores located in cities nationwide.

GPO Access, has also become a popular site, not only for its convenience for ordering publications, but also for its offering users the opportunity to download free databases and reports.

⁸ GPO sells only Federal Government documents. Although no legislative prohibition appears to exist, GPO does not sell state and local government publications or commercial documents.

Exhibit 2-1
GPO's Library Program Services and Retail Sales Characteristics

	FY 93	FY 95	FY 97	Percent Change FY 93–FY 97
Library Programs Service				
Titles Distributed to Depository Libraries	72,811	63,144	31,820	-56
• Hardcopy	24,919	21,501	14,732	-41
• Microfiche	47,600	41,231	16,437	-65
• Electronic	292	412	741	154
Copies Distributed to Depository Libraries	25,721,377	19,819,550	12,761,953	-50
• Hardcopy	10,796,536	7,678,351	6,418,990	-41
• Microfiche	14,758,324	11,909,930	6,001,858	-59
• Electronic	166,517	231,269	341,105	105
• Documents Cataloged	36,737	32,046	19,080	-48
Retail Sales Operation				
Total Retail Revenue	\$84,083,133	\$80,136,000	\$70,325,144	-16
• Central Order Division (Inbound Retail)	\$63,707,598	\$58,282,993	\$49,358,749	-22
• Field Operation Division (Retail Bookstores)	\$15,517,153	\$15,243,062	\$14,022,032	-10
• Sales By Agents	\$728,867	\$498,319	\$266,270	-63
• Sales By Pueblo Distribution Center	\$1,415,479	\$1,147,834	\$691,828	-51
• Congressional Sales Outlets	\$235,146	\$186,966	\$133,818	-43
• Electronic Products	\$1,783,654	\$3,907,088	\$5,167,488	190
• Low-Priced Publications	\$685,008	\$858,889	\$673,682	-2
• Sales To Depository Libraries	\$10,228	\$11,079	\$10,277	0
Inventory				
• # of Copies Available	8,555,225	8,919,597	5,584,208	-35
• # of Titles Available	17,563	16,157	11,900	-32
• Retail Value of Inventory	\$83,499,306	\$85,038,076	\$61,198,055	-27
Mail Orders				
• Subscription Orders	322,854	311,373	230,731	-29
• Publication Orders	348,317	369,745	261,837	-25
• Bookstore Mail Orders	60,334	52,043	31,738	-47
Telephone Orders				
• Central Office	145,624	152,326	110,425	-24
• Bookstores	48,942	55,705	48,045	-2
Walk-in Orders				
• Bookstore Walk-In Orders	210,805	165,272	114,241	-46
• Main GPO Customers	7,685	5,050	3,386	-56
• Retail Sales Branch Customers	12,371	7,583	5,323	-57
Total Orders	1,156,932	1,119,097	805,726	-30
Total Order Percent Breakout				
• Mail Orders	73%	75%	74%	
• Telephone Orders	12%	14%	15%	
• Walk-In Orders	15%	12%	12%	

Another 20 percent of the revenue is earned from GPO's retail bookstores. The Pueblo Distribution Center operated for GSA and GPO-licensed sales agents account for the remaining 5 percent of revenue.

Other Federal Government agencies and organizations also sell reports and other print and electronic products to retail customers, occasionally in cooperative ventures with GPO. These agencies include the U.S. Census Bureau, National Technical Information Service (NTIS), Bureau of Transportation Statistics (BTS), and the U.S. Geological Survey (USGS).

In addition, GPO operates as a wholesaler and fulfillment center for book publishers and retailers. Some retailers stock GPO publications, while others order publications from GPO on behalf of a customer or simply send a list of customers' orders to GPO for GPO to ship. Other wholesalers photocopy an original version of a GPO-printed document, and then sell these copies to their customers.⁹ *Amazon.com*, a popular Web site for purchasing books, also sells most of GPO's more popular publications.

Central Order Division (Inbound Retail). More than 75 percent of GPO's total retail sales revenue is generated via telephone and mail order to the Central Order Division, located in GPO's Washington, DC, headquarters. In FY 97, about 165 GPO employees staffed this operation, which processed about 493,000 mail orders and 110,000 telephone orders.¹⁰ In addition, these same staff managed another 361,000 telephone and mail inquiries requesting information about publications or the status of their orders.

For reasons discussed throughout this section, order volume and revenue have decreased about 25 percent in this Division from FY 93 through FY 97. During this same time period, the staff in the Central Order Division has been downsized from 251 to 165 employees—a 33 percent decrease.

Field Operations Division (Retail Stores). The Field Operations Division consists of 23 retail bookstores and the Pueblo Distribution Center in Pueblo, Colorado. Excluding Pueblo, about 100 staff manage and operate the 23 bookstores. In FY 97 these staff processed about 197,000 mail, telephone, and walk-in orders, amounting to \$14.0 million in sales revenue (20 percent of total).

Although no explicit written mission statement is available, the understood mission of the Field Operations Division is to sell publications throughout the United States and to provide customers with personalized service. Other than the goal of operating on a break-even basis, the Field Operations Division has no explicit goals.

Although locations of bookstores within some cities have changed, the number of bookstores, 23, has remained constant since the opening of the last bookstore in 1988 in Portland, Oregon. The stores are housed in commercial and Federal buildings and leased directly by GPO or through GSA. The lease cost for each store depends on the store's location and size. The

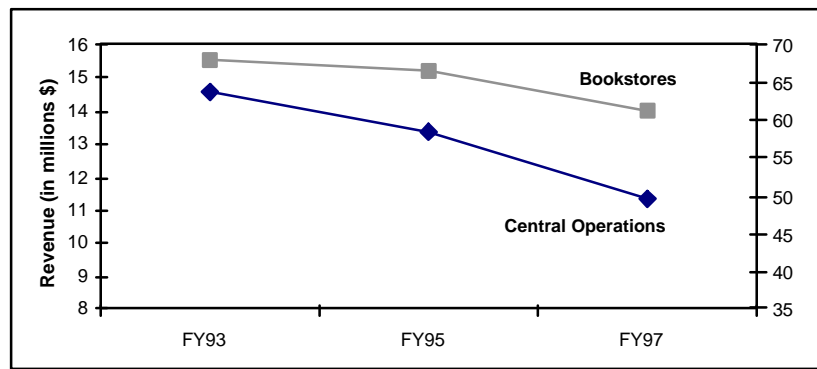
⁹ Unlike Canada and the United Kingdom, the United States does not copyright-protect documents when the content is produced from government funds. Private citizens are free to reproduce Federal Government documents and databases and distribute them as they see fit.

¹⁰ This processing includes all order entry steps, including invoicing and transmission of the order to the warehouse for shipping.

location of a store within a city is determined based on several criteria, including pedestrian traffic, potential customers, and the types of businesses located in the area.

Unlike the 25 percent revenue decline in the Central Order Division, revenue from the 23 retail stores has declined only 10 percent between FY 93 and FY 97 (See Exhibit 2-2). The precise reasons for this modest decline are not known, but it appears that even though the retail stores stock substantially fewer titles than the Central Order Division, the retail stores sell a more diverse portfolio of publications. Moreover, unlike the Central Order Division, the retail stores have not been as dependent on sales of the *Federal Register (FR)* and *Commerce Business Daily (CBD)*, which have converted to electronic versions available for free via the Internet.

Exhibit 2-2
Trend in Retail Sales Revenue
(Bookstores vs. Central Operations)



Fulfillment and Warehousing. The Laurel Warehouse Operations are housed in two adjoining warehouses (Laurel 1 and 2) in Laurel, Maryland. The Laurel Warehouse Operations Branch employs 140 personnel, of which about 100 are blue-collar and 40 are white-collar workers. Two unions represent the workforce. The American Federation of Government Employees (AFGE) represents the white-collar workers, and Teamsters Local 713 represents the blue-collar workers. Although a union represents all employees, not all employees belong to a union. The current Laurel Operations Coordinator has been in his position for 2 years. He reports to the Director of Documents Sales Service, Superintendent of Documents.

Laurel 1 occupies 204,000 square feet and is leased annually for \$683,400 for FY 98 and FY 99. The lease for Laurel 1 expires in August 1999. Laurel 1 houses the Warehouse Division, which is used for receiving, bulk storage and shipping, and the Consigned Section. Bulk products are stored on pallets that are placed on racks. The Consigned Section stores publications on racks and in bins, and ships publications for Federal agencies on a reimbursable basis.

Laurel 2 occupies 202,000 square feet and is leased annually for \$856,480 for FY 98 and FY 99. The lease for Laurel 2 expires in December 2000. Laurel 2 includes staff and equipment to operate a "letter shop," primarily to support labeling work for GPO subscription customers. Laurel 2 also houses the Retail Distribution Division, which consists primarily of bins that contain

small quantities of all publications available for sale. When necessary, the bins are replenished by moving publications from bulk storage into the bins.

The warehouse employees receive publications shipments from multiple sources, usually contract printers. After a product is received, it is stored on pallets mounted on racks. When a purchase order is placed for a publication, the product is shipped, in bulk, or moved to the Retail Distribution Division. Shipping to customers outside the warehouse is achieved by—

- Roadway Packaging System (RPS), under contract to GPO to handle outgoing shipments up to 70 pounds
- Federal Express, for high-priority shipments when requested by the customer
- United States Postal Office (USPS) and United Parcel Service (UPS) for other shipments
- Other carriers, who have a tender on file with GPO, for bulk shipments more than 70 pounds.

RPS makes a daily pickup at the warehouse. USPS, which has employees on-site at Laurel to process USPS shipments, picks up packages daily. Other shipments are arranged as needed, but generally no less than three times per week. When these shipments are ready, Laurel Operations notifies GPO Transportation Operations, who then generates a Government Bill of Lading (GBL) for, and arranges pick up with, one of the carriers on tender with GPO.

The product management system (PMS) tracks, locates, and monitors products stored in the warehouse. The PMS tracks only what is in the warehouse. It cannot be used to track or predict workload data. Other systems and reports used at GPO Headquarters to track warehouse workload include “Projected Cumulative Copies Sold From Central Office Report, Sales/*Federal Register* Programs,” “Receipts, Disposals, Exchanges, and Claims System,” and “Annual Sales

During FY 97, Laurel received 14,000,000 copies and shipped 14,300,000. These figures are down 37 percent and 32 percent, respectively since FY 95.

With the exception of the retail sales outlet, Laurel Operations performs all of its functions based on direction received from GPO Headquarters. For example—

- Order Division receives orders from customers and sends a pick ticket to the warehouse for “picking and shipping” operations.
- Inventory Management Specialists in the Documents Control Branch provide directions for inventory management, disposals, transfers, etc.
- Transportation Management provides carrier information for outbound shipments.

The Springbelt Warehouse, located in Springfield, Virginia, occupies 180,000 square feet. Springbelt is leased annually for \$720,000 for FY 98 and FY 99. The lease expires in

September 2000. Springbelt serves as a backup storage facility for paper and materials for the printing operation of GPO. It is filled to about 60 percent of capacity. Springbelt has a workforce of 16, 10 of whom are blue collar and 6 of whom are white collar.

Paper in the warehouse is on rolls and stored on racks. Based on historical usage criteria, the Paper and Materials Control Section of the Production Department orders this paper. When necessary, a trucking contractor moves the paper to GPO Headquarters. Paper supplies turn over roughly four times per year. On average during FY 97, there were 12 million to 13 million pounds of paper (about a 3-months' supply) stored in the warehouse at any given time. During FY 97, Springbelt received 22,800,000 pounds of paper and shipped 26,200,000 pounds. These figures are down 41 percent and 32 percent, respectively, since FY 95.

Materials consist of adhesives, envelopes, cartons, pallets, skids, carpentry supplies, repair parts for printing equipment. These materials are stored on the floor and on racks. They occupy about 20 percent of the warehouse. Turnover for these materials varies by item.

No decisions are made at the Springbelt Warehouse concerning ordering, planning, or forecasting paper needs.

The current Chief of the Springbelt Warehouse has been in his position for 11 months. He reports to the Chief of the Stores Division of Materials Management Service.

Financial and Market Analysis. As data on Exhibit 2-3 illustrate, GPO's retail order volume and revenue have been steadily declining for several years. Since FY 93, order volume has dropped from 1.58 million to 1.06 million shipments in FY 97—a 33 percent decline. Revenue, however, declined less dramatically, from \$84.1 million to \$70.3 million—a 16 percent decline during the same period. Price increases for printed publications and a change in the mix of products sold to more expensive (on a per-unit basis) electronic documents and databases account for the relatively slower decline in revenue.

In contrast to other operations within GPO that rely on congressional appropriations, retail sales operates on a revolving fund basis. The retail sales operation must cover its entire cost for a fiscal year with revenue generated in that same fiscal year from sales of publications to the public or risk curtailment or closure of its operations.¹¹ Unlike private enterprises, however,

Exhibit 2-3
Retail Sales

Financial Trend for the Retail Sales Operation (\$ in Millions)					
	FY 93	FY 94	FY 95	FY 96	FY 97

¹¹ The one exception to total reliance on the Revolving Fund is the application of congressional appropriations to reimburse the retail sales operation for: (a) Salaries and expenses incurred to support the *GPO Access* Internet Web site; and (b) for distributing the *Code of Federal Regulations* (CFR). In FY 97, this amounted to \$3.4 million (4.8 percent of sales). The Findings and Recommendations section discusses the matter of claiming appropriations as revenue.

Total Reported Sales Revenue	84.1	81.9	80.1	70.5	70.3
Less: Appropriation Adjustment*	- 2.3	- 1.4	- 2.2	- 2.6	- 3.4
Net Sales Revenue	81.8	80.5	77.9	\$67.9	66.9
Less: Total Reported Costs	-78.2	-74.3	-74.7	-76.8	-65.0
Net Profit (Loss)	3.6	5.6	3.2	(8.9)	1.9

* These adjustments remove congressional appropriations classified as sales revenue but used to support GPO's Internet site and to distribute the *Federal Register*.

retail sales lacks a capital budget to invest in modernization. This lack of funding, when coupled with other systemic and market factors, is resulting in eroding sales and profits.

In connection with the costs to operate GPO's retail sales operation, the following observations were made:

- As the note in Exhibit 2-3 illustrates, GPO has chosen to record certain congressional appropriations as "sales revenue," which we removed to provide a measure of sales more in keeping with typical business practices.
- For FY 96, the retail sales operation was unable to generate a profit. The large financial loss can be attributed to two major factors:
 - The decision to accelerate the destruction of surplus, unsold inventory just before the close of the fiscal year and incur an unusually large \$8.7 million charge
 - An unexplained increase in the cost of the publications sold from an historical average of 23–25 percent of sales to 31 percent of sales.
- Postage costs have decreased from an average of 25 percent of sales to just 16 percent of sales in FY 97. Greater use of less expensive non-USPS carriers and more mail preparation (such as ZIP+4) to achieve postage discounts account for these savings.
- In FY 97, we estimate that GPO expended fewer than \$1.5 million on advertising publications—about 2.1 percent of sales.¹² In contrast, retailers that rely heavily on in-bound mail and telephone orders generally expend between 15 and 30 percent of their revenue on marketing and promotion efforts. Although we do not contend that GPO should mirror the advertising efforts of other retailers, it does suggest that GPO may be underinvesting in promotion efforts to tap the full sales potential of its current markets and open up new ones.¹³
- In FY 97, the Department of Labor determined that GPO was underpaying workman's compensation coverage. The retail sales operation was then allocated a \$2.3 million

¹² This figure includes compensation of about \$1.0 million for the 16 staff within the Promotion and Advertising Branch of the retail sales operation; \$335,000 for printing catalogs, price lists, and circulars; \$37,000 in advertising expense; and \$152,000 in direct mail expenses promoting GPO's catalogs. There may also be small amounts expended by the retail stores in their local advertising efforts that are not included in these figures.

¹³ For some of the publications selected for the sales program, GPO relies on the issuing agency to promote the publication to the audience of potential users. The IRS tax forms CD-ROM product, for instance, has been heavily marketed by the IRS to tax professionals and accountants. For the 1997 tax year, orders for this product have increased from 36,000 units to more than 60,000 so far this year.

one-time charge from Superintendent of Documents. GPO has protested these charges to the Department of Labor, but there is no current indication what the outcome will be, nor do we know whether GPO will continue to incur these higher charges in FY 98 and beyond.

- Personnel costs for the retail sales operation have not coincided with other financial and activity measures. Even though staff levels (Full Time Equivalents [FTE]) have decreased 25 percent and order volume is down 33 percent, total personnel and benefits costs (exclusive of the special charge for workman's compensation) have declined less than 11 percent from FY 93 to 97.
- The substantial charge for destroying unsalable stock in FY 96 produced a smaller than average charge for this item in FY 97, probably \$2–3 million lower than the historical average. Had GPO not taken this action in FY 96, more of the loss would have shifted into FY 97. At the time this report was prepared, figures were not available on what the trend in charges for destruction of unsalable stock was for FY 98 to date.

GPO management contends that decreasing sales have resulted from government downsizing, which in turn have reduced the pool of eligible titles suitable for retail sale. Although data show that GPO now prints about 40 percent fewer titles than it did in FY 93, no one has been able to quantify what effect, if any, this has had on sales.¹⁴

There is little dispute that the shift from a print to an electronic format, with titles now available for free over the Internet, has substantially reduced the demand for printed publications from GPO, especially among relatively expensive subscriptions, such as the *CBD* and the *FR*.¹⁵ The business and financial risks this phenomenon poses to GPO's retail sales operation are compounded by a large concentration of its revenue in only a handful of titles—most already freely available in electronic formats.¹⁶

¹⁴ GPO's end-FY 97 inventory data show 11,900 titles in stock and available for sale—a decline of more than 25 percent from the prior year. The number of new titles selected for sale, however, has been relatively stable at about 2,000 annually. Thus, it appears that recent declines in the number of titles available for sale result more from inventory reductions of poorly selling titles than from fewer new entrants to the pool available. GPO contends, however, that new entrants lack the drawing power of past titles that catered more to the general interest reference and business markets.

¹⁵ Paper subscriptions to the *FR*, for example, have dropped by more than one-half, from 21,537 as of January 1993 to 10,255 in January 1998. Undoubtedly, the advent of free, on-line Internet access to the *FR* and other government documents has undercut GPO's revenue from paper versions. Moreover in 1994, GPO raised the price of hardcopy *FR* subscriptions 45 percent from \$375 to \$544 per year. This action probably further contributed to the decline in print sales. Even though the electronic version is freely available, printed copies of the *CFR* have not experienced any decline in revenue or volume. GPO can only speculate on the reasons, but the fact that courts require official copies printed by GPO to support litigation may be one cause.

¹⁶ In FY 97, just 10 of several thousand titles accounted for almost 50 percent of total sales. Revenue from subscriptions of just the three titles—the *CFR*, *FR*, and *CBD*—account for 38 percent of GPO's total revenue. All three of these titles are freely available on numerous Web sites, some with daily updates and search engines.

In addition to slumping sales for printed documents, GPO's retail operation suffers from an array of performance problems. These problems are discussed in detail later in this section. In our judgment, the root cause of these problems can be traced to three systemic factors:

- Personnel are poorly trained and unsuitable to fill positions in a high-performance, customer-focused retail sales environment.
- The excessively complex organizational structure impedes effective communication and adaptive learning.
- Arcane information systems are failing to provide suitable and timely information to help staff effectively serve customers and manage the enterprise.

In spite of these problems, GPO's retail operation has had several notable accomplishments. The next section on Findings and Recommendations describes these accomplishments in more detail. The two most prominent accomplishments that show promise in arresting the decline in sales and in dramatically improving the performance of the central sales operation are—

- Sales of electronic products, primarily on CD-ROM and diskette, have surged ten-fold since FY 93, reaching \$2.7 million in FY 97.¹⁷
- If the pending implementation of the Integrated Processing System (IPS) operates as planned, it will revolutionize order and fulfillment processing.

Unfortunately, IPS offers the potential to resolve only one of three pressing systemic problems in the retail sales operation. The other two areas relating to the personnel and organizational dimensions of the operation remain unresolved by GPO. The next section addresses these problems.

Overshadowing all these problems and accomplishments is a fundamental policy issue that Congress must address:

Should a government organization operate a retail sales activity?

The first major finding and recommendation in this chapter address this critical issue.

¹⁷ This figure excludes \$2.5 million in FY 97 appropriations counted by GPO as sales revenue for electronic products. It appears that the sales pace has accelerated during the first quarter of FY 98, with electronic product sales ahead 30 percent during the same quarter last fiscal year. The sale of the Internal Revenue Service (IRS) tax forms CD-ROM product, for example, has jumped from about 36,000 units during the 1996 tax season to more than 60,000 units during this 1997 tax season—a 68 percent increase.

FINDINGS AND RECOMMENDATIONS

Retail Sales

Finding 3. The retail document sales program could be outsourced, privatized, or remain with GPO.

In arriving at this finding, we considered several factors that make a compelling case to outsource at a minimum, and more likely turn the retail sales function over to the private sector.

First, Title 44 does not mandate the sale of public documents, but rather it leaves the decision to sell any publications to the discretion of the Superintendent of Documents. There is no need to amend Title 44 to either outsource or privatize the retail sales operation.

Second, as presently organized, GPO's missions and charter result in a counter-productive struggle over how to expand free access to government publications and simultaneously sustain a problem-plagued sales operation that largely depends on consumer purchases of those same publications. Congress must resolve this dilemma if it expects GPO to accelerate its efforts to shift more of its printed content onto a largely electronic network with free and open access to every American citizen.

Third, the prevailing trend in successive democratic and republican administrations and in Congress has been to seek ways to outsource and privatize government services that are not considered to be "inherently governmental."¹⁸ Although efforts to place government documents in the hands of citizens is a laudable objective, having the government engaged in a retail sales operation to accomplish this objective may run counter to that prevailing trend.

Fourth, GPO's reach into the consumer and business marketplace on a nationwide scale is fragmented and substantially underfinanced. Although GPO attempts to sell publications at what it believes are reasonable prices relative to other commercially produced documents, it may in reality severely handicap its efforts to finance large-scale promotion and marketing efforts to make consumers aware of these information products.

Fifth, to restore growth and prosperity to GPO's retail sales operation, nothing short of a complete overhaul in organization, staffing, business practices, strategy, and infrastructure

¹⁸ For the executive branch, the principles governing outsourcing and privatization are contained in Office of Management and Budget (OMB) Circular A-76. The *Revised Supplemental Handbook: Performance of Commercial Activities* (March 1996) defines an inherently governmental activity as: "...one that is so intimately related to the exercise of the public interest as to mandate performance by Federal employees" (page 3). The Office of Federal Procurement Policy (OFPP) Policy Letter 2-1, "Inherently Governmental Functions," (September, 1992, Appendix A) specifically *excludes* the collection of funds as inherently governmental, "...where the amount to be collected is easily calculated or predetermined and the funds collected can be easily controlled using standard cash management techniques..." (section 17 (a)).

will suffice. However, the price GPO would pay in talent, energy, and money to achieve this objective runs the risk of sacrificing its core business in government printing and free dissemination of government documents through the Federal Depository Library Program (FDLP).

Recommendation 3. GPO should continue with steps to modernize its retail sales operation, but Congress should determine the long-term, viable direction for GPO's retail sales operation.

To implement this recommendation, Congress should explore several possible models, such as—

- Outsource the retail sales operation to a firm with the experience, systems, and staff capable of managing all aspects of this activity.¹⁹ Under this option, GPO would maintain oversight responsibility and outsource the telephone and mail order processing, and fulfillment to the private sector. GPO's new IPS could be operated by the private contractor as part of this arrangement.
- Transfer GPO's retail sales operation to a wholesaler serving a much broader array of book retailers and publishers. This strategy could enlarge the market for government publications by leveraging the enormous retail capacity available in the private sector.²⁰
- Privatize the retail sales operation by transferring the assets to a private company. This approach could also provide an Employee Stock Ownership Plan (ESOP) in which current GPO employees assume the enterprise.
- Permit GPO to enter into Inter-Service Support Agreements (ISSA) with other agencies and organizations that offer similar services. This action applies to the executive branch under OMB Circular A-76, but Congress could choose to adopt this approach. Under this arrangement GPO could, for example, transfer the warehousing functions to one agency and the order processing functions to another.²¹ Although these actions do not constitute outsourcing or privatization,

¹⁹ The Government has outsourced other customer service centers. For example, GSA's Federal Information Center, which manages more than 8,000 calls per day, was outsourced in 1990 to a commercial firm operating in rural Maryland. This was done in accordance with the regulations under OMB Circular A-76. In 1994, GPO proposed to establish a satellite telephone operation at Bowie State University, but this proposal was never implemented.

²⁰ GPO already has relationships with several publishers and book retailers. If this recommendation were to be adopted, GPO would deal exclusively with a core group of distributors and retailers to serve the public. Simultaneously, GPO would continue to make the majority of its publications freely accessible on the Internet.

²¹ GPO already performs ISSA storage and fulfillment services for General Services Administration (GSA), USPS, Nuclear Regulatory Commission (NRC), and the Peace Corps. These activities generated \$5.1 million in additional revenue for GPO in FY 97. The National Performance Review maintains a Directory of Reimbursable Government Services, wherein agencies offer services, such as warehousing, on a cost reimbursable basis. The IRS, Army Corps of Engineers, GSA, and Department of Commerce, for example, offer warehousing services under this arrangement. In connection with GPO's order processing operation, this could be combined or transferred to the NTIS, which operates a similar but smaller and more automated service under the Department

they would nevertheless relieve GPO of certain burdensome activities and enable it to concentrate more of its attention and resources on its core functions, i.e., printing services and the FDLP.

In addition to exploring the best way to involve the private sector in some or all of GPO's retail sales operation, the current financial condition of GPO's retail sales operation should be analyzed. This analysis should include a long-term financial forecast, accounting for trends in agency printing, the shift toward more electronic formats, and the plans for a primarily electronic FDLP with documents freely available via the Internet.

With Congress, GPO should determine the best course of action to take, such as outsourcing or privatizing, and include a time frame to accomplish the transition or phaseout. In the interim, the retail sales operation should continue with plans to modernize its order processing and fulfillment operations, and revitalize its marketing efforts, while at least breaking even with its operations.

Finding 4. The lack of a strategic plan has left the retail sales operation without a shared vision to guide management's efforts to serve its customers while remaining financially viable.

Notwithstanding the prior finding on outsourcing and privatizing, we could find no current plan to guide GPO or the retail sales operation. There are fragments of missions and goals scattered throughout the organization, but nothing that carries the authority of senior leadership.²²

No comprehensive plan exists that codifies an overarching mission and related set of goals, along with a strategy to achieve those goals. The absence of a strategic plan, and the process that develops it, has produced an unfocused organization with multiple and sometimes conflicting agendas. It also encourages management to simply wait and react to events, rather than seize the initiative and capitalize on opportunities.

Recommendation 4. The retail sales operations should evolve a strategy from a planning process directly linked to an overall GPO plan.

GPO's retail sales should operate as a business unit and develop the organizational capacity to support its own strategic planning process. Key staff at all levels should be fully engaged in refining its mission and in developing the insights from which a strategy emerges. Results from this process should include specific objectives and measurable

of Commerce. Sometimes viewed as competitors, NTIS and GPO have recently initiated joint marketing agreements to sell each other's publications and information products.

²² Throughout GPO, mission statements, goals, objectives, and standards are published in various media including the Blue Book (*FY 99 Budget Justification*), GPO Instruction 105.1B (*Organization and Functions of the GPO*), SOD Policy and Procedure Statements, and sporadically developed documents at the Division/Branch level. But these documents and pronouncements should not be confused with a "strategy," which evolves from the insights developed through a rigorous, institutionalized planning process that engages key stakeholders within and outside of GPO.

performance goals established for each organizational unit, with managers held accountable and rewarded for their accomplishment.

The senior leadership throughout GPO should “own” this planning process, demonstrating clear, consistent, and visible involvement in the creation and deployment of a strategic plan.

With regard to the content of a strategic plan, we recommend that the following elements be included:

- A clear, succinct, and universally subscribed to mission and vision statement, followed by a set of objectives with measurable performance goals
- A statement of financial priorities, near-term and long-term, that can guide a parallel financial planning process
- Clear evidence of input from key stakeholders, including the views of customers, Congress, and GPO employees
- A discussion of the most pressing issues affecting the entire retail sales organization. These could include discussions on—
 - How to identify and sharpen the focus of the retail sales operation on key factors critical to its survival and prosperity
 - How to address the continuing decline of retail sales
 - How to improve responsiveness to customers’ need for information
 - How to more effectively use multiple channels of distribution, including the Internet
 - How to foster more cooperation with agencies and commercial information providers for the development of new products.

These issue topics should collectively address the systemic- and market-driven factors identified previously.

Finding 5. The current structure of the Superintendent of Documents organization is excessively complex with too much functional redundancy.

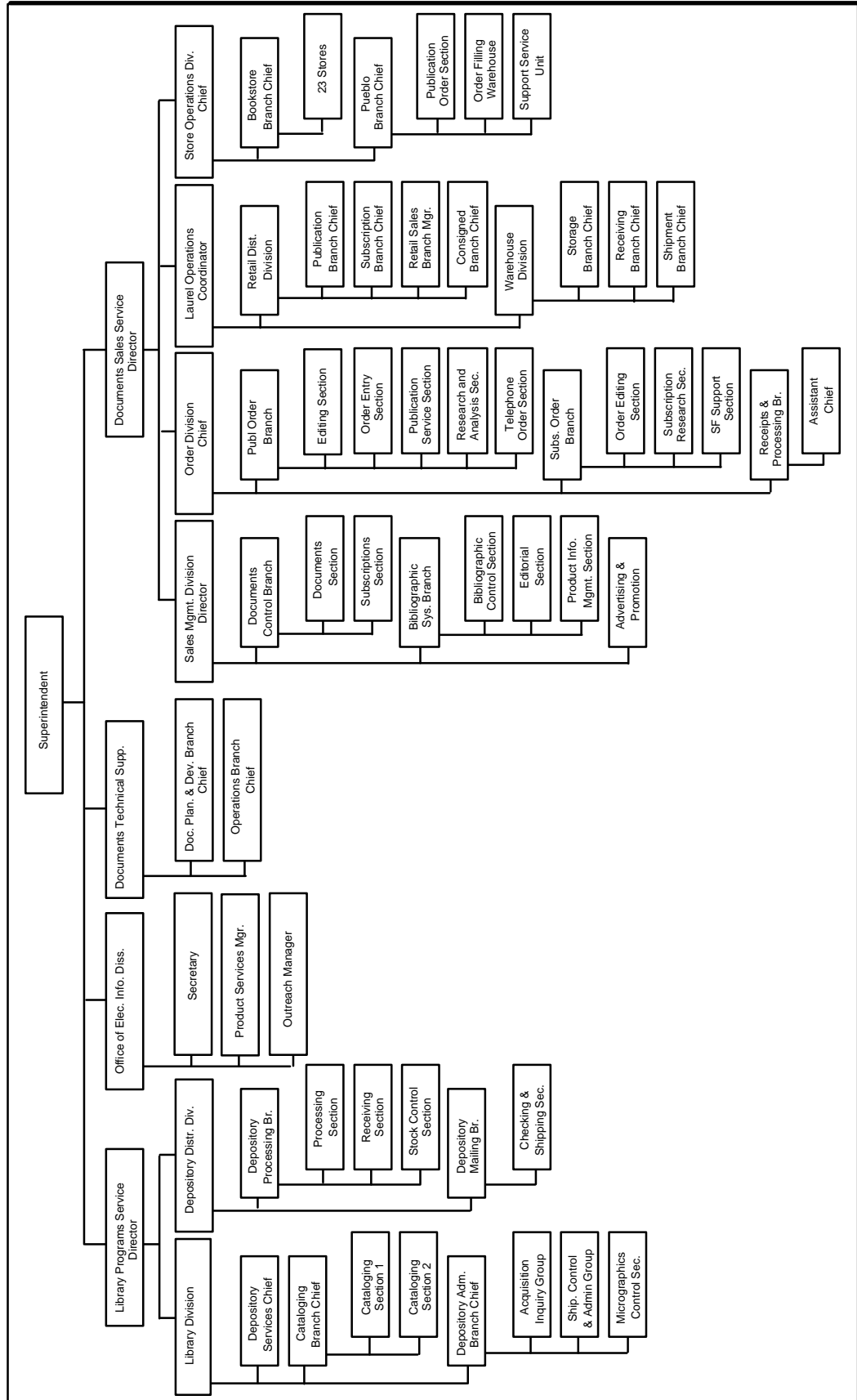
Because the Library Programs Service (LPS) and the retail sales operation are within the Superintendent of Documents and because they share some functions and processes in common, we grouped the findings and recommendations on their organizations into a single section—the retail sales operation.

As Exhibit 2-4 illustrates, the Superintendent of Documents (SupDocs) organization is divided into four units:

- The LPS works to provide no-fee public access to Federal Government information via the FDLF.
- The Office of Electronic Information Dissemination is responsible for assisting Federal agencies in disseminating their electronic government information products through SupDocs.
- Documents Technical Support group provides administrative and research and development support for various activities to SupDocs.
- The Documents Sales Service is primarily responsible for sales and distribution of products placed in the retail sales operation.

Within this structure, there is evidence of duplication of activities and lack of coordination among different departments in many instances:

**Exhibit 2-4
Current Superintendent of Documents Organization**



- The Office of Electronic Information Dissemination, the Advertising & Promotion department, and the bookstores perform outreach (advertising) functions with little, if any, coordination.
- The Research and Analysis Section is placed under the Order Division when it should actually be a support function for the entire retail sales operation. The Documents Technical Support group also performs research and analysis activities.
- The LPS performs acquisition and distribution activities, activities that are also being performed in the Document Sales Service.

The lack of coordination among different entities within SupDocs has resulted in inefficient and ineffective use of resources. Subsequently, distribution channels to serve customers have been underused from a strategic perspective. The duplication of activities across the organization also leaves SupDocs with opportunities for consolidation and downsizing.

Based on numerous discussions with management and staff, our understanding is that the retail sales operation is a “title-driven” rather than a customer-driven organization. Its organization and processes were designed to manage 10,000+ document titles rather serve customers in need of information. This underlying premise speaks to the real purpose of the retail sales operation, and needs to change, along with the functions, processes, and reporting arrangements in the organization.

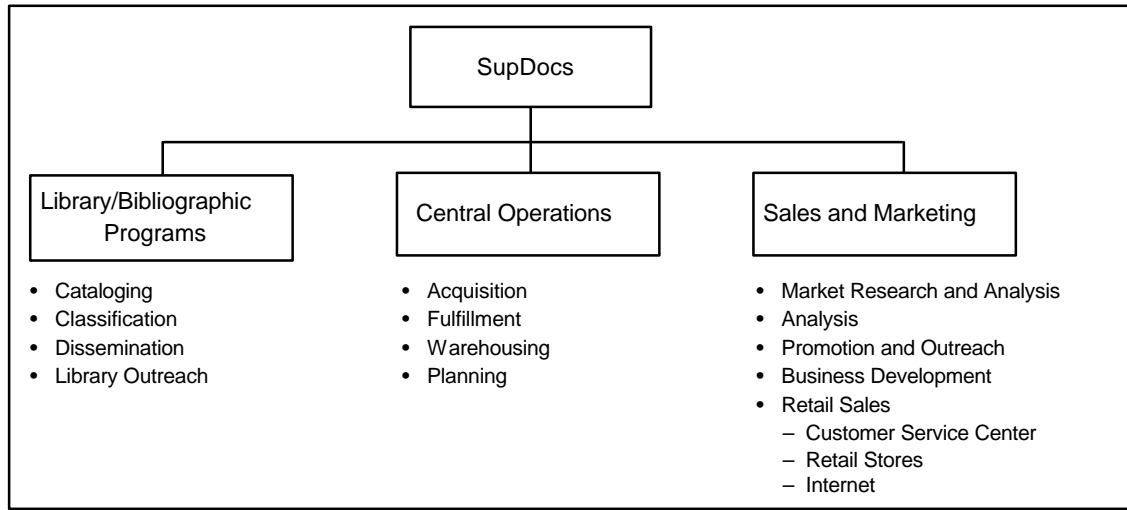
Although many functions are being duplicated, some essential activities typical of a retail sales operation do not exist. Although research and analysis functions perform some analysis of customers and sales, no entity performs market research activities to gather market information. This has resulted in uninformed decision making in the retail sales program.

Recommendation 5. The SupDocs organization should be streamlined to more efficiently accomplish its stated mission and goals.

The SupDocs organization should be reorganized and consolidated to eliminate inefficient and redundant activities. The new SupDocs could be set up as three units—Library/Bibliographic Services, Central Operations, and Sales & Marketing—as Exhibit 2-5 depicts. The reorganization would reduce the number of organizational units by about one-third by eliminating or consolidating redundant and unnecessary functions.

The LPS would continue to perform all its current activities with the exception of acquisition services and distribution. Under the new organization, those activities would be shifted to the Central Operations unit, which would assume all responsibility for acquisition, fulfillment, and warehousing activities for the LPS and retail sales.

Exhibit 2-5
The “New” Superintendent of Documents Organization



The Central Operations unit would serve as the primary support function for SupDocs, supporting fulfillment and warehousing, planning, and acquisition services. The planning function would be the primary function responsible for providing strategic planning support to SupDocs, and would act as the liaison between GPO’s central I/T function and SupDocs.

The Sales and Marketing group would have primary responsibility for marketing, sales, and business development. The Market Research and Analysis unit would undertake an array of research activities, including surveys of buyer interests and satisfaction, market segmentation, direct mail response studies, etc. They would also serve as advisors on what products to place in the retail sales program, what market segments to target, and the most effective media to reach those prospects. The Promotion and Outreach unit would develop promotional campaigns and work with the Business Development unit to manage the creative aspects of new partnerships, and develop newsletters and other informational material. The Business Development unit would concentrate on forming strategic alliances with agencies and private sector companies, and in exploring new ways to market GPO reports and information products.

We also recommend that the Sales and Marketing group engage an advisory board of specialists with varied experience in the marketing and sales aspects of the information publishing industry. The group should also tap into the expertise of various associations, such as the Direct Marketing Association, Information Industry Association, and the American Booksellers Association.

Finding 6. As currently configured and staffed, the retail sales central order processing operation suffers from numerous problems and requires a complete overhaul.

As previously described, the Central Order Division is responsible for about 75 percent of total retail sales revenue. Within this organization is the core of frontline customer contact. When compared with common and “best” practices in telephone and mail order processing centers, GPO’s Central Order Division is well below standard.²³

Exhibit 2-6 summarizes some of the measures collected on the retail sales operation’s central order processing center including—

**Exhibit 2-6
Comparison of Customer Service Center Activity Measures to Industry**

Measure	GPO ²⁴	Industry Standard ²⁵
Posted Hours. Available to Call	8 hours/day	24 hours/day
800-number Available	no	Yes
Language Option Available	no	Common
Number of Shift Schedules	3 per day	4 per hour
Maximum Wait Time in Calling Queue	44 seconds avg.	15 seconds
Percent of Callers Getting Busy Signal	60.3 percent of calls	0 percent
Percent of Callers Who Abandon Their Call After Waiting	9 percent of calls not busied-out	2.0 percent
Percent of Calls Resolved Without Hand-off	75 percent	85 percent
Avg. Number Days To Process All Orders	2–3 weeks	2–3 Days
Avg. Number Days To Process 50 Percent of Orders	Unknown	1–2 Days
Employee Attrition Rates	Unknown	3–7 percent
Job Rotation Rates	none	24–36 months
360-Degree Evaluation	none	Common
Outcome-Based Pay Incentives	none	Common
Average Hourly Wage	\$13/hour	Unavailable
Call Monitor Coaches Available	Yes, 4 coaches	5–10 calls/worker/ month
Post-Call Customer Survey Follow-Up	None	Common

- An analysis of inbound customer calls revealed that more than two-thirds of the 1.5 million calls in Calendar Year (CY) 97 could not be serviced by an attendant.

²³ The comparison material used in this section was extracted from several sources, including *Putting Customers First, Serving the American Public: Best Practices in Telephone Service*, National Performance Review, Federal Consortium Benchmark Study Report (February 1995); *Best Practices in World Class Call Centers*, Discussion Paper, Booz-Allen (undated); *Customer Service Benchmarking Study*, Booz-Allen (November 1994); *Technology and Systems Configuration Analysis*, a call center systems analysis report prepared for The Retired Officers Association by Booz-Allen (November 26, 1997); and the *Medicare Hotline Transition Business Plan*, prepared for HCFA by Booz-Allen (June 1997). We also received input from various agencies operating or managing call centers, including the U.S. Census Bureau, GSA’s Federal Information Center, National Technical Information Service, and the Consumer Response Center at the Federal Trade Commission. We reviewed various GPO-developed material to investigate order processing benchmarking, including its discussions with Federal Express on its call center operations.

²⁴ The GPO measures (CY 97) were extracted from its Automated Call Distributor (ACD) software that supports the inbound call center and from data supplied by staff of GPO’s Central Order Division.

²⁵ Refer to footnote (19) for a list of sources for these industry standards.

Discussions with management on this issue suggest that the main source of the bottleneck is insufficiently trained staff to serve as telephone customer service representatives. About 15 full-time and 5 part-time staff manage incoming calls. Using the SIMPROCESS[®] software, call management simulations prepared by the Quality Systems Division in GPO revealed that, under certain assumptions, a one-third increase in staff would be sufficient to reduce the percentage of calls forced busy to less than 5 percent on a typical day.²⁶

- The retail sales operating hours (8:30 a.m. to 4:30 p.m., EST) are insufficient by industry standards.
- GPO typically takes 2 to 3 weeks to process an order, while the standard in the industry is closer to 2 to 3 days. This long interval between a customer's order and receipt could be prompting customers to call about the status of their orders, contributing to the calling bottleneck within the Central Order Division.²⁷ Enabling more callers to reach a representative and place an order is also key to improving productivity overall. GPO's work process studies indicate that it takes 9.2 days to process an order received through the mail, and just 1.2 days to process that same order received over the telephone. Clearly improving the phone capacity would dramatically improve turnaround times on orders and in turn reduce the heavy volume of callers.²⁸
- Customer service staff, who are recruited and classified as supply clerks, are not adequately trained on how to serve customers in an effective manner. Management in the retail sales operation have proposed changes in formal job descriptions to improve recruiting and reassignment of staff, but no action has been taken yet.
- Information systems for order processing are fragmented, inadequate, and outdated. This is a well-known problem among management and staff in the retail sales organization. This problem is being addressed with a comprehensive, state-of-the-art order processing and inventory management system, scheduled for deployment later this year.

²⁶ Under the current system, calls in excess of five waiting in the queue are forced busy (i.e., busy signal). This is done to limit the time waiting after a call enters the queue. The very high volume of calls "busied out" is believed to be attributed to callers using automatic redialers attempting to reach GPO. How many customers fail to reach GPO because of call center problems is unknown, but if only 5 percent of the calls forced busy are customers never served, GPO could be losing substantial business. Assuming one-third of these lost callers would have placed an order valued at \$66 (based on FY 97 averages), the amount of money at stake (1,500,000 calls X .66 non-answer rate X .05 as customers X .33 as buyers X \$66 order value) is \$1,078,100. Modeling this phenomenon is a common practice in the call center industry, and several new software simulation packages have entered the market, together with benchmarking data that improve and simplify the process.

²⁷ Survey data supplied by GPO indicate that of those calling with a question (which is about two-thirds of all calls), more than one-half of these calls are inquiries about the status of a prior order.

²⁸ The disparity in the time interval required to fill orders by telephone compared with mail was contained in GPO's *Justification for Increasing FTEs in Telephone Operations* as an appendix to its *Proposal to Establish a Satellite Telephone Operation at Bowie State University*, prepared by the Documents Technical Support Group (undated).

GPO is about to implement a complete overhaul of their software systems and hardware supporting the central order processing operations. For several years the IPS has been under development, and it appears to be well-designed using state-of-the-art technology. IPS offers the promise of automating much of the back-office order processing and fulfillment paperwork. This will free up substantial staff, but there are no plans on how these surplus staff will be used. Additionally, IPS will demand that all staff perform multiple activities previously not required of them. Most do not have the necessary skills to serve as customer service representatives to relieve the critical bottleneck of inbound calls and mail.

Recommendation 6. GPO should proceed as planned with the implementation of the IPS software system, but it should also institute a rigorous customer service performance measurement program and develop and execute a new streamlined staffing plan for the Central Order Division.

In line with his Recommendation, the following actions should be taken:

- Industry performance standards should be established and monitored for the central order processing center.
- The job descriptions for customer service staff should be revised to better reflect the service nature of the positions.
- Intensive customer service and IPS training should be provided to all staff. (This is being planned by GPO.)
- Hours of operation should be expanded to an industry minimum standard of 12 hours per day, with shifts and staffing levels staggered throughout the day to conform to customer call patterns and mail delivery schedules.
- Workload simulations should be conducted using GPO's SIMPROCESS simulation software to prepare and implement a staffing plan that takes advantage of the productivity enhancements possible under IPS.
- In the long-term, all 23 retail stores should be networked into IPS to take advantage of its operating efficiencies.

Finding 7. The implementation of GPO's long-awaited IPS in spring 1998 offers the potential for dramatic productivity improvements in order processing and inventory management.

Nearly 10 years ago, certain staff within the SupDocs realized that the information technology systems supporting the retail sales operation would be inadequate to lead the organization in the future. To address continued decline, these staff proposed an initiative to implement a state-of-the-art system that would modernize SupDocs' inventory management and order processing functions. After years of hard work, SupDocs is ready to implement the IPS.

IPS is a fully integrated, inventory management and order processing system that replaces 18 current stand-alone systems, resulting in modern, integrated capabilities for all supported functions. IPS is composed of eight functional modules:

- Customer account and information system
- Product management/inventory system
- Warehouse management system
- Financial/accounting system
- Order control system
- Forecasting and analysis system
- Reports system
- Customer service system.

Nearly all entities within SupDocs expect to gain some benefit from the implementation of IPS. Benefits some functions within SupDocs can expect include—

- Improved Inventory Planning and Marketing—A sophisticated decision support system will provide forecasting that is based on historical data and various forecasting models. Marketing will be able to track the success of promotional activities and track customers based on market segment codes.
- Improved Order Processing and Customer Service—On-line entry, inquiry, and control of orders will allow for order processing by one staff member at one time and eliminate the multiple hand-offs now required to process an order. Additionally, customer service representatives will have all product and customer information available through IPS' centralized database.
- Improved Inventory and Warehouse Management—Besides benefiting from improved product planning, which is expected to decrease inventory costs, inventory and warehousing functions will benefit from the “perpetual inventory control” IPS provides. The system will manage inventory on a real-time basis, i.e., as sales are made. Some additional expected performance improvements include flexible cycle inventory counting, weekly status reports for activity analysis and daily stock status, electronic data interchange for customers, and bar coding of inventory.

A few of the productivity improvements expected from the benefits outlined above include—

- Decrease in order processing time from the current 2–3 weeks to 1 to 2 days
- Elimination of much of the back-order paper processing in the central order processing center
- Reassignment of most staff from back-office operations to frontline customer service positions.

Although successful implementation of IPS would constitute a revolution in the order processing functions, many major issues remain to be addressed, as follows:

- IPS does nothing to resolve the chronic problem of too few staff well trained to serve customers.
- The bookstores operation, which accounts for one-quarter of retail revenue, is not linked to IPS. Therefore, GPO will still not have a complete picture of its inventory; only five stores have point-of-sale systems that can be connected to IPS.²⁹
- No staffing plan has been developed to operate IPS and take advantage of its potential productivity improvements.

Recommendation 7. GPO should proceed with IPS implementation but develop and implement a new staffing plan to capitalize on the productivity improvement potential inherent in IPS.

With the implementation of IPS in early spring 1998, SupDocs may experience significant productivity improvements all across the organization. To exploit the abundance of tools and information available through IPS, however, GPO must develop a staffing plan that addresses the effect IPS will have on workload and workforce. Specifically, GPO must answer the following two questions:

- How much will workload decline as a result of the expected productivity improvements?
- How will the nature of the positions change in terms of skill sets required, and what effect will that have on staffing?

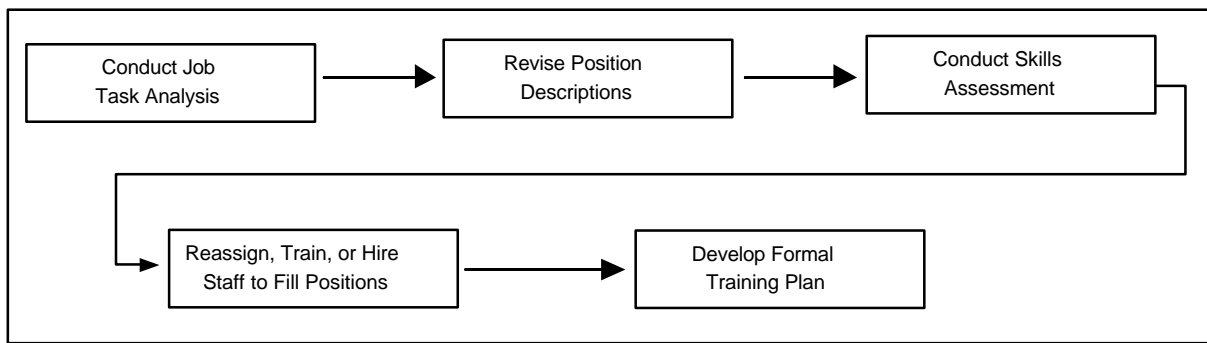
Although management expects workload to decline, the exact effect of IPS on workload is unknown. Management should conduct a thorough analysis of the efficiency gains expected through IPS.

²⁹ The Chief of Field Operations (Bookstores) and the IPS team have been negotiating with the IPS contractor to develop a module to connect IPS to the bookstore point-of-sale (POS) system. The IPS team is planning to have bookstore POS systems connected to IPS soon after IPS goes live, although no time frame has been set to accomplish this task.

GPO has also begun to conduct training in anticipation of IPS. The different training modules GPO developed address different workforce needs. For instance, GPO has developed training modules not only on how to use IPS but also how to address the lack of experience some staff have working with PCs. However, GPO has not performed a comprehensive job task analysis to assess how the nature of positions will change and what new skill sets will be required of staff working with IPS.

To address this issue GPO should take the series of steps illustrated in Exhibit 2-7. First, GPO should conduct a job task analysis to determine the knowledge, skills, and abilities (KSAs) required of each position. Based on the KSAs, GPO should revise the position descriptions for all staff working with IPS. GPO should then conduct a skills assessment to compare the skills of their staff against the required skills. The results of the skills assessment should be used to reassign, train, or hire staff based on skills and job requirements. Additionally, GPO should develop a formal training plan to bring the skills of personnel up to date with those required to meet their new job requirements.

Exhibit 2-7
Steps to Address Workforce Issues



A substantial but unknown share of GPO's retail publication inventory resides at the 23 retail stores. When other stores or the Central Order Division's Laurel warehouse run out of stock, GPO has no way to easily determine whether other supplies of the "out-of-stock" publications are actually at one or more bookstores. As a result, unnecessary reprinting can occur or sales can be lost. To correct this problem, and better manage GPO's inventory, GPO management should install POS systems at all bookstores and link them to IPS.

Finding 8. GPO has established cooperative distribution and marketing initiatives with various public and private sector organizations to achieve expanded distribution of its published products.

- Based on sales growth, alternative media products represent the best opportunity for new product development.

- GPO has various internal sources, such as the Office of Electronic Information Dissemination Services (EIDS) and the Institute for Federal Printing and Electronic Publishing (IFPEP), that are at the forefront of emerging electronic printing and publishing technology.
- The strategic alliance between EIDS and the Department of Commerce to make the *CBD* available online via *GPO Access* is one example of how GPO collaborated with an agency to develop a new product.

Recommendation 8. GPO should be more proactive in seeking cooperative ventures to package, promote, and sell its publications.

- GPO should develop an action plan to target agencies for new product development.
- GPO should expand its cooperative efforts with NTIS to develop marketable publications and other information products.
- GPO should leverage the capabilities of its internal organizations, such as EIDS and IFPEP, to form strategic alliances with agencies.

Finding 9. The process for selecting, pricing, and promoting products for the retail sales program is inefficient and poorly coordinated.

The current process for selecting, pricing, and promoting products occurs within stove-piped organizations, all working as independent entities with the common goal of selling government publications to the public. For example, inventory management specialists, who recommended the products and quantities entering the sales program, determine the product mix for the sales program. The GPO Pricing Committee manages pricing separately, working within the limitations of Title 44. The GPO Pricing Committee determines methods to compute prices for retail products. Various entities within SupDocs manage promotion activities that occur independently of the product selection and pricing process.

The product selection or “ride” process begins when GPO receives Form 3868, “Intent to Publish,” from the customer agency. Ideally, Form 3868 arrives in the Documents Control Branch (DCB) before the Request for Printing (SF 1) to allow sufficient time for the DCB to make a decision concerning the ride. In many cases, however, the Form 3868 arrives the same day as the Request for Printing and the master document. In these cases, Customer Services calls DCB and asks for their decision immediately.

Inventory management specialists use the following criteria to determine if a publication should enter the sales program and the quantity to ride:

- The number of copies the agency requests for printing and subsequent free distribution
- A comparison with similar products and the number of rides on them

-
- A review of the Form 3868, “Intent to Publish,” and any special comments or requests from the issuing agency
 - Current events and media attention at the time
 - Whether or not the publication is on the Internet
 - Periodic meetings with the issuing agency representatives to discuss the sales potential of the product.

GPO generally orders enough copies to satisfy the number of copies expected to sell during the publication’s shelf life—usually a 1-year period. In cases of large shelf life quantities or potentially slow sellers, GPO may order the total number of copies incrementally as needed.

Prices are established and reviewed annually by the internal GPO Pricing Committee. Publications are priced using one of two methods—scale or formula (See SOD 202, “Pricing Sales Information Products”):

- Scale Method of Pricing. The scale method is used for basic, standard, black and white publications. Like-sized publications are priced similarly.
- Formula Method of Pricing. There are four components of the pricing formula:
 - Printing and binding costs—Previously estimated production costs. The Sales Management Division (SMD) believed those estimates were generally accurate but it had no method for tracking or measuring the accuracy of the estimates. The GPO Comptroller will begin providing SMD with a “firm” price for printing and binding. That price will be the final price quoted and charged to the customer.
 - Handling or program costs—The Pricing Committee annually determines these costs. These costs include GPO’s overhead to produce the publication. The criterion for setting the cost is the size of the publication measured in square inches.
 - Postage.
 - Mark-up of 50 percent—This cost is intended to recover GPO costs associated with discounts given to customers, unsalable publications, and reprinting (when GPO cannot ride a publication).

After a product is produced for the sales program, it is delivered directly to the Laurel Warehouse. No plans are created to “push” the products out of the Laurel Warehouse and into the sales channels.

Whenever marketing and promotion does occur, the marketing processes lack the necessary inputs to develop an effective and targeted marketing campaign. Information about customers and sales is often not available or is too cumbersome to obtain. The automated information systems now in use are configured to track sales by GPO product

number rather than by customer accounts. Furthermore, promotions of publications are not coordinated with other entities in the sales program.

The lack of coordination among the various sales and marketing activities sustains a large product list, but relatively few revenue generators. For instance, of GPO's 12,000 retail sales titles, fewer than 10 account for 50 percent of the total revenue and three (*CFR*, *FR*, and *CBD*) account for 38 percent of GPO's total revenue.

Recommendation 9. GPO should revamp the process for selecting, pricing, and promoting products.

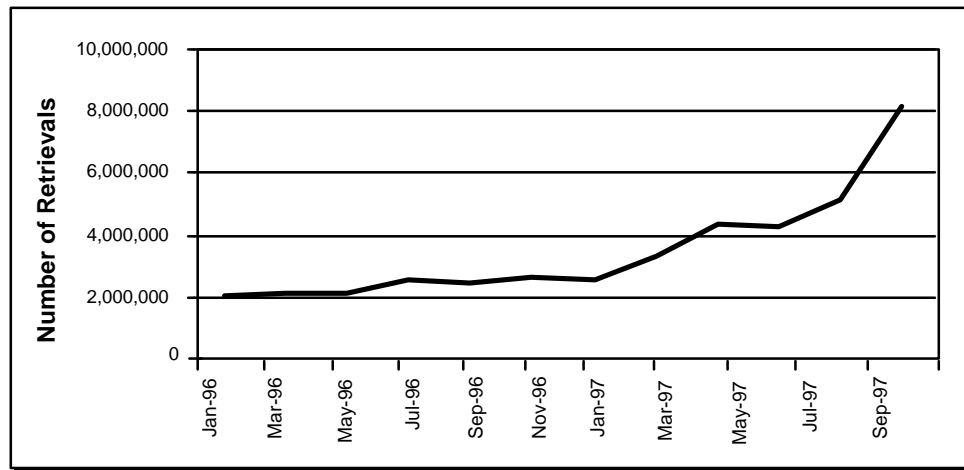
The future of the retail sales operation depends on how well GPO meets the challenge of redesigning its sales and marketing processes. As the processes currently exist, lack of communication and coordination among the various entities involved in sales and marketing undermines efforts to restore financial health to the retail sales operation. Although the tools and information will be available through IPS, the challenge for GPO is to create an integrated approach to sales and marketing. To achieve this goal, GPO must revamp the current processes for selecting, pricing, and promoting its products.

IPS is a good start for revamping the sales and marketing processes. Essential data regarding customers and sales that do not exist will be available through IPS in the near future. Additionally, tools such as forecasting models to project demand will enable the inventory management specialists to make improved decisions regarding product mix and quantities. Finally, distribution of products will benefit from the real-time relay of product orders from the time they are placed to the time they are received in the Laurel Warehouse.

The decision to select a publication for sale and the quantity to select should be made after the following characteristics, at a minimum, have been considered—existing markets, potential (untapped) markets, sales history of similar products, external environmental factors, and effect on overall revenue. With the implementation of IPS, GPO plans to employ forecasting tools to approximate demand for products. Additionally, though the effect of all pricing strategies should be simulated on modeling tools to determine the effect on volume and market share, competitive position, and profitability. Finally, GPO should define a projected demand threshold for a product to be selected for the sales program.

The limitations placed on pricing by Title 44 should be removed. With the subsequent added flexibility, GPO should align its pricing strategy with its short- and long-term objectives. Specifically, pricing should address business strategy, revenue goals, and product and market objectives. Furthermore, if GPO continues to use the Pricing Committee to set sales prices, the Chief of the Field Operations Division (or a knowledgeable, designated representative from the Bookstore Branch) should be included as a member of the Committee.

Exhibit 2-8
Monthly GPO Access Retrievals
(January 1996–October 1997)



Recommendation 10. GPO should continue with its efforts to place more documents on its *GPO Access* Web site and, if necessary, seek additional funds from Congress to expand this program.

The importance of *GPO Access* will continue to increase as the FDLP moves to an electronic future. Additionally, as stated previously, users value the service *GPO Access* provides and continue to increase their use. To keep *GPO Access* current with changing technology, GPO should continually modernize and redesign *GPO Access* to keep it user friendly. GPO should undertake a study to compare *GPO Access* with the best-rated Internet sites that serve a similar purpose. Given the important nature of this program, Congress should provide support to GPO in continually updating and modernizing *GPO Access*.

Finding 11. Although sales of printed documents have declined, the sales of information products in electronic format have risen dramatically.

According to GPO figures, the sale of electronic products³⁰ has risen from \$1.2 million in FY 93 to \$2.7 million in FY 97—a 22 percent compound annual growth rate.³¹ Moreover, it appears that sales of electronic products have accelerated during the first quarter of FY 98—increasing 30 percent over the same period last fiscal year.

A major contributing factor to this accelerating growth has been sales of the IRS tax forms on CD-ROM. With the help of more marketing from GPO and the IRS, this title's sales

³⁰ Electronic “products” include publications, documents, and databases sold in an electronic format, including CD-ROM, magnetic tape, and diskette. It does not include any printed documents that may have been ordered via the Internet.

³¹ As stated elsewhere in this report (see footnotes 7 and 8), these sales figures include Salaries and Expense (S&E) appropriations amounting to \$0.6 and \$2.5 million in FY 93 and FY 97, respectively. In spite of this accounting anomaly, the growth in actual sales of electronic products remains substantial.

have surged from about 36,000 units shipped during the 1996 tax year, to more than 60,000 for this tax year (1997) so far (i.e., through the end of February 1998).

Recommendation 11. GPO should accelerate its product development and marketing efforts in the electronic products area and modify its accounting practices to show how sales of these products have increased.

Although no one predicts printed documents will be entirely eliminated, there undoubtedly will be a continued shift in consumer preferences from printed publications to some version of an electronic format. Large reports and files, even if available free via the Internet, do not lend themselves to rapid downloading and easy viewing, at least not with the technology typically available to today's mass market consumers. For these and other reasons, titles and products on CD-ROM and on diskette should continue to increase in popularity.

As the leading publisher in the Federal Government, GPO must continue to demonstrate a keen interest in fostering growth in sales of products in electronic formats. Electronic formats also lend themselves to bundling documents to enhance their marketability. This could be achieved by placing several titles or databases (or a combination) on the same theme, such as health care, onto a single CD-ROM.

Accounting conventions at GPO allow funds from the Salaries and Expense (S&E) appropriation to be classified as sales revenue. This offsets the inclusion of these same amounts in the S&E expense categories, where staff who are developing and maintaining *GPO Access* are reimbursed from this appropriation when they provide assistance to customers. In FY 97, for example, the sales category (#5216) "Electronic Products" reported sales revenue of \$5.2 million, of which \$2.5 million represented the offset for appropriations in certain S&E expense categories. We recommend that this practice be abandoned, because it overstates the sales revenue figures, especially in the important electronic products category.

Finding 12. Through more effective use of delivery services, GPO has reduced the postage cost for shipping documents to customers from an average of 24 percent of sales to 16 percent, saving at least \$5 million in FY 97.

Historically, GPO has relied on the US Postal Service to deliver publications at Fourth Class book rates. In calculating the retail price of a publication, these postage costs are included in conformance with the requirements of Title 44. During a review of ways to save money in the retail sales operation, GPO determined that, under certain conditions, UPS offered a cheaper and speedier alternative to USPS Fourth Class.³²

Beginning in FY 97, GPO began sending more of its publications for shipment through RoadWay Express under a blanket contract agreement. This agreement is the result of

³² For details on this and other actions to save money and increase revenue refer to *Action Plan to Return SupDocs Sales Program to a Self-Sustaining Basis in Fiscal Year 1997*. (GPO internal report, September 1996).

competitive bids from major delivery services, including USPS, in an effort to lower costs and improve delivery further.

Recommendation 12. GPO should explore the possibility of adopting the common practice among mail-order operations of charging an additional standard shipping and handling fee to the customer's invoice.

Title 44 aside, GPO should consider adopting the common mail-order industry practice of adding a shipping and handling fee to the standard retail price. This could result in substantial revenue, improving the financial health of the retail sales operation.

Fulfillment/Warehousing

Finding 13. GPO's aggressive actions to eliminate excess, obsolete, and unsalable stock during the past 2 years has freed up about 25 percent of the floor space at Laurel, making it possible to proceed with consolidation from other locations.

This finding addresses the consolidation of inventory management and warehousing operations from two aspects:

- Consolidate operations and equipment to exploit available vacant floor space
- Consolidate personnel who are performing similar functions to reduce the staff required to fulfill those functions.

GPO leases two warehouses in Laurel (406,000 square feet) for storage of printed publications and subscriptions and one warehouse in Springfield (180,000 square feet) for back-up storage of paper and supplies. The combined annual leases cost \$2.26 million, plus another \$540,000 for utilities, planned upgrades, and miscellaneous services (e.g., trash removal, snow removal, parking lot clean-up).

A total of 199 personnel collectively perform pick, pack, and ship functions at GPO. Specifically, 140 personnel work at Laurel, 43 personnel work as part of LPS, and 16 personnel work at Springbelt. Although the products that are managed at these facilities differ, the basic mechanics of the pick, pack, and ship functions are similar.

The Laurel Warehouse complex is composed of two warehouses. Laurel 1 houses the Warehouse Division, which is used for bulk storage and shipping, and the Consigned Section, which houses racks and bins of publications that GPO manages for other Federal agencies on a cost-reimbursable basis. Laurel 2 houses the Retail Distribution Division. The Retail Distribution Division consists primarily of bins containing small quantities of all publications available for sale. When necessary, the bins are replenished by moving publications from bulk storage into the bins.

There is much excess/unused floor and rack space at the Laurel Warehouse. After the major reduction of obsolete and excess inventory (“dump”) occurred in 1996, a proactive initiative was taken to move the remaining publications off the racks in area 100 of Laurel 1 and to consolidate them elsewhere within the warehouse. As a result, about 50,000 square feet were made available in Area 100 and that space still remains unused. About 35,000 square feet of that total would be immediately available with the removal of the racks that are in place, provided the racks are not required as part of any other consolidation considerations. With all the racks still in place, the number of empty pallet storage spaces has also increased by 2,500, or 16 percent since January 1996. Further, as part of the same initiative, about another 18,000 square feet could be available within Area 400 of Laurel 2. This space is now being used for storage of palletized materials, pending their placement on racks, and three roof-top air-conditioning units pending installation.

Additionally, the Laurel Operations Coordinator spoke of the possibility of vacating another 31,000 square feet in Laurel 1, which is occupied by the Consigned Section. The Coordinator believes that the consigned materials could be relocated into the Retail Distribution Division area of Laurel 2. This space could be used as part of other consolidation considerations or it could be returned to the building owner after the current lease expires in August 1999. If this space is returned to the owner, it is estimated that a savings of about \$75,000 (lease, utilities, etc.) would occur when the lease expires.

Other considerations that could make additional floor or rack space available include reducing the number of titles selected for sale, with a subsequent reduction in storage in the warehouse, and reducing the current prescribed shelf life for publications (typically 12 months), which would reduce the number of publications stored on the racks. Either of these approaches would reduce the number of copies held in storage and could lead to further internal consolidation, making more space available.

Excess and unused material handling equipment is sitting idle in the Laurel Warehouse. The equipment, along with the associated recharging stations, occupies floor space that could be used for storage purposes. Additionally, selling the serviceable equipment would generate revenue for the GPO Revolving Fund.

The LPS Depository Distribution Division is responsible for the physical receipt, storage, issuance, preparation, and distribution of shipments of publications to depository libraries. In its current configuration, Depository Distribution Division requires about 49,000 square feet—30,000 for industrial operations and 19,000 for offices—to accomplish its pick, pack, and ship operations. The floor space already available at Laurel is more than sufficient to house this operation of LPS.

At least some efforts appear to be duplicated between the Depository Distribution Division and Laurel Warehouse operations with personnel performing similar functions related to pick, pack, and ship operations. These functional areas are ideal for consolidation, as floor space is available at Laurel to relocate the Depository Distribution operation.

The Springbelt Warehouse, which serves as a back-up storage facility for paper and materials, uses about 60 percent, or 108,000 square feet, of its capacity (180,000 square feet). In its current configuration, and with the current philosophy concerning the amount of paper and supplies to keep on hand, there is not enough available floor space to relocate Springbelt operations to Laurel. However, further aggressive action to reduce inventories of printed materials at Laurel and to better manage paper and materials, or to reduce the on-hand stock level at Springbelt, could allow Springbelt operations to move to Laurel when the Springbelt lease expires in September 2000.

Recommendation 13. GPO should take action to reduce its supply of paper stock and other materials at the Springbelt Warehouse in anticipation of an eventual consolidation of the warehouses into a single location. GPO should dispose of or sell excess material handling equipment at the Laurel Warehouse.

In all the warehousing best practices we researched, regardless of product, the accepted standard is to minimize inventory, thereby minimizing the amount of space required to house the inventory and thus reducing inventory carrying costs. In a letter dated July 8, 1996, to the Honorable William M. Thomas, Chairman of the Joint Committee on Printing, GPO's Public Printer recognized this best practice. He addressed the issue of consolidation of warehouse space, identified the estimated savings, and highlighted the inventory reduction efforts that had occurred to date, including which efforts still needed to occur to ensure consolidation. One letter also stated that options to reduce warehouse space were being reviewed.

Although a formal consolidation plan has not been developed, the current Laurel Operations Coordinator has a conceptual plan that addresses several options for consolidation of warehouse space. Although his concept has not been established in detail, it appears to be a solid framework from which to develop a usable plan. This initiative should progress in a coordinated effort. Target dates to complete consolidation should coincide with the warehouses' respective lease expiration dates (Laurel 1—August 1999; Laurel 2—December 2000; and Springbelt—September 2000).

Personnel space savings would be a major benefit resulting from consolidating the Laurel warehouse with the Depository Distribution Division. Not all 183 personnel (140 at Laurel and 43 at Depository Distribution Division) who are involved in pick, pack, and ship operations may be required to perform those functions in a consolidated environment. After the necessary staffing and skill level required for the consolidated operation are determined, GPO should fill all positions with employees with sufficient skills and reduce all surplus through reassignment or attrition.

Serviceable equipment could be sold through auctions with the proceeds benefiting the GPO Revolving Fund. In addition to producing revenue for GPO, the removal of the equipment would free up additional floor space for other operations.

Finally, GPO should review its policies for determining the amount of paper and supplies stored in the Springbelt Warehouse. The review should establish absolute minimum levels for supplies to prepare for the consolidation of Springbelt and Laurel.

Finding 14. Even though the overall shipping and receiving volume has declined by 34 percent during the last 2 years, the staff at the Laurel Warehouse has decreased by only 13 percent (from 160 to 140 staff).

The staff reduction that has occurred, primarily through attrition, during the last 2 years at Laurel has not kept pace proportionately with the reduction in workload that has occurred during the same time frame as Exhibit 2-9 illustrates.

**Exhibit 2-9
FY 95 to FY 97 Workload Reductions
Laurel Warehouse³³**

Activity	FY 95 # Copies	FY 97 # Copies	Percent Reduction
# Copies Received	22,252,724	14,086,234	37
# Copies Shipped	20,982,706	14,328,125	32
Warehouse End FY Balance	7,274,142	4,498,080	38
Total # Copies Handled	43,235,430	28,414,359	34

Recommendation 14. GPO should further adjust staff through reassignment or attrition to levels more in keeping with current and projected workload.

Staff levels should be set commensurate with the reduction in the workload that has occurred during the last 2 years. However, any planned consolidation of operations at the warehouse, such as the LPS Depository Distribution Division, should be considered to ensure sufficient staff, with the proper skills, are retained to perform the additional functions.

Finding 15. Storage rates charged to agencies for their consigned publications and periodicals have not been updated since FY 92, and reporting discrepancies exist on the number of pallet spaces and bins that should be charged for agency consignment.

GPO manages and mails publications and periodicals for 24 Federal agencies on a consignment basis. These products are stored and processed in a separate section of Laurel Warehouse 1. Agencies that place products in the warehouse reimburse GPO for the handling and processing of the products. The agencies are also charged a storage fee (for pallet storage space or for bin storage space, as required) for products that are stocked in the warehouse for future distribution.

³³ Source of the data is the Annual Report entitled, *Projected Cumulative Copies Sold From Central Office Report, Sales/Federal Register Programs* for FY 95, 96, and 97.

The storage rates are calculated by dividing the warehouse operating expenses (for the Consigned Section), proportionately, by the number of pallet storage spaces or the number of bins, as appropriate. The storage rates that are charged to agencies have not been updated or revised since FY 92 even though operating costs have risen. While using those rates, the Warehouse Reimbursable Program experienced a loss of \$426,302 during FY 92 alone. The GPO Rates and Investigations (R&I) Branch establishes the rates charged to agencies. R&I uses pallet storage space and bin storage space data provided by the Consigned Section in its calculations. The FY 92 calculations were based on 591 pallet storage spaces and 4,700 bin storage spaces. However, there may now be 2,789 pallet storage spaces and 3,148 bins being used.

Recommendation 15. GPO should reconcile the number of available and assigned storage spaces (pallets and bins), and review and adjust as necessary the storage rates charged to the agencies.

Storage fees should be a revenue producer for GPO or, at a minimum, a break-even proposition. If the storage rates are calculated using an incorrect number of storage spaces and bins—

- GPO will not be charging agencies fair and accurate rates for storage of their products.
- GPO will continue to lose money.

An applicable best practice we observed involves the Defense Logistics Agency (DLA). DLA stores materials and distributes them from numerous warehouses for other Defense agencies, including publications for the U.S. Navy. DLA establishes the rates and charges the agencies through the Defense Business Operating Fund (DBOF). DLA reviews and recalculates the rates annually, based on its operating expenses and the amount of square feet occupied by the material the agency has in storage. Recognizing these storage rates are revenue producers, DLA is examining the feasibility of calculating the rates using the cubic feet (versus square feet) occupied by the materials. This would increase DLA's revenue substantially. GPO should consider a similar pricing model after it reconciles the number of available storage spaces and updates its rates.

Field Operations Division (Retail Stores)

Finding 16. Some GPO bookstores have developed a niche by recognizing the needs of their local markets and capitalizing on them through creative marketing.

In general, GPO bookstores serve customers that are unique to their market. Some stores have exploited this fact by tailoring their marketing and promotion efforts to target their unique customers. As a result, the assortment of merchandise sold in bookstores varies greatly from store to store. For example, the New York store has capitalized on its large immigrant customer base by stocking all immigration and naturalization forms, sales of

which generate a significant amount of its revenues. Similarly, the bookstore in Jacksonville has targeted nautical publications as a result of nautical interest in the area.

In some instances, bookstore managers have also conducted significant marketing efforts to capture markets outside their immediate local market. For example, the Seattle bookstore, with the help of Headquarters, initiated a marketing trip to Alaska during which the store manager and the assistant manager visited many businesses. The trip was targeted at businesses that required the use of the *CFR*. The store manager tracked all sales from the trip, showing that the store generated sales in excess of \$11,500 in just 2.5 months as a direct result of the Alaska trip.

Recommendation 16. GPO needs to institutionalize the process of fostering and sharing innovative, local, market-specific initiatives among staff managing the retail book stores.

Like their commercial counterparts, GPO's retail bookstore sales each reflect the character of the customers that frequent these stores. To capitalize on sales opportunities in these local markets, GPO needs to take steps to better understand the geographic, demographic, socioeconomic, lifestyle, and occupational makeup of customers and prospects within easy commuting distance of each store. GPO also needs to gather information on the retail, industrial, and residential makeup of the immediate area around each store, because these factors as well affect store traffic.

In addition to gathering market intelligence specific to each store, GPO should encourage and reward store staff for market testing and experimentation in selecting and promoting retail publications. They need training in how to develop specific offerings that better match the needs of customers in their local markets. A continuous sharing of lessons learned from this testing and experimentation is essential to leverage the knowledge gained in one local market for the benefit of staff in other markets.

Finding 17. About 60 percent of stores' revenue is generated through mail and telephone orders, raising questions about the need for stores.

As Exhibit 2-10 illustrates, a majority of the bookstore revenues arrive through mail and telephone orders, while about 40 percent of revenues are generated via walk-in customers.³⁴ This situation presents a potential risk to the entire bookstore operation. Although there are some instances where sales can be traced back to a store's promotion activities, the true origin³⁵ of most telephone and mail-order customers is unknown. Since bookstore telephone numbers and addresses are readily available in GPO catalogs and on Internet sites, and are also made available to customers by the bookstores, the origin of mail and telephone sales could either be Headquarters or bookstores. There is a chance

³⁴ The data used to determine the sales categorization by type (i.e., walk-in, mail, or telephone) of sale is tracked manually by stores and submitted daily to GPO Headquarters.

³⁵ The word "origin" refers to the marketing activity and the source of the marketing that results in a sale. For example, the origin for a sale generated as a result of Headquarters placing bookstore numbers on the Web would be Headquarters.

that because of the bottlenecks at the central order processing operation at Headquarters, many customers have opted to call the bookstores instead of Headquarters to place an order. If this is the case, stores could potentially lose a majority of their revenues with the implementation of IPS at Headquarters. IPS is expected to eliminate much of the backlog that currently exists in the central order processing operation. As a result, many of the orders currently being placed at bookstores would return to the central order processing operation, thereby eliminating much of the sales currently credited to stores.

Exhibit 2-10
Sales Breakdown for GPO Bookstores

Bookstores Sales Breakdown				
Type of Customer	Walk-In %	Telephone %	Mail Orders %	Other %
FY 95	32	26	35	7
FY 96	32	31	29	8
FY 97	42	30	20	8

This situation also raises the issue: is there a real need for the bookstores? If only 40 percent of the sales at bookstores are being generated through walk-in sales, regardless of the origin of a sale, what real purpose are the stores serving? The mission of the bookstores is to provide face-to-face personalized service to customers, but if the majority of the sales revenue is generated through mail and telephone orders, customers do not receive face-to-face service. With the implementation of IPS, those telephone and mail order sales could be diverted to Headquarters where staff at the central order processing would have the adequate training, resources, and information to serve customers.

Recommendation 17. GPO should develop a mechanism to track sales based on the origin of the order and perform a cost and benefit analysis of the bookstores.

To closely monitor each store's customer base, GPO should continue to use the sales activity reports to monitor sales by customer type (i.e., walk-in, telephone, or mail). In addition to the sales activity reports, bookstores should develop a mechanism to track sales based on their origin or marketing source. An option should be added to the POS system that allows store staff to enter the type of sale and its origin. Store managers and Headquarters will then be able to more closely track the types of products different types of customers are purchasing and the accurate origin of sales.

GPO should also perform a cost and benefit analysis of the retail stores operation to determine whether the retail stores should be privatized, outsourced, or closed all together.

Finding 18. Although GPO’s bookstores are financially viable as a group, some are unprofitable and most fall short of industry performance standards.

The 23 retail stores are collectively self-sustaining and generate a net income for GPO, which was \$1.8 million in FY 97. Of the 23 stores, however, 8 stores operated in the red and had a net loss of \$535,000. In fact, six stores—Chicago, Cleveland, Columbus, Detroit, Portland, and San Francisco—have been unprofitable at least 3 of the past 5 fiscal years. These stores are lowering the overall profitability of the operation.

GPO has no measurement system to evaluate the performance of its stores. The lack of a measurement system has resulted in a situation where management is unaware of the true state of the retail store business. After constructing some measures based on information collected from GPO, we found that although many stores are profitable, they fail to meet many industry performance standards. Based on data from the American Booksellers Association, GPO bookstores consistently rank well below industry averages on several performance measures. For example, while industry sales per square foot range from \$152 to \$233, most GPO stores sales per square feet range from \$30 to \$100. The disparity between industry and GPO’s stores can be attributed to—

- Bookstores are limited to selling government publications. Therefore, their customer base cannot be compared with that of private sector bookstores.
- Stores might be too large for their line of business. Most stores’ percentage of selling space compared with total space is below industry standard.
- Most GPO stores are open from 8 a.m. to 4 p.m. Monday through Friday, while private sector stores are generally open from 9 a.m. to 9 p.m. at least 6 days a week.

Recommendation 18. After a thorough review, GPO should close or relocate all stores with unprofitable futures and set up a performance measurement system to closely monitor the performance of all open stores.

Although GPO’s retail stores remain profitable as a whole, their overall profitability could be increased by taking necessary steps to close or relocate historically unprofitable stores that show little or no potential to achieve and remain profitable. Additionally, implementation of a performance measurement system at the store level will enable stores and Headquarters management to closely monitor the performance of stores.

The Chicago, Cleveland, Columbus, Detroit, Portland, and San Francisco stores should be placed on a “watch schedule” so Headquarters can help them develop a plan of action to at least break even. If at the end of this period, the stores are still operating at a loss, they should be closed or relocated. The decision about whether or not to relocate a store must be justified and, at a minimum, consider the following questions:

- What were the reasons for closing the old location?

- Will the new location solve the problems that led to the closing of the old location?
- Is there a large enough local market to support the new store?

GPO should identify and apply industry-accepted performance standards to evaluate the performance of its bookstores, individually and collectively, on a regular basis. Some typical performance measures include revenue per square foot, inventory turnover, and sales per store hour.

Regular market assessments should be conducted so that management is aware of the evolving markets and customer base for each bookstore. The opening of new stores or relocation of existing stores should be based on extensive market analysis. The market analysis must show that the store will break even by the third year of operation and remain consistently profitable, thereafter.

Finding 19. Little standardization of practices exists across stores, and most stores lack the basic necessities to achieve their true market potential.

The GPO bookstores operate under the guidance of the Office of the Chief (manager of the Field Operations Division) and adhere to the policies listed in the standard operating procedures manual, *United States Government Bookstores, Guidance for Manager*, and Title 44. All stores submit daily sales reports and other required documentation to Headquarters and follow the operational policies of SupDocs and GPO.

Merchandising decisions are exclusively made at the store level. The decision to order or replenish inventory is based on the store manager's knowledge of the local market and sales history information, which is available on inventory cards.³⁶ Because information regarding a particular store's product sales or markets is not tracked at Headquarters, stores seldom receive guidance regarding merchandising from Headquarters. The practice of allowing stores to tailor their merchandise to the needs of the local market is common throughout the bookstore industry. However, Headquarters or regional offices in the private sector constantly track sales trends of particular stores and markets, providing guidance to store managers on which merchandise might sell particularly well in the store's markets.

Marketing efforts are also managed at the store level and vary by store. Some store managers proactively market outside of their store's immediate local area, and in some instances (as cited in Finding 16), store marketing efforts have generated significant revenues through their marketing efforts. However, there is little or no coordination of marketing and promotion efforts between the stores and GPO's Advertising and Promotion Branch. Most bookstores rely on fragmented mailing lists that are maintained on various software for promotional efforts.

³⁶ Because most bookstores do not have a POS system that tracks inventory, inventory cards are used to track orders and inventory.

Although examples like those cited in Finding 16 are favorable, the lack of communication among the store managers, and between Headquarters and the bookstores has hindered the exchange of information and ideas that could potentially prove to be lucrative and enhance store performance. Additionally, stores do not have e-mail, which has further impeded communication. Best practice organizations have regular regional meetings, yet the last GPO store managers meeting was held May 1994. A store managers' meeting is tentatively scheduled for June 1998.

Bookstores also lack basic necessities required to run an efficient retail store operation. Only 5 of the 23 stores have POS systems installed, and those systems function as stand-alone systems with no linkage to Headquarters. In several interviews, it was mentioned that after IPS was implemented, the POS systems would be linked to it. The remaining stores without a POS system are supposed to be provided with a POS system and linked to IPS (currently, no funds have been approved to purchase POS systems for the remaining stores). The staff at the five stores that do have POS systems are inadequately trained to use the system or do not use it to its maximum potential. Moreover, managers do not use many reports that are available or can be generated. In the fielding of the POS system, many necessary components such as the customer module were either not purchased or overlooked.

In the private sector, companies use store design and layout to convey a common theme and attract customers, yet GPO stores lack such a theme to convey the GPO image. Although 10 stores have display fixtures similar to the main bookstore located in Washington, DC, the remaining have various fixtures and layouts.

Finally, like most distribution channels of GPO, the bookstores do not use any methods to solicit customer input or to monitor or measure customer satisfaction.

Recommendation 19. GPO Headquarters should support the bookstores with the necessary resources and guidance to maximize their revenue potential.

Merchandising decisions should continue to reside with store managers. However, Headquarters should take a more proactive role in providing guidance. Specifically, Headquarters should develop a mechanism to monitor store sales, products, and customers, and should provide recommendations based on that information. Headquarters should also benchmark the commercial retail industry and join industry associations such as the American Booksellers Association to remain current with industry trends and make recommendations to GPO bookstores.

Sales territories or regions should be defined for each store, including areas of responsibility for each region. Stores should be made responsible for marketing to their region. Headquarters' Advertising and Promotion Branch should provide more assistance, such as providing promotional materials, to the stores.

GPO should conduct at least one store managers' meeting per year to discuss issues related to the retail store operation and to exchange best practice ideas. The meeting could be held in different cities to allow store managers to view other GPO bookstores. Additionally, all stores should have access to basic technologies such as the Internet and e-mail. Stores should use e-mail to freely exchange ideas and information.

GPO should develop a timeline to implement POS systems at all bookstores. The requirements for the POS system should be reevaluated to consider the possibility of adding the customer module and the export module to existing and future systems. The system should be directly linked to IPS, thereby enabling Headquarters to have a comprehensive view of inventory in the retail sales operation and providing stores a mechanism to view inventory at the Laurel Warehouse. Finally, GPO should develop a training plan to train all store managers and staff on all the uses of the POS system for store management and reporting.

GPO Headquarters should develop a common design and layout for all bookstores comparable to the methods private sector bookstores use. For example, in the private sector, companies use store design and layout to convey a theme and draw in customers. GPO should define and implement a GPO theme throughout its bookstores to attract customers.

GPO should regularly conduct market assessments to anticipate and respond to changes in the markets for each store.

2.3 FEDERAL DEPOSITORY LIBRARY PROGRAM

Mission and Goals

As authorized by Title 44 U.S.C., LPS administers the FDLP. The mission of the FDLP, under the SupDocs, is “to provide equitable, efficient, timely and dependable no-fee public access

³⁷

The FDLP reaffirms this mission by emphasizing the importance of making government information available via electronic formats. The FDLP's goals are³⁸—

- Ensure that the public has equitable, no-fee, local public access to government information products through a centrally managed, statutorily authorized network of geographically dispersed depository libraries.

³⁷ U.S. Government Printing Office, *Study to Identify Measures Necessary for a Successful Transition to a More Electronic Federal Depository Library Program*, June 1996, p. 5.

³⁸ U.S. Government Printing Office, *Study to Identify Measures Necessary for a Successful Transition to a More Electronic Federal Depository Library Program*, June 1996, p. 6–7.

- Use new information technologies to improve public access to government information and expand the array of government information products and government electronic information services made available through the FDLP.
- Provide government information products in formats appropriate to the needs of users and their intended use.
- Enable the public to locate government information regardless of format.
- Ensure both timely, current public access and permanent, future public access to government information products at or through depository libraries, without copyright-like restrictions on the use or reuse of that information.
- Facilitate preservation of government information through the National Archives and Records Administration.
- Ensure that the program is cost effective for all parties involved, including government publishing agencies, GPO, depository libraries, and the public.

Services

The FDLP provides four main services to government agencies—information dissemination services, cataloging and locator services, permanent access services, and depository library services.

Information Dissemination Services. The FDLP disseminates agencies' electronic information products via *GPO Access*. These products are distributed to depository libraries at no cost to the agency if they are produced or procured through GPO.

Cataloging and Locator Services. Agency information products are cataloged in a standard library format for entry into a national bibliographic utility and nationwide individual library online catalog. Through pathway services, users can locate and connect to information at agency sites. FDLP coordinates with agencies to provide bibliographic control of government information products.

Permanent Access Services. FDLP coordinates with agencies and with participating depository libraries to ensure that both tangible and online electronic information products are maintained permanently for use by agencies and the public. FDLP stores, maintains, and provides distributed permanent access to government electronic information products. These services are an historical resource for products that are no longer available through the publishing agency or the Sales Program.

Depository Libraries Services. About 1,375 depository libraries exist nationwide. There are two types of depository libraries: regional depositories, which receive all material distributed through the FDLP and make the information permanently available for public use without charge; and selective depositories, which tailor their publications acquisitions to local needs, choosing from among 7,000 organizational and series categories, and are required to keep the products they receive available for at least 5 years. Both types of depository libraries receive

government information products in various formats at no cost in return for providing free public access to the information. These libraries service between 189,000 and 237,000 users each week. In FY 97, about 13.4 million copies on paper and microfiche and 341,100 copies in electronic formats (i.e., CD-ROM) were distributed to depository libraries. LPS monitors the condition of depository libraries through periodic inspection visits, self-studies, and a biennial survey. In addition to managing the depository library program, LPS conducts outreach activities, such as organizing continuing education efforts for librarians, which include the annual Federal Depository Conference and Interagency Depository Seminar. These outreach activities lead to effective implementation of input from members of the depository community, library associations, and key advisory bodies.

Appropriations

The FY 99 appropriations request for the S&E Appropriation of the SupDocs was \$30.2 million, most of which was designated for the FDLP (\$25.8 million). Other programs covered by this sum include Cataloging and Indexing (\$3.5 million), By-Law Distribution (\$0.4 million), and International Exchange (\$0.5 million). The FY 99 appropriations request represents an increase of \$1.1 million (3.9 percent) over the amount approved for FY 98, due to increases in mandatory pay and related costs, price level changes, and workload changes. For example, resources once used to manage physical products are now being used to manage electronic products. About \$225,000 of the FY 99 appropriations are for enhancements to *GPO Access* to facilitate the transition of the FDLP to a predominantly electronic information distribution system.

Title 44

Title 44, Chapter 19, of the US Code gives the SupDocs responsibility for receiving, classifying, cataloging, distributing to libraries, and ensuring the preservation of Federal Government information products. Title 44, Chapter 41, of the U.S. Code enables the public to have no-fee online access to the *Federal Register*, *Congressional Record*, congressional bills introduced in Congress, *Code of Federal Regulations*, *Commerce Business Daily*, public laws, and more than 70 government databases. In 1993, Congress amended Title 44 with the GPO Electronic Information Access Enhancement Act, which requires GPO to disseminate government information products online. This Act formed the basis of *GPO Access*, the primary delivery vehicle for online government information to depository libraries and the public.

A major effort in place is to redraft Title 44. GPO has proposed changes to Title 44 in three main areas:

- Changes reaffirming the centralization of the Government's conventional printing procurement functions in GPO
- Changes clarifying GPO's authority to produce, procure, and sell government publications in electronic formats; clarifying GPO's responsibility to compile comprehensive catalogs and indexes of government publications, including publications in electronic format; and clarifying the existing requirement that

- government publications in electronic formats be made available for dissemination to Federal depository libraries
- Changes providing additional flexibility and authority to the Public Printer and the Superintendent of Documents in managing government publications, including requirements for the Director of OMB to support GPO programs and services.

The second change is the most relevant to the FDLP. Proposed changes to Chapter 19 of Title 44 include—

- Create new definitions of “government information” to specifically include electronic formats and prevent restrictions on public access to public domain information
- Establish a system of electronic public access to government information coordinated by the Superintendent of Documents
- Combat “fugitive”³⁹ documents by broadening the kinds of information entering the depository library program, including eliminating the exemption on “cooperative” publications
- Update language covering statutory designations of depositories, inspection requirements, and cataloging and locator services
- Provide for permanent access to electronic information.

GPO’s Transition Plans for a More Electronic FDLP

In August 1995, at the direction of Congress, GPO initiated a *Study to Identify Measures Necessary for a Successful Transition to a More Electronic Federal Depository Library Program*. The transition to a more electronic FDLP, which is estimated to take 5 to 7 years, includes disseminating tangible electronic government information products, online databases, and locator services. Results of the study indicated that there was value in having the authority for a broad-based public information program remain in the legislative branch, and for having a single entity in the SupDocs coordinate library-related information dissemination activities.

GPO is continually implementing transition plans for a more electronic FDLP. Depository libraries can use the World Wide Web to perform a wide variety of functions related to the FDLP, including updating library profiles, viewing and downloading library item selection profiles, making new selections and dropping unneeded items online, obtaining information regarding changes to the program, registering for conferences, and completing the *Biennial Survey of Depository Libraries*. Federal depository libraries now assist users in locating government information in tangible formats, including information that is available online. Through the FDLP, public users can access STAT-USA, CenStats, and Environmental Health Information Service at no charge to the user or the library.

³⁹ Fugitive documents are documents that are not received in the FDLP.

In addition to these services, users are electronically accessing government information from *GPO Access* at an increasing rate. Users of *GPO Access* are downloading about 8 million documents per month from more than 70 databases. Even those without computers are using *GPO Access* through public access terminals located at depository libraries. Future electronic projects for the FDLP include an e-mail response system for depository library inquiries and an automated claims system.

FINDINGS AND RECOMMENDATIONS

Finding 20. FDLP's mission is well defined and includes a specific set of goals addressing the increasing amount of government information available in electronic formats.

Congress has encouraged GPO to transition the FDLP to an electronic basis. The GPO Electronic Information Access Enhancement Act, which established *GPO Access*, has aided in the transitioning of the FDLP to an electronic program. By establishing *GPO Access* databases, the FDLP assumed responsibility for permanent access to electronic government information products. This expanded mission led to the creation of the FDLP Electronic Collection, consisting of remotely accessible electronic government information products, including core legislative and regulatory products, which will reside permanently on GPO servers. The FDLP Electronic Collection also contains other products maintained by GPO or other institutions with which GPO has established formal agreements.

GPO is also adopting technology solutions to assist FDLP administration. For example, depository libraries use the World Wide Web for various purposes that simplify and speed FDLP administration and information dissemination. Similarly, GPO continues to develop applications for the FDLP Administration Page on *GPO Access* as the main channel for official communications with the FDLP. In 1997, GPO added Council Web pages, which list information on the activities of the Depository Library Council, to the FDLP Administration Page. GPO has also discontinued certain paper titles when reliable electronic alternatives are available.

In spite of FDLP's stated mission and technological advances, the FDLP's goals do not include a specific timetable to convert from print to electronic format as the preferred medium for documents transferred to the depository libraries. The existing transition chronology outlines *general* activities to be taken from FY 96 to FY 98. During the period from FY 98 through FY 01, no explicit steps are outlined; instead, the plan reads "SOD will move increasingly toward electronic dissemination and access." Without a definitive timetable, progress has been slow in converting the FDLP to a predominantly electronic format. Even though the *1997 Biennial Survey of Depository Libraries* revealed that 89 percent of the depository libraries provide public access to computer workstations with CD-ROM and Internet capability, most of the material distributed to the depository libraries remains in a non-electronic format. GPO has, however, taken steps to offer substantially more electronic documents and databases on its own Internet Web site *GPO Access*. Moreover, GPO is confronted with an economic disincentive in shifting

from a print to electronic format for FDLP documents, because Congress appropriates funds to “purchase” printed documents from GPO for free distribution to the libraries.

Recommendation 20. GPO should refine the goals of the FDLP to include target dates for completing the transition of the FDLP to a more electronic basis.

GPO should develop a 3- to 5-year action plan, including numerical targets, dates, and a list of accountable parties, to transition the FDLP to a more electronic basis. As the FDLP transitions to a more electronic basis, the FDLP should be redescribed to further reflect the electronic information content.

To provide an incentive to depository libraries for transitioning to an electronic basis, GPO should examine the possibility of charging participating FDLP libraries for their acquisition of printed copies of reports when alternative electronic formats are available and accessible for the same publication. This action would lessen the demand for printed documents and defray GPO’s cost of producing them.

The FDLP saves individual Federal agencies staff resources because agencies do not have to communicate with or supply documents to depository libraries. In addition, the FDLP saves Federal agencies money because agencies do not have to pay the cost of printing, binding, or shipping documents, or of licensing software, if the documents are provided through GPO. To further encourage agencies to migrate from print products to electronic formats and to ascertain that their electronic products are included in the FDLP, participation must be made effortless and cost effective for the agency.

GPO should continue developing new and improved methods for efficient information dissemination to the depository libraries. Likewise, GPO should work to improve the computer and telecommunications resources necessary to serve the public with electronic FDLP information. To further accelerate the electronic transition of the FDLP, GPO should develop additional partnerships (consisting of GPO-brokered agreements between agencies and depository libraries) with other organizations to provide the environment and resources for permanent access to agency products not previously managed via *GPO Access*.

Although many benefits are associated with the transition to a more electronic FDLP, risks are involved in this transition and they should be considered. Specifically—

- GPO may incur additional costs to provide permanent public access through its electronic information services.
- Depository libraries and their users will have to pay to print or for printed copies of information that are no longer disseminated to depository libraries in print format.
- Means must be created to identify and ensure the authenticity of government electronic information.

- Restrictions may be placed on electronic government information, thereby restricting public access.
- Procedures must exist to ensure the public's access to electronic publications will not be jeopardized in the future (e.g., due to changing Internet addresses or agencies replacing their files with updated data).
- Depository libraries will require staff training, public access workstations, and software to connect the public to remotely accessible government electronic information.

A joint study group should be formed, consisting of selected representatives from the following groups: depository librarians, GPO employees (e.g., Electronic Photocomposition Division, Office of Electronic Information Dissemination Services, electronic transition staff), and congressional staff to explore the aforementioned risks, to determine ways to minimize the risks, and to obtain buy-in from FDLIP's stakeholders.

Finding 21. GPO has begun partnering with several institutions to share the burden of preservation and dissemination of government documents and to ensure public access to government information in electronic formats.

LPS is attempting to ensure permanent online accessibility for electronic government information products that are part of GPO's online collection. To this end, a core of legislative and regulatory information managed on GPO's servers will remain with GPO permanently, while partner institutions will provide storage capability and free public access to a wide variety of additional executive and judicial branch information. Partnerships build on the model of cooperation between GPO and local libraries for dissemination of and public access to government information.

A key development from FY 97 was the "collection management" concept for *GPO Access*. This concept provides for GPO management of the various electronic government information products made permanently available via *GPO Access* as a library-like collection. Under the collection management concept, GPO-partner institutions provide storage capacity and free public access to a wide variety of executive and judicial branch information. In 1997, GPO established partnerships with the University of Illinois-Chicago and the State Department, the University of North Texas and the now-defunct Office of Technology Assessment, and the Online Computer Library Center and the National Library of Education. In addition, GPO developed a partnership with the Department of Energy for the electronic dissemination of its reports in image format. GPO is also piloting a project with the NTIS to make available certain NTIS image files to 20 depository libraries. In all these partnerships, agencies and depository libraries enter GPO-brokered agreements to provide the environment and resources for permanent access to agency products not previously managed via *GPO Access*.

Recommendation 21. GPO should develop additional depository partnerships with libraries and other government agencies.

As the transition to a more electronic FDLP unfolds, partnerships will become increasingly important. Partnerships, like those previously cited, help ensure permanent online accessibility for electronic government information products. They also help share the burdens of building, storing, disseminating, and preserving the collection of FDLP electronic resources. Therefore, GPO should continue to develop partnerships with other organizations.

Finding 22. The FDLP is well managed, provides a valuable public service, and is respected by the library community. Constituency support, including the support of the American Library Association and depository librarians, enhances FDLP's ability to conduct its mission.

The LPS is well managed; it accomplishes its mission through the Library Division and the Depository Distribution Division. The Library Division's primary responsibilities include acquisition of publications, classification of books by assigning a SupDocs classification number, conversion of books to microfiche, cataloging of books, and inspection of depository libraries. The Depository Distribution Division is responsible for the physical receipt, storage, issuance, preparation, and distribution of shipments of publications to depository libraries.

In addition to being well managed, the FDLP provides a valuable public service. Specifically, the FDLP ensures that access to government information is available to the public at large. People without the technological means to access online information can do so via public access workstations located in the depository libraries located across the country. Likewise, people who cannot purchase their own copies of print materials of government information can access these materials at the depository libraries. Moreover, these collections serve as a historical resource for products that are no longer available through the sales program or publishing agency. In all the aforementioned cases, depository librarians play a critical role in helping people find the government information they need. Service at the depository libraries is consistent and of high quality. The FDLP monitors the depository libraries' condition through periodic inspection visits, self-studies, and a biennial survey, including librarians who participate in continuing education efforts the FDLP sponsors.

Support from the FDLP's constituencies strengthens FDLP's ability to accomplish its mission. For example, depository librarians have testified on Capitol Hill and have written letters to Congress in support of GPO's appropriations requests. Although the FDLP engages in some marketing activities with its direct customers (the depository librarians) through conferences and newsletters, little marketing is directed to the public at large. Therefore, potential stakeholders are largely unaware of GPO's products and services. Only 20 percent of the respondents to the *1997 Biennial Survey of Depository Libraries* described their libraries' promotion of the depository to the general public as "active,

ongoing promotion to the public,” while 16 percent are not promoting the depository to the public.

Recommendation 22. GPO should expand marketing efforts to all potential stakeholders.

To increase public awareness of the FDLP’s valuable services, GPO should enhance its marketing efforts to all stakeholders, including library users. For example, the LPS should work with the depository libraries to develop promotional and educational materials regarding the FDLP’s services. FDLP should develop a strategic marketing plan with stated goals and assigned accountability. Long established and positive relationships with libraries may strengthen product sales, if marketing efforts were expanded to reach this customer segment. For instance, the outreach programs for the library community—the annual Federal Depository Conference, Depository Library Council meetings, and Interagency Depository Seminars—could be used to market FDLP’s services.

Finding 23. Opportunities exist to reduce staff in the Library Programs Service through consolidation.

Rapid advances in information technology, especially in the area of electronic mass storage and wide-band Internet access, could minimize the need for GPO staff required to distribute printed matter. Although the number of copies of information products distributed to the depository libraries has decreased by more than 50 percent since FY 93, full-time staff committed to the library program have declined by only 16 percent. More specifically, the library program staff engaged in the distribution functions for the depository libraries perform duties similar to those supporting the retail sales programs at the Laurel Warehouse. Similarly, the library program staff engaged in the acquisition functions for the depository libraries perform duties similar to those supporting the retail sales operation.

Recommendation 23. GPO should consolidate functions and reduce staff as necessary to address the duplication of efforts in the library program and the retail sales operation.

The possibility for consolidating the retail sales operation’s distribution function at the Laurel Warehouse with LPS’s distribution function to save space and resources should be explored. It may be possible in the new IPS to consider the depository libraries as a customer and establish a standing order form, as is done for other customers of retail sales. Doing so would eliminate the need for separate LPS and retail sales operation distribution functions.

Similarly, GPO should explore consolidating the acquisition function of the LPS with that of the retail sales operation. Consolidation could potentially reduce the duplication of staff functions in the LPS and sales operation’s acquisition process. Moreover, consolidation would ensure that fewer documents were overlooked for inclusion in the library programs. The inventory management specialists from the Sales Division do not have the classification expertise necessary to perform LPS acquisition functions.

Likewise, the LPS staff has no experience with the parameters used to determine which publications should be placed in the Sales Program. Therefore, training would be required to successfully consolidate the acquisition function.

Finding 24. The roles for the preservation of electronic documents are ill-defined, leading to gaps in the information available to the public and potential problems for permanent access to government information.

The FDLP is responsible for providing permanent public access to government information products disseminated through the FDLP. A problem with electronic publishing is that there is virtually no way to determine how long the documents will stay online. Moreover, it is often unclear whose responsibility it is to maintain electronic information. Some agencies do not regard Title 44 as applying to government information in electronic formats. Although OMB's Circular No. A-130, "Management of Federal Information Resources" requires agencies to cooperate with GPO for print publications, it only "encourages" cooperation for publications in electronic formats and provides agencies with a rationale for excluding electronic information products from the FDLP based on cost. Some agencies therefore do not provide their electronic products to the FDLP, creating gaps in information available to the public and potential difficulties for permanent public access to government information in the future. This threat is underscored by the fact that government printing is becoming more and more decentralized. If this trend continues, LPS will need more employees to identify and obtain all publications created at organizations other than GPO.

Recommendation 24. GPO should continue to pursue changes to Title 44, which require government agencies to provide all documents to the FDLP.

Chapter 19 of Title 44 of the U.S. Code gives the SupDocs responsibility for receiving, classifying, cataloguing, distributing to libraries, and ensuring the preservation of Federal Government information products. It is unclear whether the definition of "Federal Government information products" refers only to print products or also includes electronic information. Nonetheless, GPO is being encouraged by Congress to transition the FDLP to a more electronic basis. If revisions to Title 44 are made that clarify the existing requirement that government publications in electronic formats be made available for dissemination to Federal depository libraries, organizations will have to be more diligent in giving LPS depository copies. Subsequently, centralization of the program will be maintained. In addition, means should be developed to ensure that agencies notify GPO before they initiate, substantially modify, or eliminate government information products to ensure permanent access and preservation.

Finding 25. The existence of "fugitive" documents undermines the public's ability to access government information.

Nonreceipts in the FDLP occur most often when the agencies do not print their materials through GPO and do not provide the LPS with depository copies as required by Title 44. These excluded documents are known as "fugitive" documents. It has been estimated that

more than 50 percent of all tangible government information products are “fugitives.”⁴⁰ “Fugitive” documents impair the public’s ability to access government information.

Several factors have led to the increase in “fugitive” documents. Technology advances in desktop publishing have enabled agencies to publish and print on their own, thus decentralizing the process and making it more difficult for GPO to identify these documents. Similarly, organizations are placing information on their Web sites, which leaves no record of the publication. Further exacerbating the “fugitive” issue is the cooperative publication exclusion.⁴¹ This exclusion has resulted in government information of notable public appeal being exempted from the FDLP. According to Title 44, Section 1903, “so-called cooperative publications which must necessarily be sold to be self-sustaining” are not required to be included in the FDLP.

Recommendation 25. GPO should hold an information campaign to make agencies aware of their compliance responsibilities.

To strengthen enforcement of Title 44, new means must be developed to inform agencies of their responsibilities and to ensure agency compliance with FDLP obligations. Many agencies are either unaware of the FDLP and their legal obligations or do not recognize the value of the program. Therefore, GPO should conduct an information campaign underscoring the roles and responsibilities of the FDLP and agency obligations to the FDLP. Also, more precise language is needed in Title 44 highlighting that electronic information is within the scope of the FDLP.

In addition to the incentive provided in Section 1903 of Title 44, authorizing GPO SupDocs to pay for copies of products produced or procured through GPO, penalties should be imposed for noncompliance. Moreover, the exclusion from the FDLP of cooperative publications should be eliminated. Eliminating the exclusion will help the FDLP to combat “fugitive” documents by expanding the types of information entering the program. In addition, governmentwide standards must be developed to manage the creation and dissemination of electronic government information products. The use of standard formats would reduce expenditures in preparation, printing, distribution, storage and retrieval, archiving, and use of electronic government information products.

Finding 26. FDLP staff are insufficiently trained, thus impeding the transition to a more electronic FDLP.

Staff do not have sufficient training to accelerate efforts to shift toward a more electronic FDLP. GPO staff training is reactive and is provided only if it is directly related to the employee’s current position. No training plan exists to handle FDLP employees’ changing roles. In addition, hiring freezes, combined with positions being filled too slowly, have led to an inadequate number of trained staff. Moreover, as the physical maintenance of

⁴⁰ Michael F. DiMario, Public Printer, Prepared Statement Before the Committee on Rules and Administration, U.S. Senate on Oversight of the Government Printing Office, February 27, 1998.

⁴¹ These are documents that result from public-private partnerships to jointly produce a product.

collections decreases, GPO must determine how to handle excess employees. Similarly, some depository librarians, including library users, lack the technical skills necessary to transition to a more electronic FDLP. However, GPO is planning to continue providing *GPO Access* hands-on training classes and demonstrations this year nationwide. In addition, managers do not believe they are given enough latitude in making personnel and training decisions, such as classifying positions, reassigning personnel, and deciding what kind of training is appropriate.

Recommendation 26. GPO should endorse a training plan to manage FDLP participants' changing roles and provide managers with more authority over personnel decisions affecting their areas.

As the focus of the FDLP continues to change to provide more electronic access and fewer physical products, and with depository libraries providing connections to remotely accessible government information rather than building connections in their own facilities, the roles of the FDLP participants will change as well. It is imperative that a transition to electronic distribution does not limit the public's ability to access government information. Depository libraries will be required to serve as local providers of public access workstations and to have the necessary services to connect the public to remotely accessible government electronic information. Consequently, depository librarians will need specialized staff training and continuing education opportunities to manage electronic information services. Depository libraries will also need computer equipment to allow for timely and equitable public access to government information, including printing and downloading capabilities.

In addition to the action plan (Recommendation 20), LPS should develop a staffing plan that describes the competencies required to achieve the targeted transition dates. The staffing plan should estimate the gaps between current competency levels of the staff and required competency levels. Next, training interventions should be identified to close the identified gaps. LPS should also be provided with the funding necessary for the training. Additionally, managers should have more responsibility and authority regarding personnel decisions in their areas. Specifically, managers should be empowered to determine and approve training in their areas. This recommendation will reduce the time required to make staffing decisions and improve the quality of staffing decisions.

Finding 27. Problems with the acquisition, classification, ordering, and production processes leave numerous opportunities for human error.

The acquisitions process includes both ordering and receiving, and varies depending on the document and originator of the document. This process leaves numerous opportunities for human error, given the complexity of the process, including a complicated manual workflow and a large number of organizations that may be involved. Form 3868 provides the SupDocs with advance notice of publications for decisions to be made about the number of sales and depository copies GPO should order. When completed, the publication and its intended audience are described in enough detail for SupDocs staff to determine whether or not the publication should be in the Sales and/or Depository Library

Program, and how many copies should be ordered. In practice, the 3868 forms are often incomplete or illegible, which requires GPO to contact staff at one of GPO's Regional Printing Procurement Offices or the publishing agency for clarification and additional information. Incorrect and incomplete 3868 forms have two main consequences: either a publication that should be distributed to the depository libraries is not ordered at all, or a quantity that does not match the needs of the depository libraries is ordered.

Classification is based on the SupDocs classification system. Until publications are classified, material cannot be cataloged or ordered. If GPO classifies a publication incorrectly, an erroneous item number may be assigned, an inaccurate quantity may be ordered, and publications may be sent to the wrong location. The automated classification system has data only for products classified since 1976. Therefore, sometimes nonunique identifiers are assigned.

Shortages occur when the GPO receives fewer copies than are required to complete the depository distribution. Ordering errors occur when a publication printed through GPO is not recognized as a depository item and no depository copies are ordered. Also, a publication can be ordered under a different item number than that assigned after the publication has been classified. Production errors occur when LPS receives fewer usable copies than were previously ordered. There may be defects in the publications or the printer may deliver fewer copies than were ordered.

Recommendation 27. GPO should institute a formalized quality control system to improve FDLP processing activities.

A formalized quality control system with established rules of accountability should be instituted. Employees working in the acquisition, classification, ordering, and production areas should be accountable for the accuracy and completeness of their work. In addition, communication tools between the FDLP and the acquisition, classification, ordering, and production areas should be implemented to ensure sufficient communication regarding each area's needs. Specifically, cross-functional meetings should be established. An electronic version of the 3868 forms should be developed. The forms should not be able to be submitted until they are fully completed. Electronic forms will therefore eliminate the illegibility and incompleteness issues; consequently, depository libraries will receive the correct quantity of publications.

To determine how GPO can become more effective and efficient in marketing, sales, and distribution, we examined the strengths, weaknesses, opportunities, and threats (SWOT) to a competitive strategy.

**Exhibit 2-11
SWOT Matrix**

Function/ Organization	Strengths	Weaknesses	Opportunities	Threats
General	<ul style="list-style-type: none"> • <i>GPO Access</i> • Institute for Federal Printing and Electronic Publishing (IFPEP) • Office of Electronic Dissemination Services (EIDS) works with customer agencies regarding their electronic product needs • Promotion and advertising, when it occurs, is effective. • Automated Call Distribution (ACD) system • Integrated Processing System (IPS) is expected to significantly improve productivity throughout the retail sales operation. 	<ul style="list-style-type: none"> • Product selection, pricing, and promotion process • No staffing plan for IPS • No formal plan to implement point-of-sale systems at bookstores • Staff does not have entire picture of inventory because bookstore POS systems, where available, are not linked to IPS. • Lack of customer and sales information • Staff does not possess the qualifications or training needed for sales support positions. • Call volume far exceeds capacity of staff to respond. • Title 44 limits GPO's flexibility on pricing and promotion. 	<ul style="list-style-type: none"> • Internet site can be used as a primary distribution channel to sell GPO's publications. • EIDS and IFPEP have the potential to be the partners of choice for agencies regarding their electronic product needs (example <i>CBDNet</i>). • Promotion efforts used by stores can be implemented on a nationwide basis. • Successful implementation of IPS could add to the available capacity to manage calls, • The market for government publications could be much larger than GPO realizes. Limited marketing budgets hinder realizing this potential, 	<ul style="list-style-type: none"> • Excessive concentration of sales in only a handful of publication titles leaves retail sales more vulnerable to the shift to free access via the Internet. • Emerging competition for customers between NTIS and GPO could prove wasteful and counter-productive. • Availability of GPO's customer lists invites competition from commercial resellers of GPO's products. • Too aggressive action by GPO in the marketplace could invite political backlash by private book retailers.

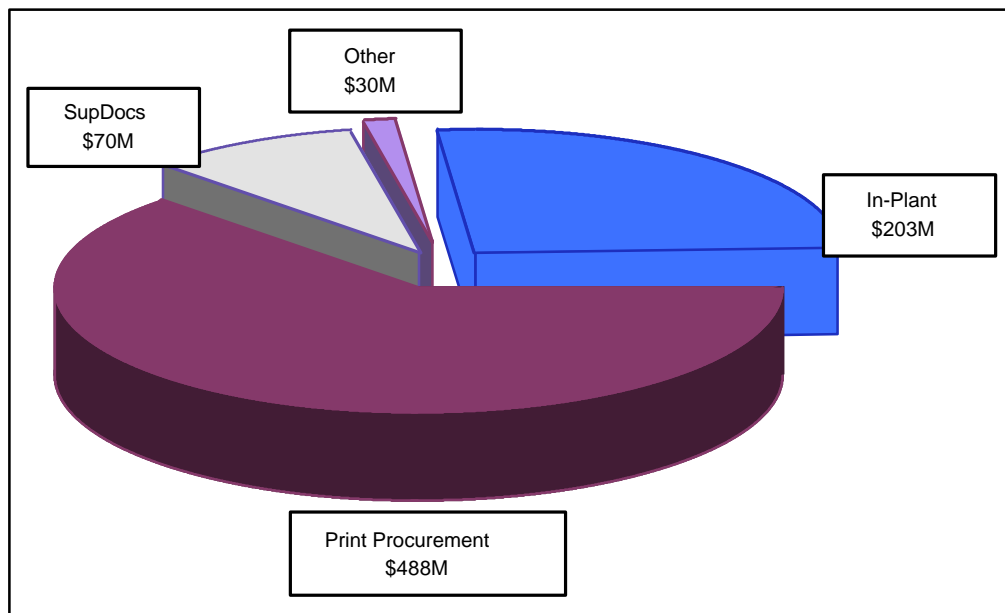
Function/ Organization	Strengths	Weaknesses	Opportunities	Threats
Fulfillment/ Warehousing	<ul style="list-style-type: none"> • Experienced work force • Job continues to get done even after a 13 percent staff reduction during 2 years. • Proactive relocation and consolidation of publications at Laurel Warehouse after the 1996 dump. 	<ul style="list-style-type: none"> • No formal plans for consolidation of warehouses • Mission, goals, functions not published • Lack of performance standards • Effect of IPS unknown • Ride decision process • Pricing decision process • Storage rates charged to agencies that consign pubs/subs • Excess material handling equipment at Laurel 	<ul style="list-style-type: none"> • Cooperative efforts with major book resellers • Consolidation of warehouses • Expanded Inter-Service Support Agreements (ISSA) to offer inventory and fulfillment services could generate more revenue for GPO. 	<ul style="list-style-type: none"> • Status quo-product vs. customer focus
Field Operations Division	<ul style="list-style-type: none"> • Provide personalized service to GPO customers • Self-sufficient, revenue generating (\$1.8 million in FY 97) • Provide additional channels for GPO to distribute products • A diverse portfolio of products is offered through the stores. 	<ul style="list-style-type: none"> • Insufficient technology—only 5 stores have POS systems; stores do not have e-mail and are not on the Internet. • Most stores do not meet industry performance standards. • No formal mechanisms for sharing information and communicating among store managers or with Headquarters exist. • Customer lists and databases are maintained on multiple files and various software. • No “regions” or “territories” are designated for each store. • Market assessments are not regularly performed. 	<ul style="list-style-type: none"> • Designate “regions” or “territories” for stores to concentrate their marketing and promotion efforts • Identify market segments for each store’s area and target those markets • Offer more electronic products to customers • Open more stores and realign others into high volume areas • Evaluate the profitability and performance of each store and close down stores that are deemed as underperforming, thereby increasing overall profits 	<ul style="list-style-type: none"> • Title 44 limits GPO from operating like commercial bookstores • Commercial vendors’ expansion onto Internet Web sites reselling GPO publications • Shift toward free, open access to publications on the Internet through the FDLP • Shift of customer base to Headquarters, after Central Order Division processing bottlenecks have been resolved by IPS implementation

Function/ Organization	Strengths	Weaknesses	Opportunities	Threats
Library Programs Service	<ul style="list-style-type: none">Well-defined mission supported by technological advances and agency savings	<ul style="list-style-type: none">Inefficient processesInsufficient trained staff	<ul style="list-style-type: none">PartnershipsRelationships with librariesConsolidation	<ul style="list-style-type: none">Ill-defined roles for preservation of electronic documents"Fugitive" documents

3. PROCURED PRINTING SERVICES

The Printing Procurement Department (PPD) accounts for 63 percent of the total revenue brought into the Government Printing Office (GPO). It employed 379 people and performed 177,627 procurements in Fiscal Year (FY) 1997 in support of legislative, judicial, and executive agencies. The PPD's revenue is generated from the Central Office (\$296.4 million) and regional operations (\$191.1 million) for a combined total revenue of \$488 million in FY 97. Net income reached \$3.9 million in the Central Office, while the regional offices experienced a \$6.3 million loss, for a combined net income loss of \$2.4 million for FY 97. Exhibit 3-1 reflects the revenue generated in FY 97 by the PPD, in relation to the Superintendent of Documents (SupDocs), and In-Plant production (In-Plant). Clearly, the PPD generates the most revenue.

Exhibit 3-1
FY 97 Distribution of Revenue



Procurement services are provided through the Central Office located in Washington, DC, as well as through a network of 20 regional or satellite offices located nationwide. To meet the printing demand, a list of approximately 10,000 vendors is used by GPO in awarding print work. According to GPO, of the 10,000 firms, about 3,500 do business with GPO on a regular basis.

Once it is determined that a requisition will be satisfied via procurement, it is processed as one of the following:

- Small Purchase (less than \$25,000)
- One-Time Bid (or Normal Bid)
- Term Contract Print Orders.

GPO establishes what are known as Term Contracts for work that is to be performed over a specified period of time. This type of contract can be for work of a recurring nature, such as recurring issues of periodicals, newspapers, and pamphlets, or work with a wide range of applicability and demand across the Government, such as snapout forms, marginally punched continuous forms, and color copying. Term contracts can cover the requirements of only one agency (Agency Unique Term Contract) or apply to governmentwide needs (General Usage Term Contract). Depending on the subject matter of the contract, term contracts may be awarded to one contractor or there may be multiple awards. Agencies have the ability to place orders directly against term contracts (Direct Deal) or have GPO place the order (GPO Deal). For Direct Deal contracts, GPO receives a copy of the agency's order and administers the contract to ensure satisfactory completion of all orders.

Agency printing and publishing requirements that do not fit within the parameters of a Term Contract are processed as a Small Purchase or a One-Time-Bid, depending on the estimated value of the requisition. These contracts are typically awarded to the lowest responsible bidder via the sealed bidding process.

Printing procurements are conducted in accordance with the provisions of the *Printing Procurement Regulations* (PPR) of GPO. Although GPO is not required to operate under the rules and provisions of the *Federal Acquisition Regulations* (FAR), the guidance and procedures specified in the PPR are very similar, and in many places, identical to those of the FAR.

GPO's Printing Procurement Services are paid for by the agencies that use the services. The typical printing requisition is assessed 6 percent of the value of the procured job, with a maximum charge of \$15,000. A rush job may be assessed a 9 percent surcharge, with a maximum charge of \$20,000. Some services, such as press sheet inspections, are paid for on an hourly basis.

FINDINGS AND RECOMMENDATIONS

Financial Analysis

The financial analysis of the PPD has identified unfavorable financial trends that indicate that the PPD is not a financially efficient operation. Exhibit 3-2 shows the financial trends of the PPD over the last 2 years (FY 96 to FY 97).

Exhibit 3-2
PPD Unfavorable Financial Trends
(FY 96 to FY 97)

Total Revenue	Down	13%
Operating Margin	Down	17%
Net Income	Loss	(\$2.4 M)
Number of Procurements	Down	7%
Number of Billings	Down	4%
Average Revenue Per Job	Down	13%

Average Revenue Per Employee	Down	9%
Total Personnel Cost Per Employee	Up	9%
Total Expenses Per Employee	Up	13%
Cost Allocation Burden	Up	7%
Direct Deal Revenue	Down	13%
GPO Deal Revenue	Down	4%
Normal Bid Revenue	Down	41%
Small Purchase Revenue	Down	14%
Term Contracts—Direct Deal Orders	Down	27%
Purchase Division—Small Purchase Orders	Down	23%
Purchase Division—Normal Bid Orders	Down	27%

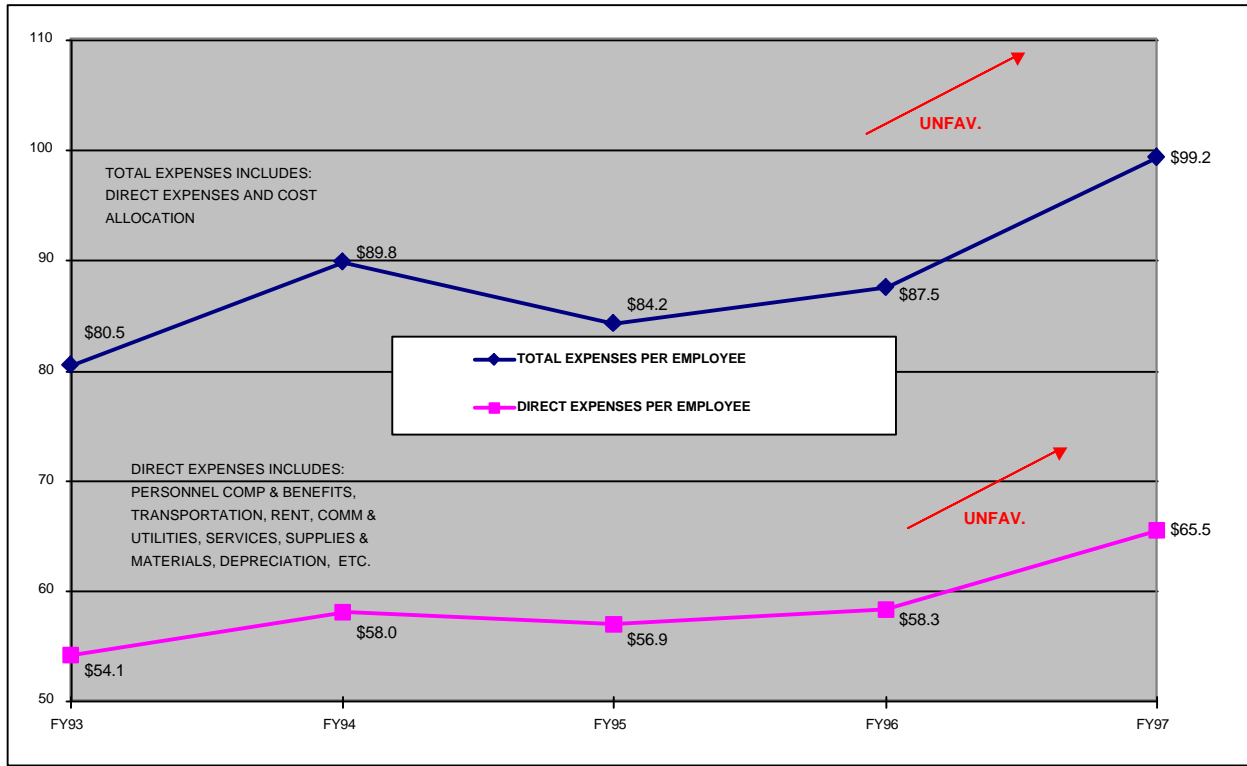
Finding 1. The PPD's operations nationwide do not generate sufficient revenue to cover its total cost allocation.

Over the last 2 years (FY 95–97), total printing procurement revenue has steadily declined. During that period, revenue was down by 15 percent, or more than \$86 million. Several factors have contributed to the decline in revenue, some of which are external to, and beyond the control of, the PPD. These external factors include:

- Downsizing of the government, in general
- Internal printing capabilities of the executive agencies
- Lack of Title 44 enforcement
- Government shift to a more paperless environment (e.g., technical manuals are being placed on CD-ROM)
- The drop in paper prices.

As total revenue has dropped each year, so too have total expenses, but not in proportion to the decline in revenue. Consequently, the PPD experienced a net income loss of \$2.4 million in FY 97. While revenue in that year dropped 13 percent, expenses declined only 12 percent, resulting in a 1 percent increase to the cost of current operations. Total direct expenses increased and total direct expenses as a percentage of revenue increased more than 7 percent. Exhibit 3-3 illustrates these unfavorable trends. The PPD reduced the number of employees on board (EOB) from 452 in FY 95 to 390 in FY 97 (about 14 percent); however, average revenue per EOB declined 9 percent in FY 97. The reduction in the number of employees was not enough to offset the decline in the revenue and the increase in the costs of operation. These trends describe a financially inefficient printing procurement operation.

**Exhibit 3-3
Expenses Per PPD Employee (\$000)**



When the printing procurement operations of the Central Office are analyzed separately from the Regional Printing Procurement Offices (RPPO), it becomes evident that the Central Office is profitable while the RPPOs are not. The Central Office generates revenue through three divisions: Term Contracts, Purchasing, and Contracts Management. In FY 97, the Central Office generated a positive net income of \$3.9 million. By comparison, 19 of the 20 RPPOs were unprofitable in FY 97, for a combined loss of \$6.3 million. The Chicago regional office was the only RPPO to break even. Fourteen RPPOs had positive operating margins but did not generate enough revenue to support the full cost allocation burdens imposed by GPO. Six regional locations lost money at the operating margin level, i.e., they did not generate enough revenue to cover their own operating costs.

The total cost allocation burden to printing procurement has remained relatively flat over the last 2 years (FY 95-97), remaining at approximately \$13 million per year. As the PPD downsizes, it will become increasingly difficult for the operating margins to cover the cost allocation burden.

Recommendation 1. PPD must capitalize on opportunities to increase revenue and decrease cost.

Because none of the RPPOs generated a profit in FY 97, a complete evaluation of the location, management, and operations of these offices should be conducted. Specifically, Boston, Massachusetts; Los Angeles, California; New York, New York; San Francisco, California; Columbus, Ohio; and San Diego, California, should be evaluated first, as these locations failed to generate a positive operating margin for FY 97 prior to cost allocations. These offices also generated the lowest revenues among all the RPPOs. However, the regional offices are a significant part of the revenue generating base of the PPD. In FY 97, the RPPOs contributed \$191.1 million or 39 percent to the total GPO revenue base. Efforts to streamline regional operations should be undertaken to retain this valuable service. Unlike the Central Office, the regional offices lack the processing of high dollar contracts to offset the low dollar contracts, which is necessary under the current pricing structure. The regional offices should investigate a new pricing structure that is aimed at recovering the actual costs of performing the procurement service. (See Recommendation #2 for further discussion on price restructuring.)

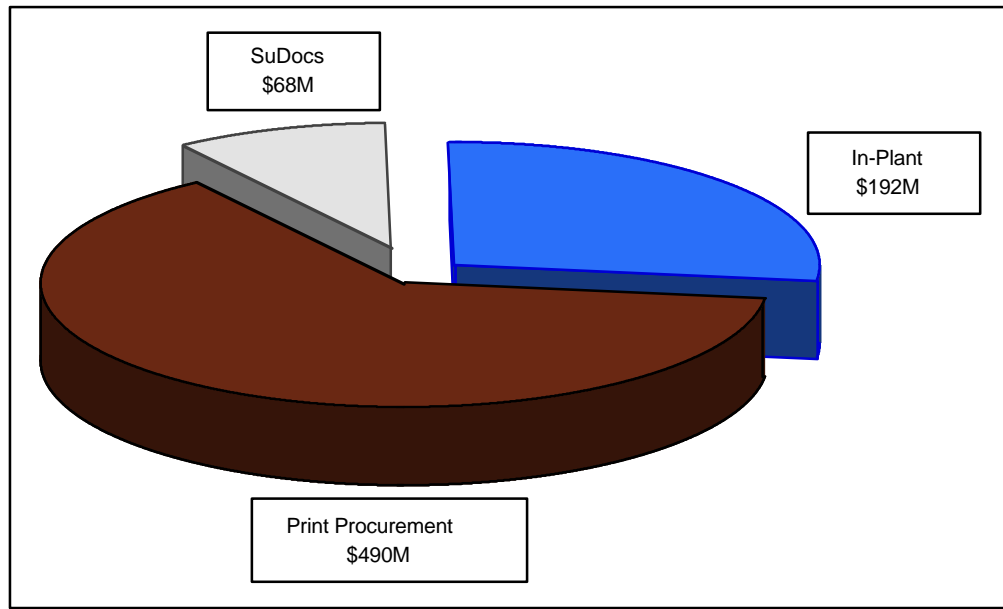
The origins of the jobs processed by the RPPOs need to be investigated. Agencies admit to processing jobs through a regional office to avoid using the Central Office and to processing through a Printing Specialist with whom they have had a long relationship. If an RPPO is not serving its locale in a significant way, or if its closure would not have a significantly negative impact on the primary executive agency customers it serves, it should be identified for closure or consolidation with another regional office.

PPD needs to reduce costs proportionately to the decline in revenue. Exhibit 3-4 illustrates the PPD's total expenses in relation to GPO's total expenses. As stated previously, several factors beyond the control of GPO contribute to the reduction in revenue. GPO estimates that strict enforcement of Title 44 would result in additional revenue of approximately \$500 million. Any large increase in procurement activity, however, would require an increase in PPD resources and therefore have an increased cost associated with it. No matter how large the revenue stream, if the operation is not efficient and costs exceed revenue, the net result will still be a loss. Whether GPO occupies a monopoly position, or not, it has a need, as well as an obligation, to make its operations efficient. Without benefit of knowing the costs of the services being provided, PPD management is hampered in identifying where efficiencies can be gained.

The PPD has the potential to become more efficient in executing procurements. Specifically, PPD should investigate opportunities to reduce total personnel compensation and benefits costs by reducing the number of full time employees, reducing costs per employee, and eliminating process inefficiencies. The PPD should make process changes to improve efficiency per employee, which can be achieved by increasing revenue per employee and jobs procured per employee, and decreasing expenses per employee. The PPD can achieve these efficiencies by instituting faster and cheaper ways to process procurements, especially small purchases, and investing in appropriate automated tools

and systems for procurement. (See Recommendations 6, 7, and 8, respectively, for process and information technology [I/T] recommendations.)

Exhibit 3-4
Printing Procurement—Direct Expenses

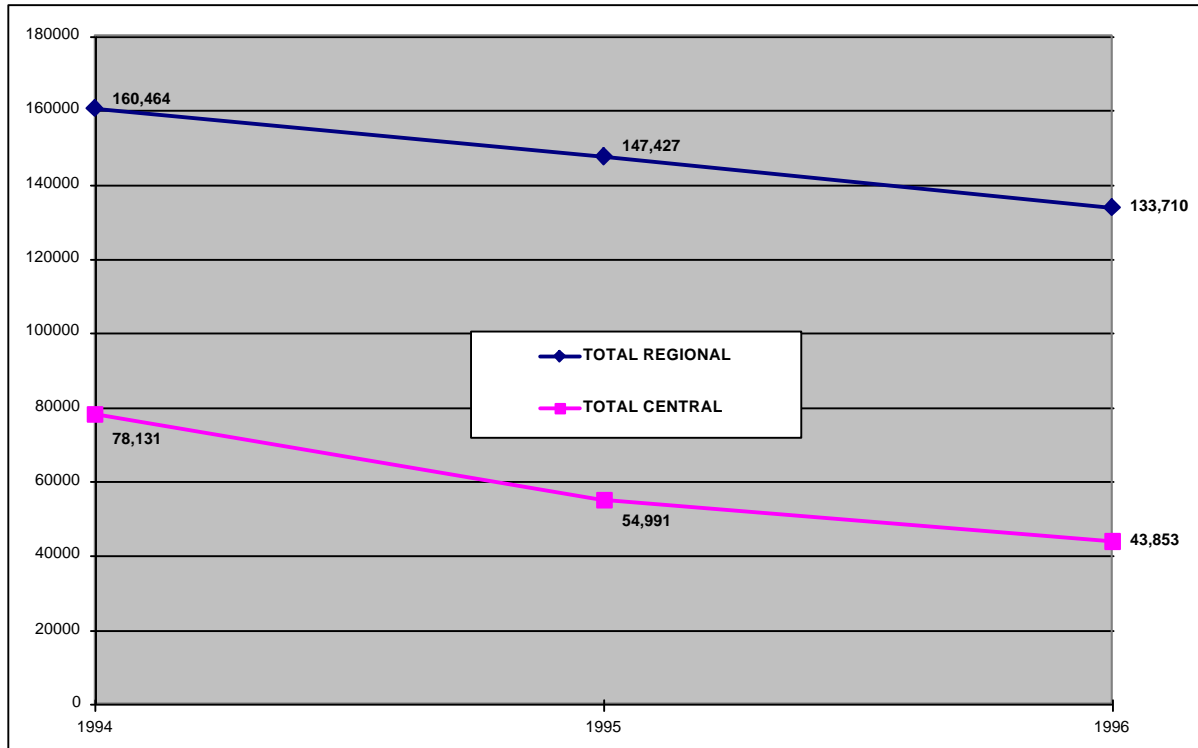


GPO should investigate the cost allocation applied to the PPD to ensure proportionate distribution of the cost allocation throughout GPO. Over the last 2 years, the PPD's operations have decreased, both in revenue and number of employees, yet the cost burden has remained at about \$13 million.

Finding 2. Workload trends for the PPD indicate that breaking even under the current pricing structure is becoming increasingly difficult.

As reflected in Exhibit 3-5, the RPPOs' total procurement workload decreased 16 percent from FY 94 to FY 96; the Central Office's total procurement workload decreased 44 percent in the same period. As the number of procurements decreases from year to year, so does the revenue generated by the 6 percent markup. If current trends continue, the 6 percent mark-up will be unable to sustain an adequate revenue base to support the PPD. This is already evident in the regional offices.

Exhibit 3-5 Printing Procurement—Total Orders



The majority of procurement requisitions and orders placed with GPO are under \$1,000. Billings less than \$1,000 account for 76 percent of PPD's workload, but only 7.5 percent of its revenue. This means the PPD is expending a large amount of resources to generate very little revenue. The current price structure forces the PPD to attempt to offset the small dollar contracts with the larger dollar contracts that generate larger revenues. The following charts, Exhibits 3-6 and 3-7, depict the disparity between the number of billings in various dollar ranges and the dollars generated from those billings.

Billings between \$1,000 and \$25,000 account for 22 percent of the PPD's workload, and 45 percent of its revenue. When combined with billings under \$1,000, these two categories, which encompass all procurements under \$25,000, account for 98 percent of the workload, but only 53 percent of the PPD's revenue. This means that 2 percent of the workload is for procurements above \$25,000, which generates 48 percent of the revenue. Under the current pricing structure, this large dollar segment of procurements is vital to the success of the PPD; without it, the PPD would be unable to maintain viability.

Exhibit 3-6
Printing Procurement—Number of FY 95–97 Billings

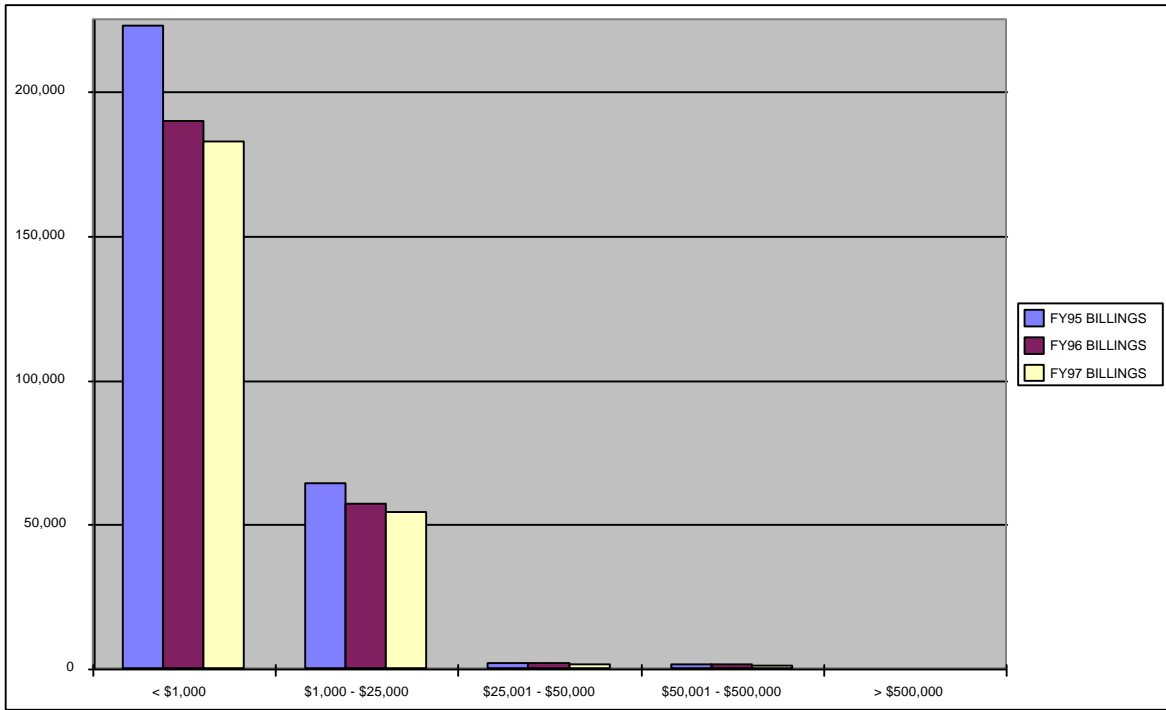
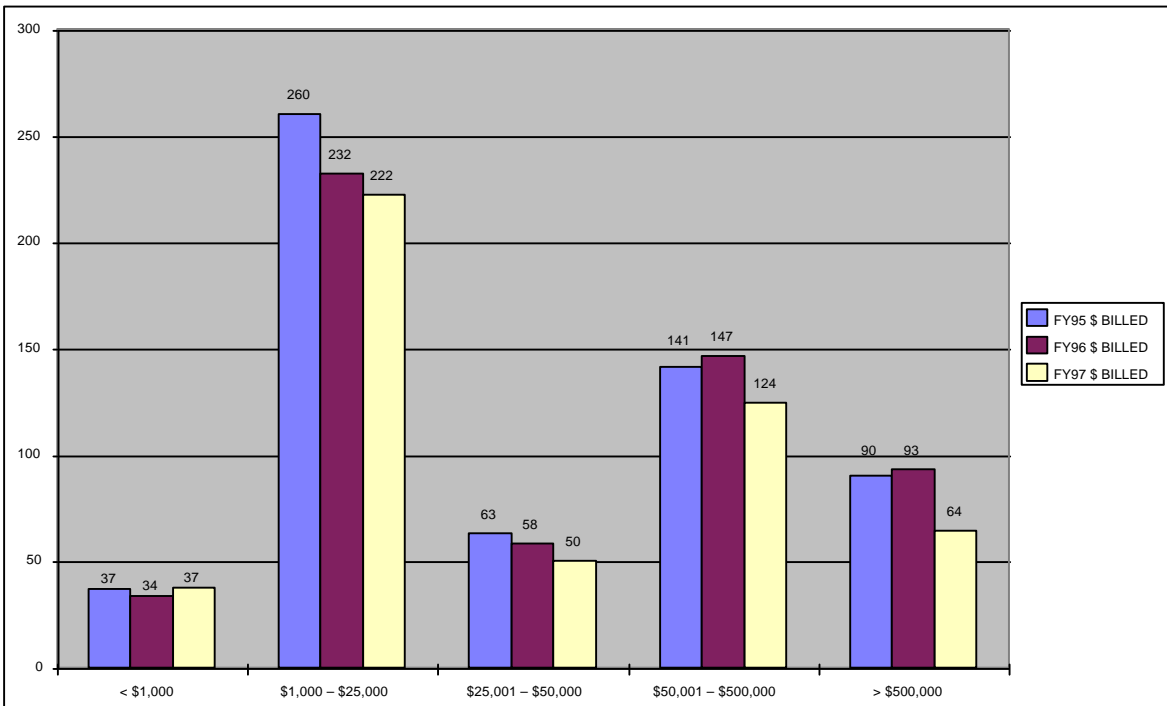


Exhibit 3-7
Printing Procurement—Millions of Dollars Billed in FY 95–97



The majority of jobs procured under \$25,000 generates a loss to the PPD's net income. Our analysis indicates that the average internal cost to procure a job is about \$257. To generate \$257 in revenue would require a requisition procured at \$4200. In other words, a \$4200 requisition represents the average break-even job. The average billing in the less than \$1,000 category is \$203, with an effective revenue yield to GPO of \$10; the average billing in the \$1,000 to \$25,000 range is \$4,092. The average loss per billing under \$1,000 is \$242; the average loss per job between \$1,000 and \$25,000 is \$20. The average job procured by PPD in FY 97 was \$2,747 (total PPD revenue of \$488.1 million divided by 177,627 jobs procured). The revenue generated by the average order is \$169 ($\$2,747 \times 6 \text{ percent} + \5.00), a loss of \$88 per average procurement.

When considering all sources of revenue to the PPD, i.e., the 6 percent surcharge, the \$5.00 flat fee, \$15,000 maximum, rush charges at 9 percent, and discounts retained by GPO for early payment, the effective rate of earnings for the PPD in FY 97 was 9.6 percent. This margin is higher than the FY 96 effective rate of earnings of 9 percent, yet net income was still negative for FY 97. To have broken even in FY 97, the earnings would had to have been 10.3 percent.

The current price structure does not support the services provided to process the lower dollar value requisitions, where the bulk of the PPD's resources are expended. High-dollar and low-dollar value contracts are executed in the exact same manner, and the PPD's management is unaware of the actual costs to process either one. Each step of the procurement process provides value added to the procurement, and each step is aimed at driving the contractor price down. Each step, however, carries an associated cost. PPD management has no insight into those losses, i.e., they do not know whether, in driving bid prices down, they are spending more than they are saving. There is no doubt that the PPD is obtaining the best contractor price through its source selection process; however, the costs associated with obtaining that price outweigh the revenues generated from obtaining that price.

Recommendation 2. GPO should establish a pricing structure that more realistically addresses the cost of operations.

Choosing the right price for a service is extremely important to the success of a service provider such as GPO. A company or department that does not make an adequate profit on its services cannot survive over the long term. In keeping with best practices, the pricing decision is usually based on three major considerations: cost of providing the service, the prices competitors charge for similar services, and how customers will respond to different prices. Title 44 of the U.S. Code has put GPO in the unique position of being in a noncompetitive market for its services. This situation makes it very important to determine how much it costs to process a procurement in order to establish an appropriate pricing structure. Competitors' prices and customer response to the price is less significant than in a competitive market, further stressing the importance of having sufficient cost visibility and the ability to trace PPD resources to specific procurement services. The current 6 percent surcharge is attractive because it is easy to comprehend and requires minimal effort to implement. The net loss of \$2.9 million makes it clear that

the 6 percent surcharge is not an effective price determinant. The pricing structure needs to reflect today's PPD business investment, which requires cost visibility into the different PPD functions.

The answers required to successfully establish a new price structure can be obtained with the quantitative information provided by activity-based cost (ABC) accounting. ABC would not replace any of the existing accounting systems. Activity-based costing links the activities performed to process procurements with the costs of these activities, including overhead costs, and also measures resource costs. The pricing structure should then be revised to recapture actual job costs and should be adjusted as operating efficiencies are achieved. Profit margins (price minus total cost) usually are lower on low priced products and services such as GPOs, which means that controlling costs is very important to ensuring positive net incomes. ABC accounting will provide PPD management with the specific costs of the operation. Armed with that knowledge, management will know which processes are the cost drivers and therefore the key processes to target for process improvements.

It is likely that any pricing structure based on actual processing costs would yield different pricing schemes for the various contract processes. That is to say, the fee for processing a One-Time Bid and a Term Contract are likely to be different, and the fee for a Direct Deal order is likely to differ from the fee for a GPO placed order. The cost of processing a requisition in a regional office also will be different than the cost to process in the Central Office.

We are not suggesting that the new pricing structure recapture the cost on each transaction. Customers would be resistant to paying \$250 to process a \$50 requisition. Through modeling, a pricing structure can be developed based on the historical profile of the numbers, dollar values, and types of contracts processed and the actual costs of processing them, which more accurately approaches recouping the costs of the operation. If the current 6 percent surcharge were increased, it would require a significant period of revenue collection to determine whether that increased surcharge was effectively recouping costs, but would not provide any insights into cost drivers.

Printing Procurement Department Organization and Staffing

The Printing Procurement Department has approximately 379 total staff; 158 assigned to the Central Office and 221 performing procurement functions from the twenty Regional Offices. The Regional Offices range from as small as two to the largest at nineteen staff.

Finding 3. The PPD's hierarchical structure appears geared to justifying positions as opposed to efficient management and optimum utilization of resources.

As depicted in Exhibit 3-8 the PPD's Central Office is functionally organized around the contract management functions it performs and the types of contracts processed, i.e., Term Contract, Small Purchase, or One-Time Bid. This centralized functional structure does provide the PPD the greatest potential for achievement of operational efficiency.

This structure eliminates duplicate roles and responsibilities, and enables maximum transfer of professional knowledge within functional areas. The PPD can benefit further by maximizing other efficiencies that a functional structure allows, e.g., increased spans of control and standardized performance measures.

Within the functional framework, the PPD has a very hierarchical structure that appears geared to justifying supervisory positions as opposed to efficient management and optimum utilization of resources. The spans of control for most managers are very small, typically supervising two to three people. The most dramatic example of the small span of control is the Term Contract Assistant Superintendent who supervises one Program Section Chief.

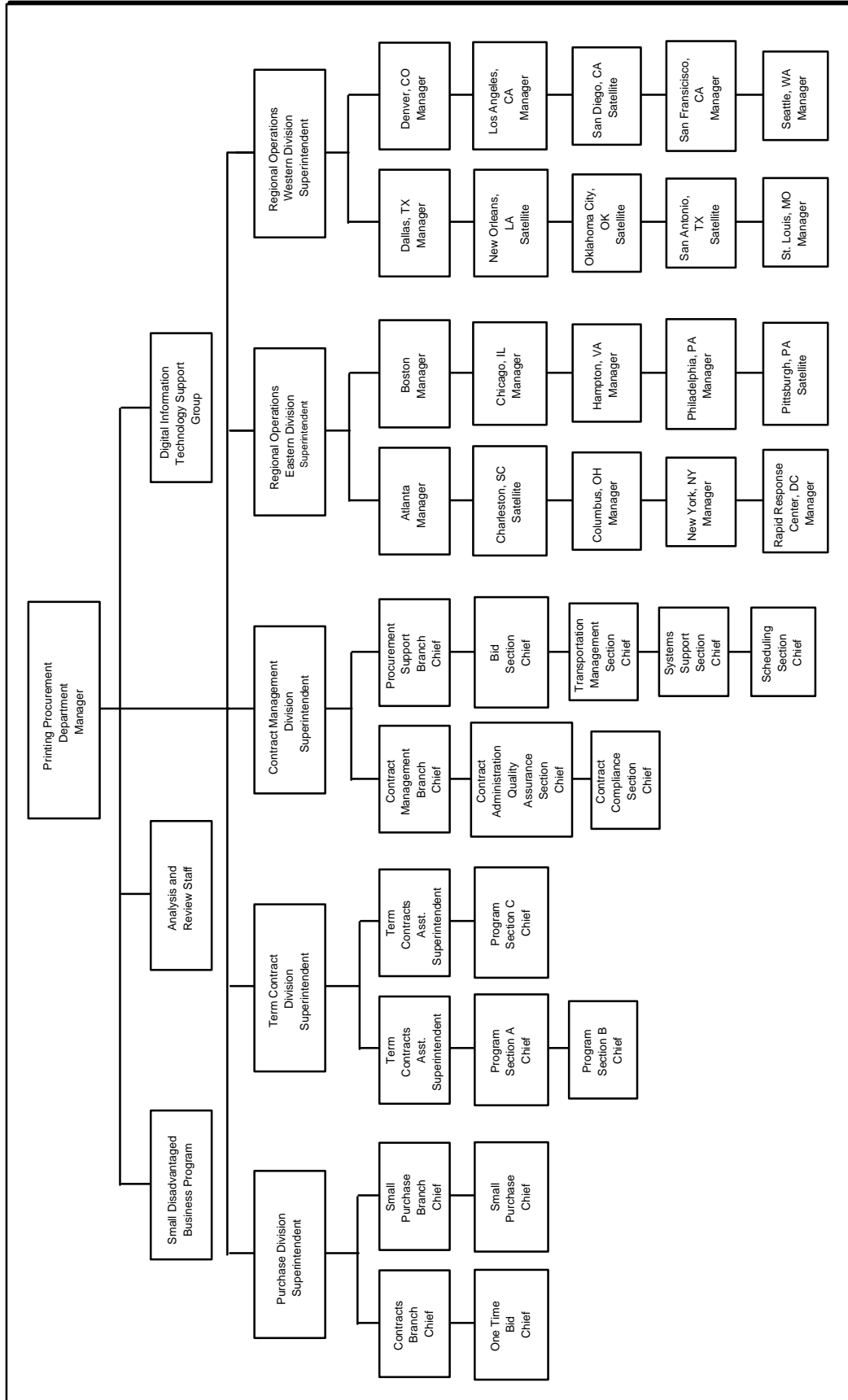
Reducing management layers and/or increasing spans of control present opportunities to reduce costs. Although a qualitative or quantitative span-of-control analysis was not conducted, this report can fairly accurately address the factors that would be considered in such an analysis. These factors include—

- Complexity of the organization and processes
- Capability of the workforce
- Resources and work volume.

Within the PPD, fewer management layers and greater spans of control would be acceptable given that the direct reports are fairly homogeneous, the processes are standardized, and the processes are performed in the same manner every time. Although diligence and attention to detail are necessary, projects generally are not analytically complex. Most of the staff are experienced in their current jobs and there is low turnover in the workforce. Also, although the work level appears to be high, the volume is fairly steady and all the resources needed to complete the processes are under the control of the PPD.

Two senior positions, i.e., the Superintendent of Purchase Division and the Superintendent of Contract Management Division, have been vacant for several years. During the vacancy of both of these positions, the two subordinate Branch Chiefs have alternated monthly fulfilling the responsibilities of the vacant Superintendent position.

**Exhibit 3-8
PPD Organizational Structure**



While this facilitates the performance of administrative duties, the management, leadership, and planning functions are not being performed.

The PPD operates in response to the customer agencies and is committed to being responsive to the customer's needs. One of the drawbacks of the functional organization structure is its tendency to be less accountable and responsive to customers. The PPD's activities and priorities are driven by the customer's delivery schedule. The PPD Printing Specialists are dedicated to understanding and correctly defining the customer's requirements. Processing a printing request often requires considerable communication with the agency customer to clarify the request and to obtain details not provided in the agency's requisition. Typically, this information gathering/clarification process is not conducted by the Printing Specialists, but is channeled through the Customer Service Representatives. For the most part, customer interaction is handled by the Customer Service Representatives, who are part of Customer Services, not the PPD. The PPD's Printing Specialists appreciate the assistance of the Customer Service Representatives and even enjoy the buffer they provide between the PPD and the agency. However, the Customer Service Representatives already are fielding volumes of customer inquiries and complaints, e.g., status of jobs in the queue, requests for printing advice, billing questions, and quality complaints. Given the sheer volume of printing requisitions and print orders processed, this practice of channeling all communications through the Customer Service Representatives sometimes results in bottlenecks and inadequate and misconstrued communications.

Within the PPD, three functional areas are organizationally misaligned: Contract Administration, the Digital Information Technology Support Group, and the Scheduling Section. All of these functions are being performed adequately, but communications flow, performance, and professional development could be enhanced if these functions were more effectively positioned.

Within the Contract Management Division, Contract Administration and Quality Assurance (QA) were officially combined under one manager in July 1997. For 12 months prior to that, these functions were unofficially combined under the current manager because of the lack of a manager for the Contract Administration function. The Contract Administration services are used on selected contracts (i.e., jobs with critical delivery dates, quick turnaround, new contractors, jobs suspected to have problems) awarded by Small Purchase and One-Time Bid. All other contracts are administered in the branch where they are awarded. QA includes a number of functions in support of all contract areas of the PPD and directly in support of specific customer agency jobs. QA functions include performing pre-award vendor surveys, conducting press sheet inspections, and inspecting contractor samples. This last function is performed both to qualify for certain quality levels in various product lines, as well as on particular jobs either on a random sample basis or in response to an agency complaint. There is no question that both of these functions, i.e., Contract Administration and QA, are being performed competently. The issue is whether these functions should be combined, as there appears to be no logical connection between them.

The Digital Information Technology Support (DITS) Group, which has been in existence for about 3 years, reports directly to the Director of the PPD. This 3-person group provides in-house consulting for digital printing requirements. They work closely with the Printing Specialists in contracting and QA, and with GPO's Institute for Federal Printing and Electronic Publishing.

The Scheduling Section, which is currently part of Support Services, is responsible for channeling incoming printing requests that will be processed through procurement to the correct procurement channel, i.e., Term Contract, One-Time Bid, or Small Purchase. The Scheduling Section interacts between the Department Account Representatives Division (DARD) and the contracting branches, and is physically located near DARD and the Production Scheduling Section. The Scheduling Section helps prepare jobs for procurement by obtaining information missing from the requisition or sending necessary jobs to production for copy preparation.

The current organizational structure and operational approach may have worked well in the past when the PPD had significant staff and Account Representatives were in plentiful supply. Today, the process is still primarily a manual paper process and the productivity of the staff and the inefficiencies of the organization are being pushed to their limits.

Recommendation 3. GPO should reorganize the PPD to eliminate current inefficiencies and increase customer focus and communication.

To eliminate the identified organizational and operational inefficiencies, we recommend that the PPD streamline its organization to—

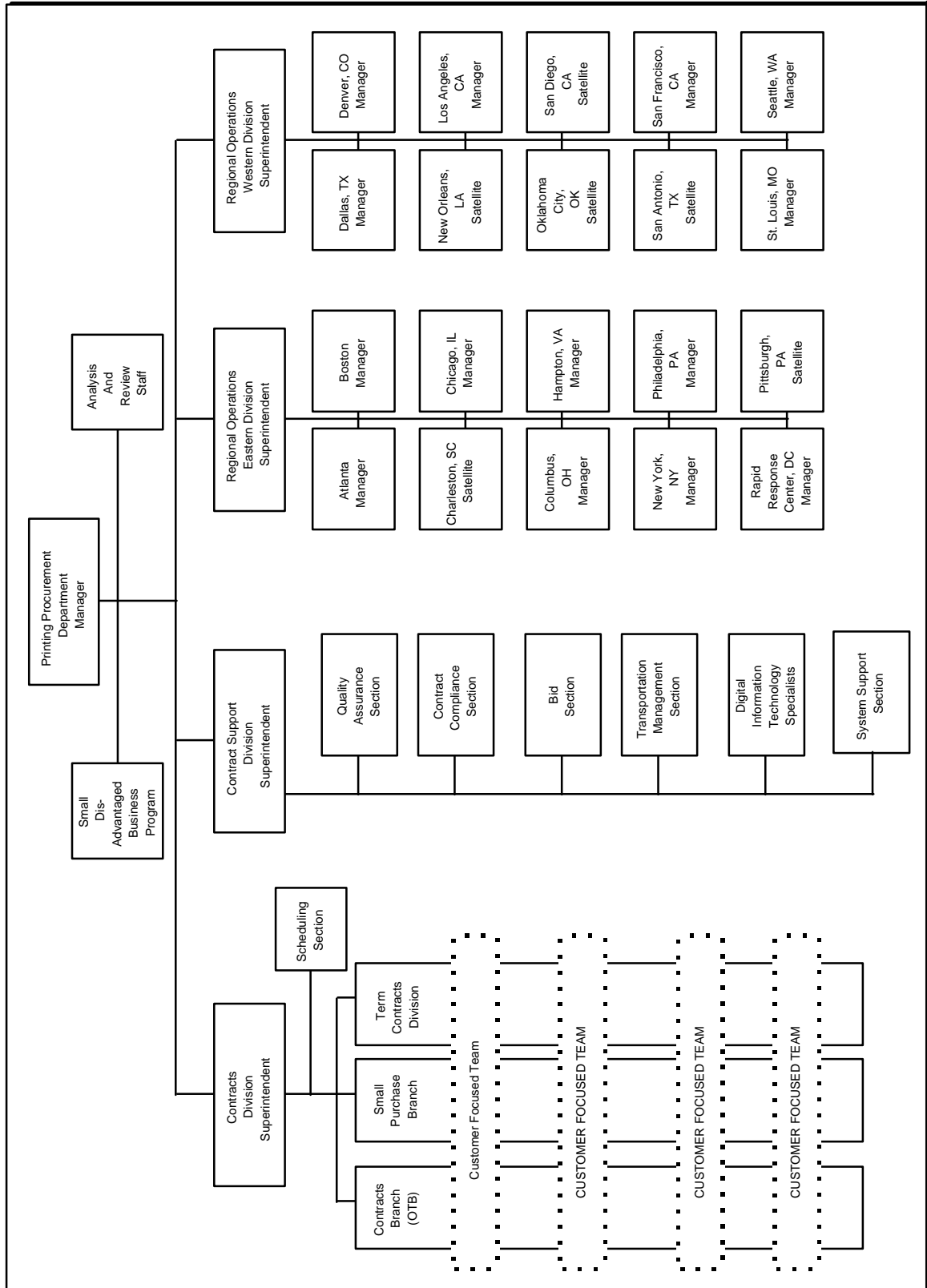
- Eliminate long-term vacancies
- Eliminate unnecessary management positions
- Improve spans of control
- Improve staff and functional alignments.

Additionally, we recommend that Customer Focused Teams be implemented across the contracting branches to increase customer focus and communication.

The notional organization chart, presented as Exhibit 3-9, demonstrates the following recommended changes to help eliminate the identified organizational inefficiencies:

- The Term Contracts and the Purchase Divisions should be merged into one Contracts Division with three contracts branches, namely, Term Contracts

**Exhibit 3-9
Notional PPD Organization Structure**



Branch, One-Time Bid Branch, and Small Purchase Branch. This measure would eliminate one long-term Superintendent vacancy and would increase several small spans of control.

- The Scheduling Section, the first decision point in the procurement process, determines how the requisition will be processed, i.e., as a Term Contract, One-Time Bid, or a Small Purchase. This function serves the Contracts Division and therefore should be realigned under the Superintendent of Contracts.

The Contract Administration function supports a small percentage of contracts awarded by Small Purchase and One-Time Bid only. Accordingly, this staff should be reassigned to those two branches, and Contract Administration should be eliminated as a separate branch.

- DITS Group supports Printing Specialists throughout the Contracts Division and QA. Unless a strategic plan is developed that identifies a role for DITS outside the PPD (e.g., part of the Office of Information Resource Management [OIRM] or the Institute for Federal Publishing and Printing), they should become a part of the Contract Support Division.

To increase the customer orientation, dedication, and responsiveness of PPD, segments of each Branch within the Contracts Division should be dedicated to a given group of customer agencies, much like the Customer Service Representatives are assigned today. Not all Printing Specialists would be dedicated to a Customer Focus Team. Those who are not dedicated to a team should continue to be assigned to printing requisitions just as they are now. One of the key elements of the Customer Focused Team concept is to allow increased communications between the PPD Printing Specialists on the team and the customer agency. This should improve and speed communications with the agency and free up the Account Representatives' time. This will also result in more staff involvement in the process and ownership of the final product. Customer-focused organization structures introduce a high level of accountability as well as responsiveness.

Finding 4. The PPD is running on tradition and experience, supplemented by pockets of energy and enthusiasm, not by management and leadership that focus on strategic planning or process improvement.

No objectives are established for the organization or for individual staff. The result is an organization that is not maximizing its potential and staff that lacks individual accountability. Accordingly, some parts of the organization are working very hard, while other parts are hardly working. The following two groups are prime examples of these opposite ends of the spectrum:

- Digital Information Technology Support (DITS) Group—The members of this group act as in-house consultants for digital/electronic printing and publishing requirements. They work closely with the Printing Specialists in contracting and QA, with GPO's Institute for Federal Printing and Electronic Publishing, as well as directly with agency customers in addressing their needs. This functionality started

as an entrepreneurial effort in response to an unfilled need within the PPD by Printing Specialists hired originally in the Purchase Division. This highly energetic group is maintaining a core competency in digital technologies and is trying to stay abreast of all the latest Web, electronic media, and video technologies. There is no active involvement of or dialogue with management about the future plan or direction of this group, nor is there a strategy to exploit this technology use across GPO.

- Analysis and Review (A&R)—This group reports to the Director of the PPD. This group describes its role as assisting in responding to upper management and congressional inquiries, maintaining the Printing Specifications Book (which contains the specifications used in all the printing solicitations), and maintaining the Printing Procurement Regulations (PPR). The Director of A&R acts as the Chairman of the Contract Review Board, which reviews contract actions over certain thresholds. GPO Instruction 105.1B, “Organization and Functions of the Government Printing Office,” identifies the functions of A&R including—
 - Preparation of short- and long-range plans based on GPO and PPD plans and policies
 - Collection and analysis of data and reports to determine trends and achievement of goals, detect problems, and recommend corrective action
 - Coordination and recommendation of career development and training programs for PPD personnel.

It is critical that these activities defined in the GPO Institution be performed by management and that is not occurring. A&R is performing few, if any, of the functions identified in the GPO Instruction or their roles as they identified themselves. Several managers throughout PPD feel that the PPRs, the Specification Book, and the Contract Terms are in need of updating. The Director of A&R was unable to provide any current data or trend analysis. During our initial visit, we were provided with a one-page tabulation of FY 95 procurement volume data. The data had been tabulated for a specific purpose and appear to be the last data analysis. Subsequent requests for data were answered with reports generated from the General Ledger from which we performed our own data and trends analyses. The collection and analysis of some Printing Procurement trend data are being performed by the Quality Systems Division of the Quality Control and Technical Department. The only reported recipient of their analyses is the Superintendent of the Regional Operations, Eastern Division.

Recommendation 4. The PPD’s management should begin now to establish a vision for the PPD and to develop plans to ensure that the PPD can continue to operate as a viable entity.

The Manager of the PPD should set the tone for the organization and establish short- and long-range plans for the PPD consistent with the strategic goals of GPO as a whole. The A&R staff must begin to support the PPD's Manager in the following activities:

- Development of short- and long-range plans
- Establishment of organizational and individual performance goals
- Development of workload factors and performance metrics to better manage activity and assess personnel performance
- Collection and analysis of performance and trend data to determine whether management goals are still valid and objectives are being met, and to identify any changes that the PPD must make to remain responsive to its environment.

The establishment of short- and long-range plans cannot be overstated and must take into account trends in Government printing and the specific environments of GPO customers. For example, DoD, PPD's largest customer, is moving away from purchasing bulk printing. DoD's mandate is to move to more electronic transmissions and print-on-demand. Other agencies, as well, are moving to more electronic transmission and storage of documents. This continuing decline in the demand for procured printing has huge implications for GPO. PPD must strategically position itself for the future, identifying, among other things, the portfolio of services that will be needed, the appropriate size of the organization, and the staff skills that will be required.

If the expertise and skills to perform these functions are not resident in the current staff of the A&R group, reassignment of staff should be effected as soon as practicable. A team of Printing Specialists should be established from across the PPD, led by A&R, to address the areas of the PPRs, the printing specifications, and Contract Terms that need to be updated.

Finding 5. The PPD's personnel attrition will affect the department's ability to accomplish its mission if corrective action is not adequately planned and implemented.

Attrition of the senior Printing Specialists over the next 3 to 5 years will significantly reduce the level of skill and knowledge in the PPD. Currently, 12 percent of the employees in the PPD are eligible to retire. Personnel attrition will affect the PPD's ability to accomplish its mission if corrective action is not adequately planned and implemented.

The PPD staff who are cultivating their digital technology skills, such as the DITS Group, will experience eventual limitations in their career development and compensation at GPO. Their classification as Printing Specialists is limiting in its description and, with a Grade 12 ceiling on their compensation, it will be difficult for them to keep pace at GPO with their market value.

There is no plan identifying the PPDís approach for managing change within the workforce, especially in areas such as automation of tools and systems, retraining programs, and hiring initiatives. The department is in a reactive mode. A more proactive approach to operations is needed to help identify the challenges and opportunities within the printing community while facilitating the organizational and personnel adjustments necessary to adapt to a changing environment.

Recommendation 5. Staffing skills and levels should be reviewed and plans should be prepared to properly manage personnel attrition and workforce transition.

The PPD’s management needs to review closely the projected personnel attrition issue and to develop and implement an approach to ensure that the proper number of skilled employees are retained, retrained, or hired. While this attrition may coincide with the need or ability to “right-size” the organization over a commensurate period, training programs, mentoring relationships, automation initiatives, and perhaps hiring plans need to be developed now to ensure that an adequately skilled and knowledgeable workforce is in place to execute the PPDís mission.

Training in new printing technologies as well as procurement training should be provided on a regular basis to procurement staff. Stronger links with, if not a change in focus of, the Institute for Federal Printing and Electronic Publishing should be developed to enhance sharing of information concerning new printing technologies. Any additional printing procurement personnel requirements should be addressed in a hiring plan, including revitalizing the college recruitment program.

As the requirement to become more efficient grows and the size of the printing procurement workforce continues to decline, the PPD’s management must evaluate the potential for fully automating functions and work processes. Staffing levels to support the automated work processes then should also be examined, and a comprehensive transition plan that identifies staff positions with associated skills and experience levels should be prepared and implemented. With appropriate investment in information technology, personnel reductions could be appropriately managed with no deterioration in printing procurement service or quality.

Printing Procurement Processes and Practices

The fundamental printing procurement process at GPO consists of the following steps:

- Requirements identification
- Requirements definition
- Procurement planning and preparation
- Solicitation
- Bid/proposal evaluation and source selection
- Contract award

- Contract administration.

After the agency identifies and defines the requirements, the remaining steps within the procurement process are performed by GPO. The flowcharts provided in Appendix C provide a top-level summary of the different GPO processes and departments/divisions involved after receipt of the print requisition from the agency.

Once it is determined that a printing requisition will be processed as a procurement, a physical paper jacket is established for the requisition and is routed through Procurement Scheduling to the appropriate contract branch for processing. Different automation applications and databases are used by the Procurement Department to provide contract and procurement action status or help perform a specific portion of the procurement action. Automated tools include—

- Procurement Information Control System
- Automated Bid List (ABLS)
- Printing Cost Calculation System (PCCS)
- Small Purchase Quotation System (SPUR)
- Marginally Punched Cost Calculation System
- Term Contract Database Program
- Bid Information System.

The processes and procedures used by the PPD to place the award or order for agency print requisitions have evolved over time and are reflective of a very structured and assembly line approach to procurement. These work flows, which are paper and labor intensive, require the involvement of numerous individuals in several different branches or divisions both internal and external to the PPD. Consequently, miscommunications among procurement participants, a loss of processing continuity, and a lack of ownership concerning agency print requisitions often result.

Substantial improvements can be made in automating the work flows and in revising the procedures and requirements of the PPRs that will result in greater procurement flexibility, improved procurement management, decreased processing time, reduced staffing levels and, more importantly, enhanced customer agency satisfaction.

Finding 6. GPO PPRs have not kept pace with governmentwide initiatives to streamline acquisitions and emphasize commercial practices; the PPRs require major revisions.

Application of the current PPR and the structured procurement process stifle innovation and encourage a business as usual approach to printing procurement. Commercial practices such as best value awards based on superior past performance, establishment of vendor/government long-term relationships, and increased use of electronic purchasing are not practiced or encouraged. The PPRs have not been updated to reflect changes consistent with governmentwide acquisition reform and streamlining initiatives. These initiatives, designed to reduce costs, shorten lead times, increase vendor quality and

improve customer satisfaction, allow significant flexibility in managing procurement functions and in selecting private sector suppliers. The new laws and regulations allow creativity and innovation and the opportunity to develop new alliances with the private sector through progressive partnering and value-based supplier relationships. The changes in the procurement rules and regulations require a change in measuring the effectiveness of the procurement department from one of awards based on "lowest bid" to one of awards based on "best value" to the government customer. Quality of performance is a major consideration in determining "best value" and one that agency customers have indicated is their most important determinant in vendor selection.

In response to our draft report, we were advised by PPD management that a new chapter to the PPRs had been drafted that would establish authority for GPO to enter into simplified Purchase Agreements. This draft, which is reportedly under review by GPO's General Counsel, was not provided to us and therefore could not be evaluated.

Printing Procurement Department Instruction 304.1D requires that all solicitations, with the exception of those procurements authorized as non-competitive procurements, be posted for public viewing and examination. The public posting policy has the effect of requiring full and open competition for all printing procurements regardless of dollar value or agency criticality. This emphasis on competitively bidding all printing requisitions exhausts time and limited resources and increases cost. Procurements for less than \$1,000 account for 76 percent of printing procurement's billings but only 7.5 percent of the revenue. The costs associated with processing these procurements, as currently performed, far exceed the revenue generated by the 6 percent surcharge. We understand this mandate to post all procurements was in response to the intense lobbying pressure of a bid service provider. Such a decision must be weighed against its costs in both time and money. GPO's focus on maximizing competition and awarding to the lowest bidder ignores the actual overall cost to the Government of processing the printing requisition and administering the contract to close-out.

Recommendation 6. Printing procurement regulations and procedures need to be revised to allow quicker, less costly processing of small dollar value orders and to improve overall efficiency and effectiveness within the department.

GPO Instruction 304.1D, which requires that all procurements be competitively bid regardless of dollar value, should be canceled. In addition, the Printing Procurement Regulations should be revised to increase the threshold for awarding contracts without competitive bids to \$2,500. Also, consideration should be given to increasing the Small Purchase threshold to \$50,000, revising the Contract Review Board's authority to conform to the revised thresholds, and implementing simplified acquisition procedures for all small purchases. The PPRs should also be modified to encourage the use of commercial practices in printing procurements. Specifically, these practices should include establishment of long-term vendor relationships, award of printing procurements based on "best value," partnering arrangements with industry to improve printing practices and techniques, and increased use of electronic data exchange between the vendor and GPO.

Term Contracts, Blanket Purchase Agreements (BPA), Indefinite Delivery/Indefinite Quantity (IDIQ) contracts, or some other flexible contract vehicle that allows quick ordering of basic printing requirements below the competitive threshold levels should be negotiated and established with printing vendors who have a demonstrated and proven history of quality performance and service. Agencies who have requirements below the competitive threshold should have the option of placing orders directly with the vendors or submitting them to GPO for processing. The terms and conditions of the ordering contracts should require the vendor to establish electronic ordering and billing procedures with GPO and customer agencies. Credit card purchasing for noncompetitive orders should become the preferred method of performing all below-threshold procurements.

The performance indicators shown in Exhibit 3-10 show that the Term Contracts arrangement enables the Term Contracts staff to process three times the number of jobs per employee per year than the Purchase Division. Overall, the Term Contracts Division executes four times as many requisitions as the Purchase Division. Term Contracts has more employees than the Purchase Division and the two divisions generate about the same revenue, which result in lower revenue per employee for Term Contracts. However, the term contract vehicle realizes greater efficiency per employee in terms of the number of orders that can be processed. The Term Contracts Division typically processes lower dollar orders, generating lower dollar revenues, but does it in the more efficient manner.

Exhibit 3-10
Performance Indicators
Term Contracts vs. Purchase Division
(FY 97)

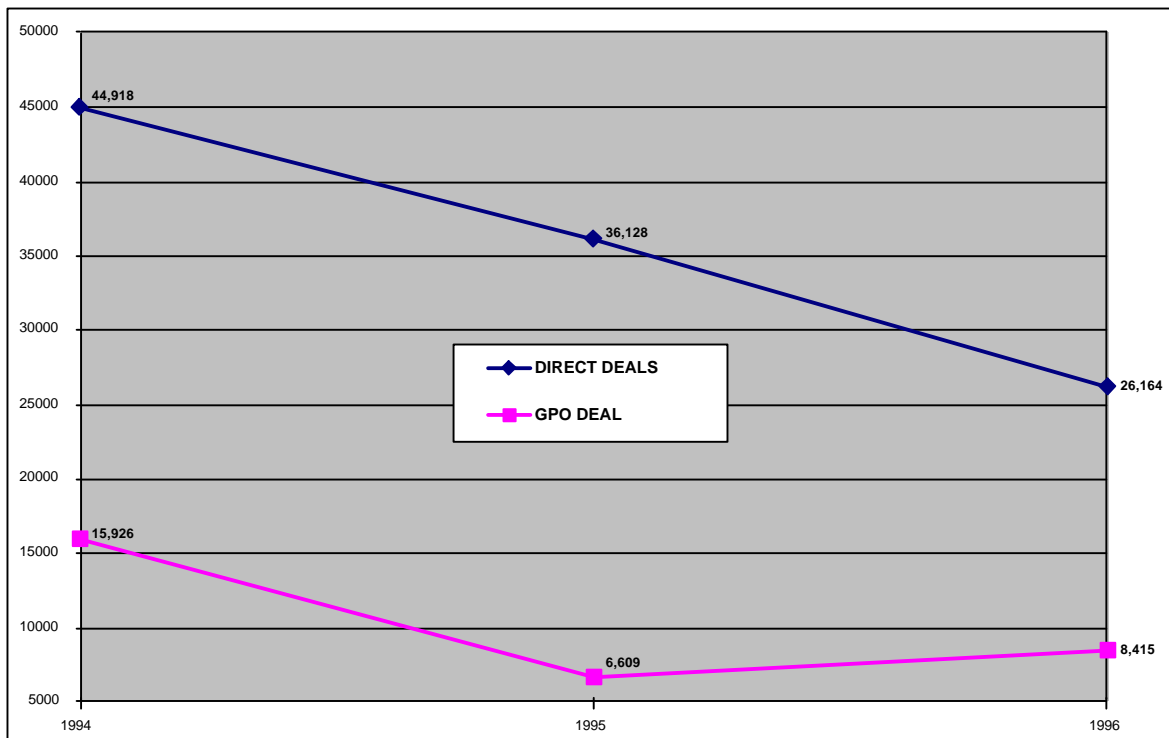
Performance Indicator	Term Contracts	Purchase Division
Revenue	\$147.0 million	\$147.7 million
Expenses	\$140.7 million	\$139.3 million
Operating Margin	\$6.3 million	\$8.4 million
Cost Allocation	\$5.8 million	\$5.0 million
Total Expenses	\$146.5 million	\$144.4 million
Net Income	\$0.6 million	\$3.3 million
EOB (as of 12/97)	53	39
Jobs Processed	35,103	8,950
Jobs Processed Per Employee	662	229
Average Value Per Job	\$4,188	\$16,503

Term Contracts performance could be improved if the lengths of the term contracts were increased, direct dealing was encouraged, and awards were based on best value. The greatest use of GPO resources is in the initial generation of the contracts and administering problem orders. Extending the periods of performance would reduce the amount of staff time involved in developing and awarding contracts. Also, continuing to stagger the termination dates of these contracts, as PPD currently is doing, evenly distributes the contract renewals throughout the year. Awards based on best value rather

than low bid would result in awards to higher quality vendors and minimize the required contract administration.

Longer term contracts with high quality vendors should also lead to an increase in agency direct deals. Agencies are looking for higher quality (as opposed to lower priced) work and like being able to establish long-term relationships with vendors. Currently, about 80 percent of the orders placed in this division are direct deals between the customer and the commercial printing vendor; however, the use of direct deal term contracts is declining at a much greater rate than GPO-placed orders. Exhibit 3-11 illustrates a 20 percent decline in direct deals in FY 95 and 28 percent in FY 96.

Exhibit 3-11
Term Contract Order Placement



The use of the direct deal feature on these ordering vehicles should be strenuously encouraged because of their efficiency.

The scope of printing and publishing products and services available on term contracts should be expanded. The PPD does a good job working with agencies to establish term contracts requested by these agencies. The Term Contracts Division should reduce the number of individual small purchase requisitions by using applicable existing term contracts (or establishing new term contracts) to consolidate multiple similar small purchases.

Term contracts are also awarded by the Central Office and each of the regional offices. There should be a concerted effort to consolidate these term contracts whenever possible into GPO nationwide term contracts that every GPO printing procurement office can, and does, use. Likewise, GPO needs to consolidate redundant term contracts, in spite of some agency objections, and award more General Usage Term Contracts. GPO, in working with the Defense Automated Printing Service (DAPS), reduced the more than 1,400 DoD term contracts to less than 800 total contracts, significantly reducing contract management costs.

The U.S. Postal Service (USPS) is a prime example of how long-term, ordering type contracts for the majority of printing needs can be established. USPS is also in the process of centrally providing all the printing requirements of the regional postal offices. They recently awarded a 10-year totally electronic Print-on-Demand, Fill-on-Demand contract for all USPS standard forms. Postal offices nationwide transmit their orders to the vendor electronically. Orders are filled and shipped, and the vendor electronically bills the Postal Service Disbursing Office which, in turn, electronically pays the vendor. Although the USPS model cannot be duplicated in whole by GPO, it does provide industry specific examples of more efficient techniques for awarding and administering contracts.

Finding 7. GPO's procurement processes require automation to reduce time and cost.

Essentially, the PPD has no *integrated* automated procurement capability. The various automated tools used provide databases of either printing specifications, vendor performance history, or term contracts; or they generate bid listings, award priorities under multiple award term contracts, and generate various delivery schedule reports. The databases/systems are fragmented, and many of them are independent of each other. Further, basic capabilities (such as e-mail) are lacking throughout the entire department and organization. The receipt of personal computers in the late spring/early summer timeframe will improve the availability and usage of the automated tools for each Printing Specialist and procurement technician; however, the lack of an integrated, automated system capable of processing printing procurement requisitions from agency initiation to final delivery and acceptance will continue to hinder the department's efficiency and effectiveness. Although each printing requirement may be unique, the actual processing steps described in the previous discussion section are very standardized and conducive to streamlining and automation. While not all printing requisitions can be processed in a paperless fashion, GPO should be striving to achieve a "paperless procurement process" among the customer, GPO, and the vendors.

Recommendation 7. PPD should make a significant investment in automated tools and processes to more efficiently manage printing procurement actions.

An integrated, automated system should be implemented that allows electronic transmission of agency requirements to GPO and that electronically processes the requirements through the various steps of procurement planning and preparation, solicitation, bid/proposal evaluation, source selection, and contract award. All of the

procurement steps should be merged into one seamless computerized system. Paper jackets should be eliminated and replaced with electronic processing of printing procurement requirements between relevant organizations and individuals. Solicitation packages should be established online, and processed online. Solicitations to vendors should be transmitted via the Internet or other electronic interface (e.g., e-mail), and bids should be received, evaluated, and awarded in a paperless manner. Vendors who do not make the required investment in technology will be incapable of meeting the solicitation requirements and should be eliminated from competition.

Further, the automated procurement system should provide management information on timely status on all jobs, and workload and performance data for use by all levels of management. Performance measurements, including procurement processing time, quality of procurement, maximizing value at least cost, and customer satisfaction should be established and tracked on a regular basis to help determine the Printing Procurement Department's effectiveness and efficiency.

Finding 8. GPO's vendor database, as currently maintained, is of limited value and use by procurement specialists.

GPO, within the Procurement Information Control System (PICS), maintains a quantitative history of vendor past performance that is available online to procurement specialists for use in making contract award decisions. The documentation and justification that support the quantitative data, however, are not online, and a manual search of paper files and a significant investment of the procurement specialist's time and effort is required. Further, a vendor's most recent past performance evaluation is often missing or is incomplete, resulting in the award of printing contracts based on inadequate or incomplete past performance information.

The process of allowing vendors to validate the performance evaluation is a paper-intensive and time-consuming process that requires monthly and quarterly issuance of letters to vendors with unfavorable performance evaluations. The vendors are given the opportunity to respond and offer documentation to rebut the performance evaluation, as is proper, but the process is labor intensive, involving numerous letters, regular faxing of documents, and continuous revision of paper files and reports.

The time and effort devoted to maintaining the vendor database appears to be disproportionate in view of GPO's focus on awarding to the lowest responsive bidder. The vendor's past performance is not used in any way to adjust the bid, and analysis and application of vendor data is left to the discretion of the individual printing procurement specialist. The customer agencies' primary complaint is the lack of quality in a given vendor's performance. Under current practices, however, a vendor's poor past performance will rarely displace a low bidder from award. A vendor's past performance record should be critical in determining awards. An automated process should be established that accurately records vendor past performance in a timely manner and objectively and fairly uses that information when evaluating bids.

Recommendation 8. GPO should maximize the online availability and impact of using past performance data.

The vendor database needs to be configured to provide narrative descriptions of vendors' performance. In addition, the past performance system should include a continuous cycle of objective assessment concerning vendor performance in areas such as quality, timeliness, cost control, and business relationship. A vendor's poor performance on printing contracts results in a cost to the Government. Although poor or improper performance of delivery order or contract requirements may be corrected at the vendor's expense, GPO incurs additional costs in performing additional oversight, agency liaison, and contract administration functions. Award to a vendor with a poor or marginal past performance record, even with the lowest offered price, results in higher overall costs to GPO and to the Government. To better evaluate submitted bids from a total cost perspective, GPO should develop objective criteria for evaluating a vendor's past performance and use past performance as an evaluation factor when making contract awards. Including vendor past performance as a part of the award criteria will help ensure quality performance on future printing contracts. Customer agencies and vendors should be given restricted electronic access to the vendor database and be allowed to make comments electronically concerning the past performance evaluations; any changes would be made only by the approved government individual after review of pertinent data and information. Those vendors with a documented history of poor or marginal performance should be given the opportunity to improve performance; if not successful, they should be eliminated from GPO's Bidder's List.

As a result of the previously discussed findings and recommendations, we have summarized the strengths, weaknesses, opportunities and threats (SWOT) associated with GPO's printing procurement operation in Exhibit 3-12. The SWOT matrix can be used by the PPD in developing a strategic plan which takes into consideration both the internal and external factors impacting PPD's future.

Exhibit 3-12
SWOT Matrix for Procured Printing Services

Functional Area	Strengths	Weaknesses	Opportunities	Threats
Financial		<ul style="list-style-type: none"> • Operational loss of \$6.8 million • Expenses are outpacing revenues • Pricing structure does not reflect the actual cost of processing a job • Actual cost to conduct a procurement from “cradle to grave” is unknown 		<ul style="list-style-type: none"> • Downsizing of the Government • Increasing executive agency printing capabilities • Lack of Title 44 enforcement • Government shift to a paperless environment
Organizational	<ul style="list-style-type: none"> • Staff has extensive experience • Low turnover • Pockets of new talent 	<ul style="list-style-type: none"> • Single spans of control • Organization structured to justify positions • Areas of functional mis-alignment 	<ul style="list-style-type: none"> • Re-establish the college graduate recruitment process to acquire skills in the latest printing technologies • Use readily available procurement training for PPD personnel 	
Operation	<ul style="list-style-type: none"> • Responsive to customer needs • Vendor past performance data • Use of term contracts, single and multiple awards, and direct deals 	<ul style="list-style-type: none"> • No strategic planning • Distinct absence of goals and objectives • No plan to respond to attrition of senior staff • Low accountability associated with each task • Lack of performance metrics and analysis of useful trend data • Declining use of direct deal contracts • Inadequate use of past performance data collected 	<ul style="list-style-type: none"> • Exploitation of new technologies and expansion of GPO capabilities • Automation tools that will enhance work processes • Investment in commercial off-the-shelf (COTS) procurement software for better efficiency and use of resources • Adopt more Federal acquisition streamline initiatives • Potential reallocation of Joint Committee on Printing (JCP) authority to the Public Printer 	

4. IN-PLANT PRODUCTION

The U.S. Government Printing Office (GPO) uses in-plant operations to produce approximately 23 percent of the printing and information products requisitioned from GPO via its Printing Procurement Program, and it sends the remaining requisitions on to the private sector for fulfillment.

The jobs that GPO retains in-house are those that cannot be produced on a controlled, timely, and cost-competitive basis. They include requisitions from Congress as well as from Federal agencies. They are received from GPO customers in a wide variety of electronic formats. Paper manuscripts are also accepted, although manuscript submissions are increasingly rare.

As part of the GPO audit, Booz-Allen assessed the adequacy and effectiveness of the GPO in-plant production including all parts of the organization that directly contribute to product generation, i.e., both core contributors and key supporters.

The findings and recommendations resulting from our assessment are presented in this section. Preceding them are descriptions of GPO's in-plant production facilities, its customers and products, and its operations.

4.1 IN-PLANT PRODUCTION FACILITIES

The in-plant operation at GPO is housed in two buildings on North Capitol Street: a main building for all congressional and agency work and an auxiliary building across the street dedicated to passport and postal card production. GPO also maintains a satellite office in New Jersey that supports Federal Aviation Administration (FAA) documentation needs. The primary operations in GPO's main building include Electronic Photocomposition (seventh floor); Pre-press, with Copy Prep (seventh floor); Negative and Plate (second floor); Press (fourth and second floors); and Binding (third and fourth floors). Material flow between these operations is managed through a series of elevators that facilitate the flow of physical material, including large blank and finished items. Various local area networks (LAN) facilitate the flow of electronic products. Blank paper inventory is stored in the basement of the main building and in a local warehouse in Springfield, Virginia. Other material, such as machine parts and other frequently used items, are kept in on-site material stores. Ink is blended on-site from base pigments and oils and purchased in liquid form. GPO accepts jobs submitted in a wide variety of formats, from electronic to paper manuscript, although manuscript submissions are increasingly rare.

GPO once operated several regional production facilities, but only a small plant in Denver, Colorado, remains. According to GPO's most recent annual report, 90 percent of jobs produced by the Denver plant are classified, sensitive information for government agencies in the western United States. The lack of cleared private printing operations in the western United States and the unwillingness of agencies located there to send documents to the east coast for production are cited as the key reasons for continued operations in Denver. Fully secure, the plant operated at a net loss of \$442,346 for Fiscal Year (FY) 97. It has 26 employees, down from 28 in 1996 and 1997.

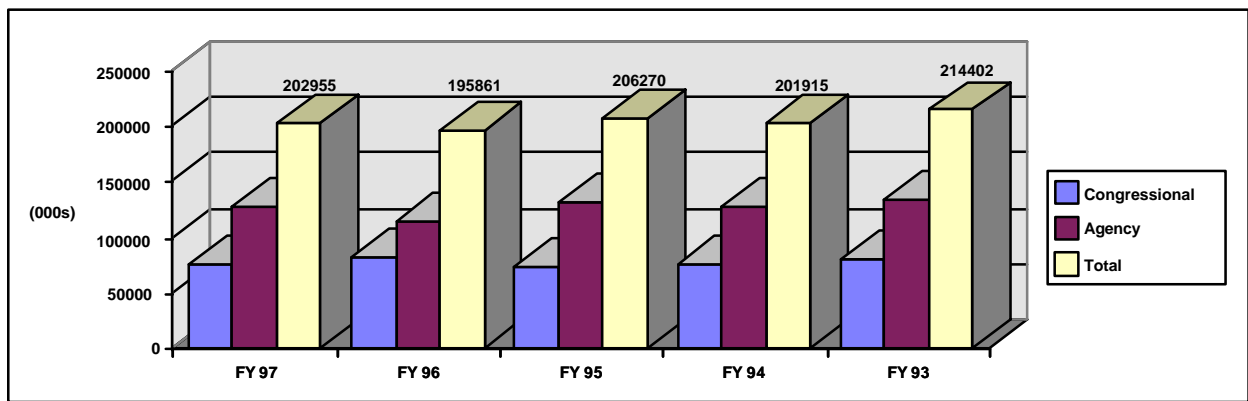
4.2 CUSTOMERS AND PRODUCTS

GPO has two key customer segments: Congress and the agencies of the U.S. Government. Counted among the agencies for purposes of this audit is the U.S. Postal Service.

4.2.1 GPO and Congress

According to interviews with personnel from GPO's Congressional Print Management Division (CPMD) and Customer Service staff, and according to the testimony by the Public Printer, the mission of GPO in-plant production is to meet Congress' printing demands, both ink on paper and electronic dissemination. As shown on Exhibit 4-1, congressional revenue accounts for about 41 percent of total in-plant revenue. CPMD determines its needs based on direct daily contact with congressional leadership and with other customers, including committee staffers, members' staffers, bill clerks, tally clerks, enrolling clerks, and official reporters of debate.

Exhibit 4-1
In-Plant Congressional vs. Agency Revenue



GPO employs detailees to gather information in hard copy or other formats for delivery from Congress to CPMD. Detailees are assigned to Congress to assess the printing needs of committees and support offices and to ensure that GPO addresses these needs properly.

To meet congressional printing needs, which include the daily and permanent editions of the *Congressional Record*, bills, resolutions, amendments, and numerous other products in both electronic and paper format, GPO has developed an extensive array of information gathering capabilities. For data interchange, GPO has established direct electronic link between a variety of offices on Capitol Hill and GPO's central facility. Electronic data, as well as hard copy (i.e., manuscript) to be keyed, comprising various portions of the *Congressional Record*, are transmitted or sent to GPO's Electronic Photocomposition Department (EPD) from numerous sources on Capitol Hill to begin the processing and printing requirements. EPD stores these files in congressional information databases and makes them available on *GPO Access* (a Web site), CD-ROM, and the Library of Congress's THOMAS information system.

GPO has also been using these electronic technologies to develop print-on-demand capabilities. Employment of these capabilities in the Senate Document Room has led to a reduction in requirements for printing of extra copies of documents for storage.

4.2.2 GPO and the Federal Agencies

The *Federal Register* and the *Code of Federal Regulations (CFR)* make up the largest portion of agency work produced in-house. Additional agency work includes, but is not limited to, U.S. passports for the Department of State, postal cards for the U.S. Postal Service, and the U.S. Budget.

Since 1988, GPO has been the leading government producer of CD-ROM technology and support services. The Graphic Systems Division (GSD) is responsible for the development of complete CD-ROM premastering services to agencies. The Special Interest Group for CD-ROM Applications and Technology (SIGCAT) recognized GPO's successful implementation of the technology in 1992, when it presented GPO with the SIGCAT's annual CD-ROM Award.

GPO has also successfully established a partnership with the Federal Aviation Administration (FAA). GPO provides FAA with a satellite electronic production facility at FAA's Atlantic City, New Jersey, site. Established in February 1991, this site provides reproduction and archival storage for FAA Technical Center publications. Service to FAA has been provided on a cost-reimbursable basis.

4.3 OPERATIONS

To produce the wide variety of products and services its customers need, GPO relies on the expertise of several specialized departments. These include departments under the direct control of the Production Manager, as well as several departments organizationally aligned under Customer Services, the Materials Management Service (MMS), and Engineering. Descriptions of these departments and their functions follow, and process flow diagrams for each are included in Appendix D.

4.3.1 The Production Department

As of 1997, the Production Department had a total staff of 1,692 full-time equivalents (FTE). It is headed by the Office of the Production Manager. Directly reporting to the Production Manager are the Assistant Production Manager and the Deputy Production Manager.

The Production Department includes five main divisions responsible for producing the full range of GPO in-plant products:

- Electronic Photocomposition
- Graphic Systems Development
- Electronic Systems Development
- Press (includes Pre-Press)

- Binding.

Administrative organizations under the Production Department include the Production Planning Division (PPD), the Production Control Center, and the Delivery Section. Although not part of PPD, Production Control Planning Division, Production Control and the Delivery Section interact directly with the Division.

Descriptions of the roles and responsibilities of the six main production and administrative divisions of the Production Department follow.

4.3.1.1 Production Planning Division. PPD receives agency jobs considered for in-house production from the Departmental Account Representative Division (DARD) within the Office of Customer Service. PPD prepares estimates, negotiates pricing with the customer agencies through DARD as necessary, and sets the production/completion schedule. CPMD, which produces a list of congressional products for priority production (the Production Manager's List), three times daily, keeps PPD apprised of congressional demand. For a detailed view of production planning and other portions of the preproduction process, see the process map in Appendix D.

PPD is composed of three sections and has a total staff of 23. Descriptions of each section follow. Also described are the Production Control Center and the Delivery section, which interact with PPD.

Production Planning and Scheduling Committee. The Committee develops production plans and schedules for Departmental printing and binding work produced in-house and enters the jobs into a system used to track jackets—the Production Estimating and Planning System (PEPS).

Estimating and Jacket Preparation Section. The Estimating and Jacket Preparation Section (EJPS) develops production plans and intermediate schedules for in-house congressional work; generates work jacket instructions, develops cost estimates; and obligates the paper and materials for each job. EJPS forwards out-of-town shipping information to the Transportation Operations Unit.

Paper and Materials Control Section. This section determines needed paper inventory levels; sets reorder quantities; tracks the blank paper needs of both Congress and Federal agencies; and schedules and prepares work jacket instructions for use by the Bindery and MMS, which furnishes blank paper to customers.

Production Control Center. The Center reviews work jackets (orders for production) and coordinates scheduling and routing of all in-house jobs. It also acts as a liaison between DARD and GPO production areas regarding the status of customers' work in process.

Delivery Section. The Delivery Section delivers regular work throughout the Washington, DC, Metropolitan Area and delivers classified work or prepares and ships it as classified mail.

4.3.1.2 Electronic Photocomposition Division. EPD prepares jobs to enter the pre-press stage of production. EPD accepts printing projects in multiple formats including raw manuscript, but electronic files in various formats are far more common. EPD proofreads and formats copy before sending final document pages on to the Camera Section within the Press Division. Difficult or first-of-a-kind jobs may be sent to GSD for formatting or application development.

EPD has a total staff of 305. It is currently composed of seven sections and may add another section following the acquisition of computer-to-plate technology in the summer of 1998. Direct-to-plate will likely be housed in EPD. The current functions within EPD are Proof and Copy Markup, Video Keyboard, Text Processing, Phototypesetting and Processing, Electronic Job, Postscript Service, and Hot Metal.

Proof and Copy Markup Section. Proof and Copy proofreads and codes all documents; parses Standard Generalized Markup Language (SGML) databases; and revises the *Congressional Record* database for bound editions of the *Record*.

Video Keyboard Section. This section keyboards data into text processing systems; keyboards edit insertion codes, changes, and corrections; edits electronic files; updates standing publication databases; and converts locator databases to SGML databases.

Text Processing Computer Section. This section performs numerous functions, as follows:

- Uses GPO's automated PostScript composition system, MicroComp, and other GPO-developed utility files to compose and edit full text databases for production of camera-ready output
- Maintains database libraries on DEC Alpha systems
- Monitors communication subsystems for congressional access to full-text databases
- Maintains a library of PostScript driver files (Congressional Bills and Reports and Congressional Reports and Documents), which are automatically accessible to Congress for DocuTech reproduction
- Outputs PostScript files of the *United States Code* and the annual supplements for the Law Revision Counsel
- Monitors the automated *Commerce Business Daily* (CBD) system and composes the daily print version, which is submitted over the Internet to a private contractor for printing and mailing
- Creates and maintains Wide Area Information Server (WAIS) databases and indexes for GPO web searches
- Copies and writes databases for sale to government agencies and the private sector.

Phototypesetting and Processing Section. Personnel in this section operate high-speed, magnetic-tape-driven phototypesetting equipment; process negatives and camera-ready copy;

produce plain-paper proofs; operate a duplicating center that produces proofs and engrossed/enrolled bills, and duplicate disks.

Electronic Job Section. The Electronic Job Section performs desktop publishing (DTP) for specialty jobs, photographically reproduces type and/or special characters that cannot be done by phototypesetting, maintains a congressional archive of stationery and envelopes, maintains a forms library for the Internal Revenue Service (IRS) and the General Services Administration (GSA), and produces output on PostScript imaging devices from customer files.

PostScript Service Section. This section delivers DTP training for agencies, develops Web pages and links them to WAIS databases; creates fonts and maintains font libraries, and develops and maintains a computerized interface for imposition of PostScript files for input to computer-to-plate units.

Hot Metal Unit. The Hot Metal Unit uses slug-casting machines to set type for gold stamping done by the Binding Division.

4.3.1.3 Graphic Systems Development Division. GSD is responsible for both application development and systems support, including Web page/Internet development. It has a staff of 64 and 7 sections. The functions of the sections are as follows:

Composition Section. This section develops or acquires commercial off-the-shelf (COTS) PostScript typesetting programs, develops applications software to support the Production Department, and develops Common Gateway Interface (CGI) software for the World Wide Web.

Systems/Communication Section. This section manages Production's DEC Alpha and VAX systems and the VAX for the Senate Office of Legislative Counsel, the Office of the *Federal Register*, and the National Labor Relations Board, and administers the 19 DEC Alpha UNIX systems used for the *GPO Access* web.⁴²

Database Retrieval/Distribution Section. Database Retrieval/Distribution works with Customer Services to develop CD-ROM publications. It also prepares searchable databases.

Remote Applications Section. Remote Applications provides remote production support for MicroComp, including format design and marked-up samples. It also provides Internet applications support, including Web page design and updates.

In-House Applications Section. In-House Applications provides both in-house production support and SGML support.

⁴² There are 13 servers at the GPO Central Office, including two systems for the *Commerce Business Daily* network, *CBDNet*, and two dedicated to congressional customers. The other servers are backup systems, some located in a facility adjacent to the GPO Central Office in Owensboro, Kentucky.

Production Information Management Section. This section maintains and administers PEPS; designs, develops, and maintains software for PEPS and for PC applications on request; and provides specialized PEPS training.

Support Section. The Support Section provides in-house and interagency training and develops system documentation.

4.3.1.4 Electronic Systems Development Division. Within the Electronic Systems Development Division (ESD), the Electronic Systems Branch provides technical services, including engineering and systems design for the GPO Production Department, other areas within GPO, Congress, and Federal agencies. This staff of 14 also provides maintenance services for Production, the Senate and House Offices of Legislative Counsel, the House Office of Information Systems, the Law Revision Counsel, the National Labor Relations Board, and the Office of the *Federal Register*. The Network Systems Group is responsible for Internet domain name services (DNS), firewalls and network security, and interconnectivity.

4.3.1.5 Press Division. With a staff of 502, the Press Division is the largest within the Production Department, but this may change with the acquisition of direct-to-plate technology. This new technology is the latest in a series of advances experienced in the Press Division's recent history. Some 10–15 years ago, Linotype (which set lines of type on a metal slug) was being eased out to make room for more advanced electronic print technology. Since then the technological changes have been substantial, and now the soon-to-be installed direct-to-plate machines will take formatted and proofed documents and produce a plate in a single step. Direct-to-plate will replace most of the Press Division camera and negative functions, which are currently performed by nearly 150 people. The sections that will be directly affected are Copy Preparation, Negative, and Plate.

Press is composed of five sections, which produce a variety of intermediate and final products on letter, sheet, or web presses for output to the Binding Division. For a detailed view of the Press Division's current operations, see the process maps in Appendix D.

Copy Preparation Section. Copy Preparation prepares camera-ready copy or reproducibles, inspects and certifies procured process reproducibles, and performs stripping and page makeup.

Negative Section. The Negative Section produces photographic halftones, tints, and line negatives or positives; processes 70-mm negatives for projection platemaking; corrects film imperfections; assembles page elements for the Plate Section; and processes dylux proofs and matchprint color proofs, sometimes for commercial production.

Offset Plate Section. The Offset Plate Section imposes film reproducibles for offset and letterpress platemaking; produces offset and photopolymer plates, including negative presensitized plates; produces projection offset plates from 70-mm negatives; and makes blue book dylux proofs. It also includes the Reproducible Storage Unit, which maintains negative storage for plant and commercial negatives.

Offset Press Section. The Offset Press Section prints documents using sheet-fed offset presses as well as recently acquired web offset presses.

Letterpress Section. The Letterpress Section prints envelopes, letters, invitations, pamphlets, and jobs processed on flatbed, cylinder, vertical, and platen presses. It also embosses and numbers specialty work and does thermographic printing.

Postal Card Section. The Postal Card Section produces postal cards for the U.S. Postal Service; wraps the finished cards, places them in cartons, and fills post office orders; and prints passports on offset rotary sheet-fed presses.

4.3.1.6 Binding Division. The Binding Division has a staff of 358, including a team of 19 who make blank passports in the auxiliary facility on North Capitol Street, across from the main building. The Division completes the production process by cutting and/or binding outputs from Press and prepares products for shipping.

Many different types of binding and packaging are done in the two shift sections—the Blank/Edition Section and the Pamphlet Section.

Blank/Edition Section. The Blank/Edition Section performs a wide variety of cutting, folding, and binding; prepares all shipping and parcel post labels for jobs completed in Binding; cuts, binds, numbers, and delivers passports; and wraps, seals, and ships cartons manually and by machine.

Pamphlet Section. The Pamphlet Section performs a wide variety of folding, inserting, and binding techniques, including handwork; performs necessary binding operations to process all levels of classified jobs; and controls receiving and in-process storage of work processed by Binding.

4.3.2 Other Production-Related Services

Several departments and divisions either support or directly interact with the Production Department on a regular basis. They include Customer Services, MMS, the Quality Control and Technical Department (QCTD), and Engineering Services.

4.3.2.1 Customer Services. CPMD and DARD, both divisions of Customer Services, provide key support for in-plant production processes.

Congressional Printing Management Division. CPMD acts as a liaison between GPO and Congress. CPMD's primary purposes are to aid in effectively carrying out the legislative agenda of the Congress and to facilitate the printing requirements of other daily congressional activities. CPMD functions are—

- Delivery and verification of printed products to congressional offices, by GPO Congressional Receiving Clerks assigned to House and Senate Platforms under the direct management of CPMD
- Coordination of scheduling and printing of the Congressional Serial Set, which is composed of sequentially numbered, bound volumes of House and Senate Reports and Documents
- Coordination of distribution lists for all congressional and departmental agency requests for printed congressional products
- Assistance to congressional leadership offices, committees, and support offices regarding their printing requirements.

CPMD, which is the primary contributor to the Production Manager's List, determines congressional print needs based on daily direct discussions with congressional leadership and customers with printing needs and responsibilities including committee and member staffs, bill clerks, tally clerks, enrolling clerks, and official recorders of debate. The Production Manager's List sets the in-plant production priorities for each shift.

When Congress is in session, the second and third shifts process primarily congressional work.

Departmental Account Representative Division. DARD is the key contact between executive and judicial branch customer agencies and GPO. New job orders come first to DARD for initial evaluation before being passed on to either Printing Procurement for production by an outside contractor or Production Planning for estimation and eventual in-plant production.

In addition to channeling orders to procurement or in-plant production, Division account representatives provide a range of services to customers, including technical advice and status reports on work in process. The Account Representatives regularly visit the agencies they serve and monitor customer operations to assess long-range publishing requirements. DARD's Electronic Publishing Management Section assesses customers' electronic publishing needs and facilitates access to GPO electronic publishing capabilities.

4.3.2.2 Materials Management Service. MMS serves all of GPO in all areas of materials procurement, except printing services. A self-described provider of everything from "paper clips to print presses to GPO," MMS views itself as a service organization to GPO, responding to the demands of other parts of the agency. MMS is also responsible for processing paper purchasing requests to fill customer orders. MMS is not involved in job or production planning but responds to the demands of production when they are made. Within MMS are three key functions—facility leases, stores/inventory, and paper and specialized procurement.

Facility Leases. MMS leases building and office space for GPO (GSA and commercial contracts) for warehouses, bookstores, and regional printing procurement offices.

Stores/Inventory. MMS maintains four locations for paper and supply inventory with a total inventory capacity of 40 million pounds: basement of the main GPO building, Building 4 (the passport building), General Stores Section in Building B, and the Springbelt warehouse.

Paper and Specialized Procurement. This important section competitively acquires all paper, envelopes, and cartons for GPO, including that provided to contractors or sold to Federal agencies; sets requirements for acquisition of equipment, services, and construction work priced at more than \$100,000; acquires automated data processing (ADP) equipment and software priced at more than \$25,000; and interacts with industry and oversees bidding and contract awards for procurements of state-of-the-art technology.

4.3.2.3 Quality Control and Technical Department. QCTD provides services in the areas of quantitative methods and analytical services to various in-house customers. QCTD established the quality attributes for in-house and procured print jobs, and develops the paper quality standards issued by the Joint Committee on Printing (JCP). QCTD also conducts analytical sample analyses for paper and ink, and it establishes specifications for all procured chemical and material items. Four divisions make up QCTD:

- Chemical and Environmental
- Graphic Supplies
- Paper and Physical Testing
- Quality Systems.

Two of these divisions perform functions reviewed in our audit. The Quality Systems Division provides ad hoc statistical analysis, modeling, and simulation for internal customers on an as-requested basis. Quality Systems currently prepares a monthly Quality Audit report, which consists of a compilation of daily end-product sample evaluations and is distributed to selected production managers. Quality Systems also provides a monthly waste report, which measures the amount of paper spoilage from the production process.

Paper testing methods used by the Paper and Physical Testing Division have changed in the past 18 months. The old process involved a 100 percent laboratory analysis by GPO of each paper delivery. The new process involves sampling 5 percent of large orders and then analyzing 75 pieces (25 each from the front, the middle, and the end) from the paper manufacturing process.

4.3.2.4 Engineering Service. This office provides expertise in agency production systems development, equipment purchases, production studies, and space planning activities. It includes two divisions, the Engineering Division, which is responsible for systems design and overall project management, and the Facilities Division, which houses the construction crafts and is responsible for the construction, installation, and maintenance of GPO facilities. Three sections within Facilities perform functions reviewed during this audit—the Machine Branch, the Elevator Branch, and the Planning and Scheduling Section.

Machine Branch. The Machine Branch is responsible for mechanical work involved in the installation, maintenance, overhaul, alteration, and relocation of production machinery.

Elevator Branch. The Elevator Branch maintains and repairs elevators, dumbwaiters, and roll lifts.

Planning and Scheduling Section. The Planning and Scheduling Section is responsible for maintenance request tracking, coordination of trade work schedules, and development of preventive maintenance programs.

FINDINGS AND RECOMMENDATIONS

Booz·Allen’s objective during this portion of the GPO audit was to analyze the in-plant printing process and product flow through GPO. We defined in-plant production including all parts of the organization that directly contribute to product generation, either as core in-plant processes or as key support processes.

The core processes assessed included—

- Planning and scheduling
- EPD (i.e., preparation of jobs in electronic format)
- Pre-press
- Press
- Binding.

The key support services evaluated were—

- Customer Service
- Maintenance
- Materials Management
- Quality Control and Technology.

Documents produced at GPO go through several stages of production in several different departments before delivery to the customer. This includes “new” products delivered to GPO by Congress and agencies, as well as “stored” products such as negatives kept on file within the Production Department and periodically retrieved to produce additional versions or copies of previously delivered products. The goal of our analysis therefore was twofold:

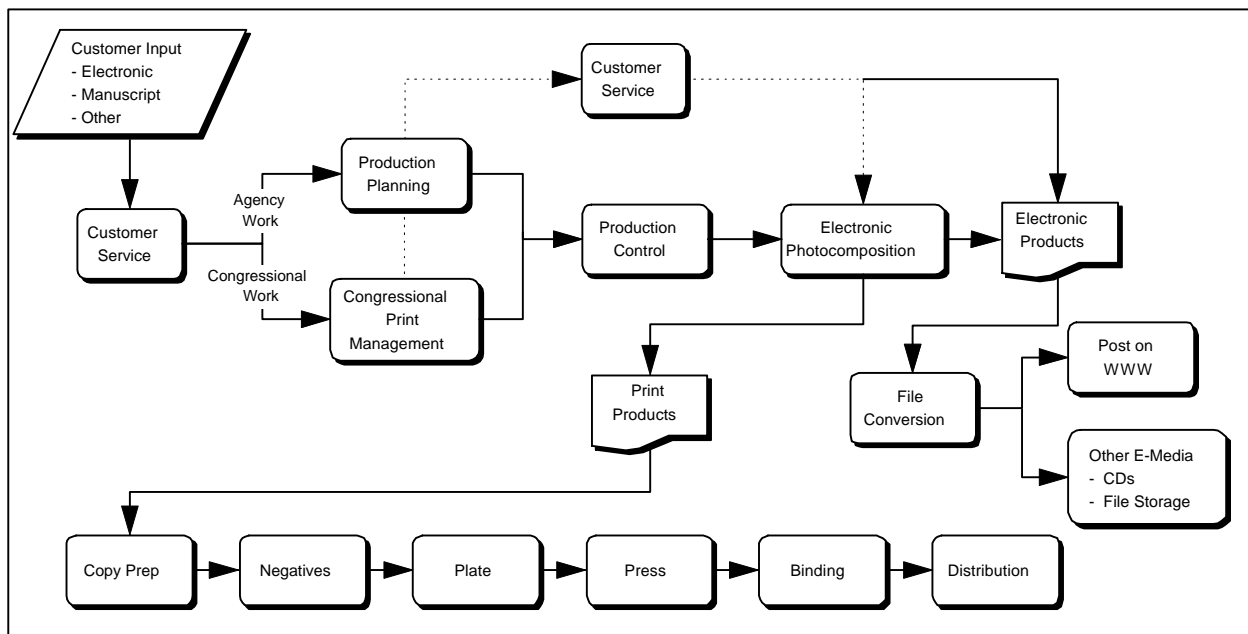
- To understand the activities performed separately by each department from a functional standpoint
- To understand how each department worked together to provide a finished product from a process standpoint.

We accomplished our analysis in several steps. We first conducted orientation interviews with the superintendents of each functional area (see Appendix E). From these interviews, the macro level

process flowchart shown in Exhibit 4-2 was developed. We then returned to each functional area to conduct a detailed analyses that included—

- A Department-wide strengths, weakness, opportunities, and threats (SWOT) analysis at the Division level, with input provided by the Division superintendents and representatives from their staffs, (the SWOT also included support services)
- Detailed in-plant process “walkdowns” and plant floor observations (see Appendix F)
- An average of three follow-up interviews with each superintendent, usually with at least one foreman present
- Interviews with staff from key support functions such as quality, materials management, and maintenance
- Reviews of documentation such as datasheets, training materials, press slips, and work jackets (see Appendix G).

Exhibit 4-2
Overall Production Process Flow



The data from these analyses allowed us to assess how well the in-plant organization currently functions as a seamless production line. The evaluation revealed that GPO satisfies its priority congressional customers and that the Production Department is beginning to take steps to modernize its printing capabilities and information technology. However, to capitalize on these improvements fully and to continue to compete in the Federal marketplace by efficiently providing high-quality products to its customers, GPO must address a number of in-plant production problems. Most of these problems are the result of poor cross-functional knowledge and communication, a fragmented organization, lack of documentation and standard procedures, poor information management, and ineffective management and control of production inputs.

These assessments are supported in the following findings and recommendations. All of our prescribed measures and solutions should not only be applied across all functions involved in production, but they should also involve all levels of the organization, from the Production Manager to the journeyman and apprentice on the shop floor. Many of our recommendations include suggestions to help ensure broad and deep involvement in organizational change.

Finding 1. Production has established important information access and dissemination systems and capabilities.

GPO's customers—the public, Congress, and Federal agencies—are migrating from paper-based means of communication to electronic formats. GPO now offers products to the public over the World Wide Web; assists Federal customers in disseminating information on the Internet; and receives congressional and other jobs electronically so that they go directly into production. Some of the key successes are highlighted below.

GPO Access offers a wide variety of online services to a variety of customers.

The establishment of GPO Access was mandated by Public Law 103–40 in June 1993. The Law required the following services:

- Online *Federal Register* (available by 6:00 a.m. each day) and *Congressional Record* (available by 11:00 a.m.)
- A Federal Locator Service that provides pathways to government information, including Global Information Locator Service (GILS) applications
- A storage facility for electronic files on-demand
- The *Federal Bulletin Board*, which provides agencies with file libraries accessible by the general public.

The goals of *GPO Access* are to provide authentic, up-to-date, universally accessible information free of charge. *GPO Access* is particularly beneficial in that it makes most databases available in ASCII format as well as in Portable Document Format (PDF). The information on the site is not costly to provide because it is essentially a by-product of the paper documents GPO produces.

Retrievals of *GPO Access* information have increased rapidly since its inception in mid-1994. Document retrievals numbered more than 4 million a month in late 1997, up from 2.8 million in January 1997 and 2.3 million in late 1996. More than 70 databases are now available on *GPO Access*, and GPO has continually added servers and bandwidth to keep the Web page ahead of demand.

GPO manages information databases and Web pages for other government agencies.

GPO has also provided assistance to agencies with World Wide Web and Internet services, such as database development, mounting of sites on GPO servers, database maintenance, training, and user support.

CBDNet, developed in partnership with the U.S. Department of Commerce, received a 1997 Hammer Award for its successful design, implementation, and utilization.

CBDNet, the *Commerce Business Daily* publishing service, is another successful illustration of GPO's electronic information dissemination. This service, performed in partnership with the Commerce Department, went live on December 6, 1996. *CBDNet* is a complete electronic service that encompasses receipt of electronic submissions from procurement offices across Government and instantaneous creation of a database that can be accessed by the public on the Web. The number of CBD notices has increased from 9,000 in December 1996 to 13,500 by July 1997. In *CBDNet's* first month of operation, 8.5 percent of notices were submitted through the Web page; currently, approximately 95 percent of all notices are submitted electronically. In the first 7 months of its existence, *CBDNet* has built to a usage rate of 600,000 notices downloaded per month. On April 21, 1997, *CBDNet* received the Hammer Award from the National Performance Review.

There are examples of effective efforts to address information technology (I/T) needs within the Production Department.

- The Electronic Systems Division has taken the lead on a variety of I/T projects including installing fiber optic cable throughout the building and becoming the de facto lead for standardization of office applications within the Production Department. Based on its success in this area, other GPO departments are increasingly using the Electronic Systems Division's expertise to manage their I/T resources more effectively. This division also effectively maintains remote equipment on Capitol Hill and in the *Federal Register* Building.
- Text Processing also made strides. It has several in-process monitoring and error-proofing programs to ensure that manipulation of electronic files is controlled and quality checked.

Recommendation 1. GPO should leverage knowledge gained through internal I/T accomplishments in the development of an in-plant information technology plan.

These experiences should provide valuable input in the formulation of the I/T component of a manufacturing strategic plan, as discussed further in Recommendation 6. As outlined in Recommendation 4, the Production Department can build on these experiences to operate more effectively.

The Production Department should play a key role in the development of a strategic plan for information technology and the establishment of a GPO Office of the Director of Information Technology.

The Production Department, and ESD in particular, has up-to-date skills and experience in creating new capabilities within GPO, e.g., Web access. The ESD superintendent and some of his staff should play an important role in developing a GPO technology plan and setting the mission for a new Office of the Director of Information Technology.

The Production Department should build on experiences gained in developing the I/T component to build a Strategic Manufacturing Plan, tied to new GPO-wide strategic and technology plans.

Production has seen a drop in the demand for paper copies of the documents it produces. At the same time there has been a sharp rise in the number and variety of GPO electronic products demanded by both content creators and public consumers.

Production-wide manufacturing and technology planning is essential to meeting these challenges. Much of the expertise required to create these plans for a 2- to 5-year period is resident in the Production Department, particularly in ESD and EPD. As noted in Recommendation 4, cross-functional knowledge must be developed in Production to maximize process efficiencies. Technology planning should include the superintendents and other key managers in the department. Their needs and goals should be addressed as an integral part of the technology element of the plan.

Finding 2. The Production Department is implementing industry state-of-the-art printing technology, computer-to-plate (CTP) to improve quality and throughput and reduce operating costs.

Computer-to-plate (CTP), also called direct-to-plate, is an important new technology that reduces production process cycle time. The system has been ordered and is expected to be delivered and installed by June 1, 1998. CTP offers the following advantages:

- Eliminates several labor-intensive steps in the pre-press part of the print process including copy preparation, camera, negative, and platemaking
- Reduces platemaking costs
- Uses a more environmentally safe process chemistry than the development chemistries it replaces
- Provides improved image quality and registration
- Has a payback period of approximately 18 months
- Produces anticipated savings to GPO of more than \$7 million over 3 years.

Recommendation 2. GPO should use the experience gained in CTP implementation to guide other technology acquisition and process improvement initiatives.

The lessons learned by GPO in moving to CTP can be used to evaluate and integrate future production technologies more effectively. As CTP is introduced, the Production Department should do the following:

- Evaluate and document the “upstream” and “downstream” effects on production cycle time caused by CTP.
- Evaluate and document the “upstream” and “downstream” effects on production capability in others areas, particularly the pressroom, to determine changes required in equipment in those areas as a result of CTP. For example, are changes required in job setup or quality revising based on the expected improvements in CTP image quality?
- Compare actual cost savings versus projected cost savings. Use the results of this comparison to improve the economic analysis of future capital purchases. For example, if discounted cash flow analysis was done with CTP as part of cost justification, how accurate were the underlying assumptions, and how should variables be adjusted in future acquisitions?
- Evaluate the effectiveness of personnel retraining and redeployment plans. CTP will affect more than 130 FTEs. Use the experience gained in their reassignment to improve internal training and cross skill detailing. Trends in downsizing and the needs of the organization for highly mobile labor to address absenteeism or retirements in critical areas demand more effective redeployment of production labor resources.
- Use experiences gained in planning for CTP as an internal “case study” during development of a Strategic Manufacturing Plan.

Finding 3. The Production Department consistently meets a demanding congressional production schedule.

Our SWOT analysis of the Production Department and key services outside Production revealed that timely and responsive service to Congress was a universal strength and is centered on the following factors:

- Representatives in CPMD have developed strong and cordial relationships with their contacts within congressional organizations and offices.
- Communication with the congressional customer is frequent and regular.
- Production functions are geared toward rapid and consistent turnout of congressional products.

- Both CPMD and the Production Department are flexible and responsive to changing congressional needs.

Recommendation 3. GPO should combine lessons learned from Congressional Printing Management Division with customer-focused marketing strategies to continuously improve overall customer service.

GPO should improve service to agency customers based on lessons learned from service to Congress. The goal is an integrated marketing approach that effectively addresses the needs of differing customer segments without negatively affecting congressional schedule performance.

Develop cross training and knowledge sharing programs between CPMD and DARD.

CPMD offers a model for frequent and direct interaction with customer representatives within congressional organizations; in fact, CPMD representatives maintain daily contact with their customers and often visit their offices. DARD personnel may be able to learn from those interactions to build relations with Federal agency customers.

Customer Services and Production could both benefit from rotations as staff serving Congress would be better able to understand the challenges of serving agency customers given the congressional priorities, and DARD personnel would better understand congressional demand. Representatives who have experience serving both congressional and agency customers may be able to identify ways to improve coordination between Customer Services and Production Planning and Scheduling to better serve agency customers.

Identify systematic approaches to integrate agency work into production operations more efficiently.

Following an initial cycle of DARD–CPMD rotation, Customer Services and the Production Department should begin to regularly identify the most frequently demanded agency work that is produced in-house. Customer Services and Production should then work together to develop a more streamlined, systematic means for planning and producing that work. Specifically, Customer Services and Production Planning should exchange views on what is and what can be produced in-house, and how it should best be coordinated with congressional demand. Recommendation 9 addresses increased Customer Services–Production Planning cooperation in more detail.

Establish channels for agency customer feedback to the appropriate parts of the production process.

Providers of products and services need to get feedback from their customers to know how well they are serving them. They need this feedback to have ownership of the product and pride in their work. The Production Department should work with Customer Services to design feedback channels, both formal and informal.

Formal feedback mechanisms can include sending out a customer satisfaction survey with certain jobs. The results of the surveys should be briefed regularly by the Production Manager to the Department at an all-hands meeting. Alternately, they could be made available over the network or regularly posted on bulletin boards.

Informal mechanisms include customer access to information on job scheduling and completion (already available on PEP and PICS); an e-mail address for customer questions should be added to this system. Responses to customer questions should be provided daily.

Finding 4. In-plant batch processing focus does not promote cross-functional knowledge sharing, accountability, or effective communication.

A lack of formal cross-functional cooperation and communication has led to troublesome disconnects in the production process. These process disconnects adversely affect production coordination and efficiency. Some of the disconnects can be quickly and simply addressed, for example, through modifications in documentation. Others will require more systematic changes to underlying procedures and practices. The specific issues that were discovered are described below, followed by a series of recommended actions to address them.

Current in-plant operations are functionally focused rather than process focused.

Production division superintendents and other lower-level managers were often unable to describe major elements of functions “upstream” or “downstream” to their specific areas. For example, managers outside of Production Planning do not have a clear understanding of how print jobs are actually scheduled, other than the fact that Production Planning determines which jobs stay in-house and which are procured, which is only partially true. Given the schedule-driven nature of the GPO production operation, better understanding and problem solving between planning and production is an area for improvement.

Managers at all levels reported that once a particular task was completed and passed on to the next step in production, responsibility was also passed on for any resulting errors and for adherence to project schedules. There is a lack of routine documented feedback given to upstream functions when errors are discovered downstream. In urgent situations, phone calls are the main method for locating delinquent work and addressing quality and schedule problems.

Some of these cross-functional problems can be easily addressed, e.g., minor process control issues related to poor copy quality because of failure to replace printer toner cartridges. Other examples of poor cross-functional cooperation are more troubling, e.g., the lack of standard practices or procedures for the bindery locator to call back to the pressroom to resolve discrepancies on paperwork delivered with a print job as to whether that job is fully or partially completed.

Functional expertise key to production cost and quality management is not routinely included in the production process.

Both QCTD and MMS view themselves as support functions, interacting with the Production Department only upon request. This formal separation limits effective use of the available technical expertise of these organizations and hinders regular collaborative problem solving critical to production efficiency. Routine integration of these support functions into production could have an impact on the effectiveness of problem solving. For example, production recently asked QCTD and MMS to analyze and propose a solution for frequent web press paper breaks. QCTD and MMS worked with Production to solve the problem. This example of ad hoc cooperation is indicative of the fact that those services are only called upon to solve specific, high-visibility problems and are not integral parts of the production process.

Functional area superintendents, senior production department staff, and other supervisors do not typically hold regularly scheduled meetings to discuss cross-functional issues.

Functional area managers indicated that they meet to discuss only serious problems. Even on these occasions, only superintendents from the affected functions meet, depriving other managers of valuable insight. More frequent meetings were deemed too difficult to schedule because of the demands of the daily workload.

There are no regular cross-shift meetings throughout all functional areas to share information, although the Superintendent of the Press Division meets with forepersons monthly and some forepersons meet with group chiefs at the beginning of a shift. Our interviews revealed that management within the same functional area often disagree on some production issues. For example, in-plant upper management believes that the use of recycled paper presents no production problem, but pressroom staff maintain that it is a major problem because it causes frequent breaks.

Organizational barriers also negatively affect work management between the Production Department and other parts of GPO.

Although they are collocated to facilitate communication, assessment of the interaction between Customer Services and Production Planning revealed several areas in which communication and process coordination should be improved. For instance—

- When an initial agency job requisition comes in, Customer Services has at times directly procured work suitable to in-plant production without giving Planning and Estimating an opportunity to bid on the job. Such decisions are based on inaccurate judgments about job attributes or current in-plant availability or capacity.
- Production Planning and Scheduling, responsible for initial job estimates, may not always be informed by Customer Services of an agency's reasons for rejecting an

initial job estimate. Production Planning and Scheduling therefore loses the opportunity to re-estimate, capture agency work, and/or modify estimating procedures.

- Difficulties in coordination between departments delayed the start of production of the 1999 U.S. Budget.

These decision-making and communication breakdowns constitute significant disruption and financial losses to in-plant production, particularly in light of declining in-plant agency workload. GPO in effect ends up selling away in-plant capacity; this is particularly detrimental to in-plant efficiency when congressional demand is low.

The incentives for management or workers to work cross-functionally are insufficient.

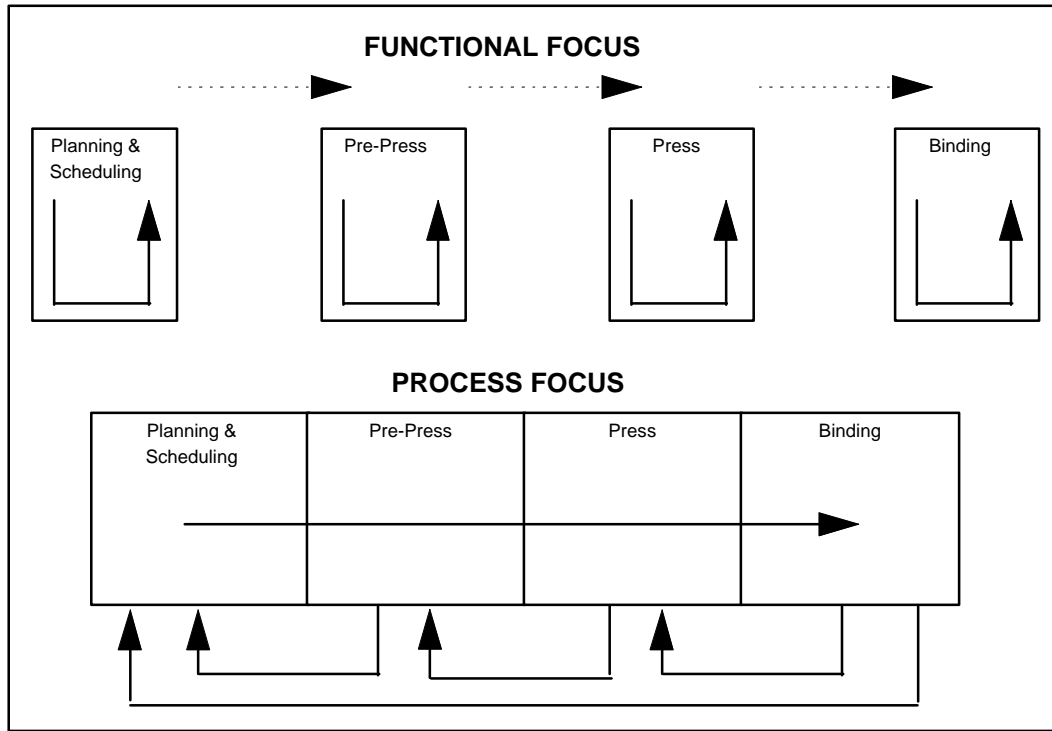
GPO's batch process focus emphasizes worker mastery of a single skill. This emphasis limits workforce flexibility and the organization's ability to adapt to unexpected changes in staff availability. Staff with critical skills are in some cases few in number, particularly in EPD, and may be irreplaceable on short notice.

This specialized, narrow focus does not encourage understanding of the entire production process. Employees and managers do not look across functions, and opportunities to improve overall efficiency or solve persistent problems may remain invisible. Current production culture fails to encourage worker ownership of the overall process or of his or her particular craft. Such an attitude is quite understandable if workers seldom, if ever, see the product in later stages of production.

Recommendation 4. The Production Department must break down functional stovepipes to establish cross-functional, process-focused operations.

The ingrained functional focus described here results in barriers to communication, problem solving, and product improvements. Exhibit 4-3 shows the difference between a functionally focused and a process-focused organization and culture. Functional focus limits communication and problem solving to within a particular function, whereas the process focus encourages and requires accountability and feedback throughout the entire production operation to improve the overall effectiveness and efficiency of the production operation.

Exhibit 4-3
Functionally Versus Process-Focused Production Department



Establish an in-plant process improvement team to identify problems related to cross-functional coordination and communication and to develop solutions in these areas.

This team should be composed of Department superintendents, foremen, supervisors, and union/worker representatives. It should be led by outside (non-GPO) facilitators with printing and non-printing industry experience. This mix of knowledge and experience will help GPO to develop innovative approaches to problem solving. The facilitator's role would be to guide the team in developing a process-focused versus functionally focused approach to communication and knowledge sharing.

The team should focus on improving the hand-offs between functional areas as products progress through the in-plant process. The group should identify needed changes in procedures, information, and management and worker responsibilities to ensure a smoother, more controllable product flow. The overarching goal should be improved production synchronization. A global, process-focused review is vital; if GPO attempts to improve production within separate functional departments, an isolated improvement in one area could compromise improvements under way in others. Only after hand-offs are smoothed should a uniform approach be used for internal improvements within specific functional areas.

Improving joint evaluation and job planning between Customer Services and Production Planning would be a good place to start. This endeavor should be focused on the following areas:

- Updating guidelines to better assist Customer Services Account Representatives to assess the feasibility of in-house production for all jobs.
- Providing DARD, and the Requisition Section, with daily copies of the Production Manager's List and the Product and Machine Attributes List, and teach Account Representatives how to use the data to better estimate delivery capabilities.
- Ensuring that Estimating and Jacket Preparation has the opportunity to discount every agency job if the agency initially rejects the estimate.
- Ensuring that the reasons for procuring agency work estimated for production in-house are consistently communicated back to Planning and Scheduling so that they can learn from customer feedback and adjust processes or prices accordingly.

Hold monthly cross-functional meetings for all superintendents, including representation from key services outside the Production Department.

The changes required to break down the functional barriers must begin with the leaders of the Production Department. Production Superintendents must have regular and frequent contact in order to understand and communicate how changes in the production process and the organization are affecting each of their different functional areas. Frequent communication will help them anticipate and address issues before they become larger problems. Furthermore, deployment of new technologies such as direct-to-plate pre-press must be cross-functionally managed.

Begin a Department-wide program of shift rotations and in-house detailing to provide workers with an overall understanding of the production process.

Managers need to involve workers directly in cross-functional learning and development of cross-functional communication channels. Increasing cross-training through job rotations should be a relatively easy initiative for Production, given the current role of on-the-job training, but it must be done with the proper preparation. Managers and supervisors should identify new opportunities for rotations first within a given functional area and then across functions. Skills that can be more easily shared should be identified; very specific skills or any work that requires special safety precautions may not be appropriate for cross-functional learning.

A journeyman/sponsor should be assigned to each worker on rotation. The sponsors should have clear guidance and brief training in how to introduce an unfamiliar worker to a new area and a new skill. This training should include modules on interpersonal and teaching skills, and journeymen recognized as having such skills should be asked to sponsor others. Workers who have done a rotation should then act as sponsors within their own area.

GPO has reportedly made successful use of ad hoc work teams,⁴³ where appropriate, cross-functional self-directed work teams should be developed to promote cross-functional awareness at the worker level. These teams are generally formed for a finite period of time to address a problem or to help an enterprise to respond to a change in the manufacturing process when one stage in the production process improves, possibly at the expense of another. The acquisition of direct-to-plate technology is a perfect example of a change in the production process, and the perfect opportunity to gain worker buy-in by creating cross-functional, self-directed work teams with workers in both EPD and Press; teach them about the new process; and include their insights and suggestions as GPO adapts to the new process.

Develop performance incentives for behaviors that promote cross-functional communication and problem-solving.

If managers ask workers to try new ways of working, learn new skills, and use their specialized knowledge along with a new broader view of the process to help improve the organization, they must be prepared to offer rewards and incentives. GPO has not funded its Awards and Incentives Program in 6 years, and 70 percent of the employees who responded to our Personnel Team survey do not believe that creativity and innovation are rewarded. Although it should be a GPO-wide priority to find a way to fund an awards program, Production managers can begin by developing a cost-free or low-cost program designed to reward cross-functional cooperation and innovation.

Production managers should establish a cross-functional panel of judges that includes personnel from each function. The panel should include both supervisors and workers. Membership on the panel should be rotated so that all staff have an opportunity to judge.

Management can first expand and regularize simple programs such as the Suggestion Awards given in Press via suggestion boxes in the superintendent's and Production Manager's offices, with monthly awards for the best ideas for increasing cross-functional communication and cooperation.

Management should use team awards to encourage cross-functional thinking and innovation. Teams can be rewarded in a variety of ways. These include a letter of commendation from the Public Printer or the Production Manager; plaques with the names of all team members listed that are hung in conference rooms or hallways and/or given to the employees; choice of a job rotation; support to attend an outside conference; or cash awards.

Management must follow through on implementing the winning suggestions, or the value of the award will be negated. The gift is not nearly as important to employees as feeling that they have made a positive difference. Employees may have excellent suggestions that

⁴³ Employees from Documents, Production, and Procurement worked together on a cross-functional team to set *CBDNet* and the production of *Commerce Business Daily* in Chicago. They received the Hammer Award.

are not feasible because of current constraints either in the organization or in the technological environment. One private sector company that wants to encourage its staff to continue to have such forward-thinking ideas has what it calls its “Best Worst Idea” award. The employee is given an award, an explanation of why the idea cannot work immediately, and encouraged to follow up on developments that may make its implementation possible.

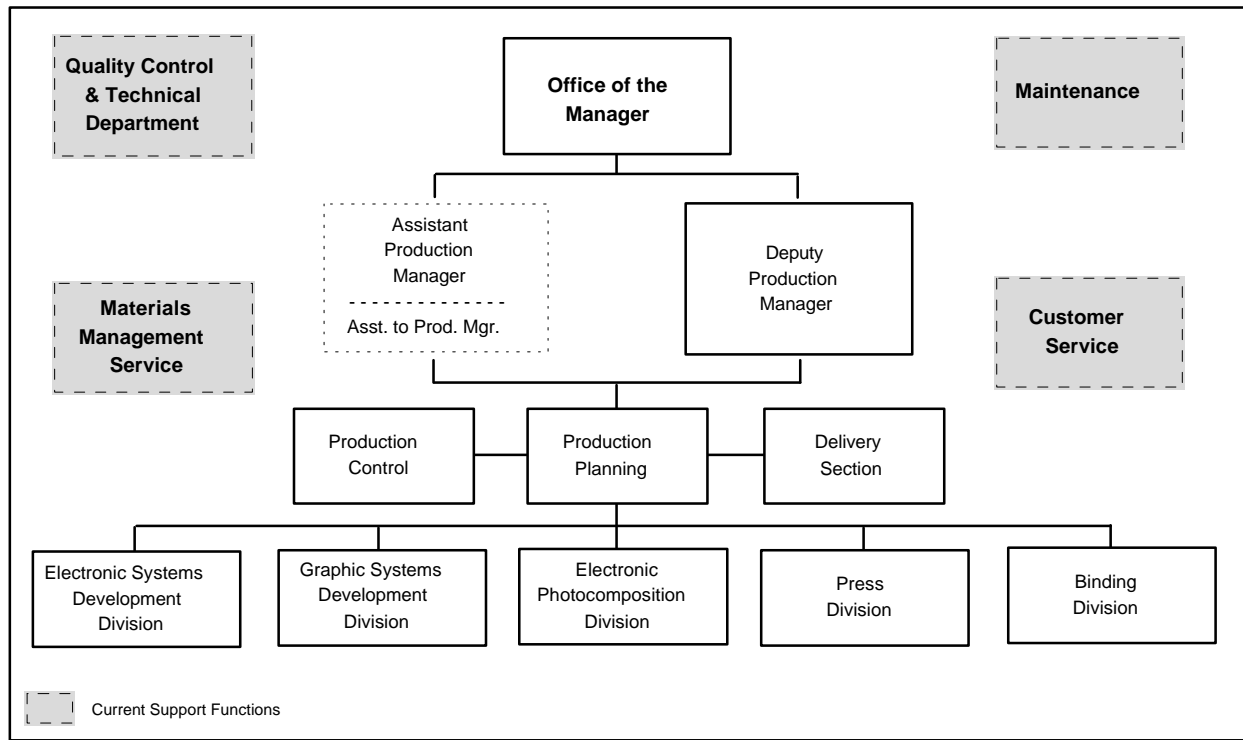
Finding 5. Current in-plant organizational structure impedes production efficiency.

An analysis and review of GPO’s current organizational chart, shown in Exhibit 4-4, raised important questions regarding the ability of the current structure to support GPO in-plant production’s key goals of meeting demanding schedules for congressional products and maximizing the use of remaining production capacity for agency work. Staff interviewed in the Production Department, Customer Services, and current “support” departments repeatedly pointed to difficulties in communication, coordination, operations management, and problem solving. The interviewees attributed these problems at least in part to a fragmented and often rigid organizational structure.

The interviewees agreed on GPO Production’s mission, i.e., the primary role of GPO in-plant is to produce quality, short-turnaround congressional work. The purpose of agency work, except for “surcharged” or expedited work, is to fill plant capacity until the next wave of congressional work enters the plant. The in-plant operation is built around “getting the congressional work out the door, no matter what it takes,” and on providing the same rapid response to high-visibility specialty projects from the executive branch. This focus on fast-turnaround capability is reflected in the operations and culture of Production in several ways:

- CPMD has primary input to the schedule that sets production priorities for each shift—the Production Manager’s List.
- Third-shift staffing levels reflect the attention given to delivering next-day congressional work.
- The primary in-plant management reports are schedule specific.

**Exhibit 4-4
Current Production Department Organizational Structure**



Although congressional work is consistently delivered on time, the current organizational structure fosters unnecessary impediments to efficient achievement of this goal. Important production-related functions are neither a part of nor closely aligned with the Production Department. In addition, disconnects exist within the Department, such as the separation of the functions performed by Production Control and Production Planning. This separation makes the planning and execution of work more difficult than necessary.

“Natural groupings” of key related expertise do not exist, resulting in sub-optimal use of subject matter knowledge and inefficient communication.

CPMD, the primary contributor to the Production Manager’s List, has the greatest impact on the in-plant production priorities of each shift. However, CPMD is part of Customer Services. It is not part of Production Planning and Scheduling, which sets the production schedule within production divisions, that determines job setup and execution times. Production Planning and Scheduling staff have ownership of the production reports (e.g., the Foreman’s Report and Summary of Work Report), while scheduling and planning tools are jointly owned by CPMD and Production Planning and Scheduling.

Other illustrations of organizational fragmentation include the following:

- Paper and Materials Control, which decides when and how much paper to order, is part of Production Planning, not MMS.

- Production does not use the simulation, process modeling, and statistical analysis capabilities of QCTD on a routine basis to collect valuable management information and identify process improvement opportunities.
- MMS orders materials and manages inventories but does not establish material ordering points.
- The Machine Branch of the Facilities Division, responsible for all production equipment service and repair, is part of the Engineering Service, a stand-alone organization.
- Projects to improve quality in production operations are not initiated or proposed by QCTD; instead, Production divisions must make specific requests for projects.

The stand-alone position of key production-related services and the separately managed islands of output within the Production Department create several impediments to an efficient and smooth production process. For example—

- Many managers, some with overlapping responsibilities, are involved in production.
- The number of information hand-offs is excessive.

- Islands of authority and responsibility within Production create obstacles to communication and information sharing that are critical to efficiency.

Information technology “development” functions are organizationally included with

ESD and GSD perform valuable functions in accomplishing the production function but do not directly add value to the product in the same way as the Pre-press, Press, and Binding. ESD provides technical services, including engineering and systems design, to the Production Department, and it has responsibility for Internet domain name services (DNS), firewalls and network security, and interconnectivity. GSD is responsible for both application development and systems support, including Web page/Internet development, and for the development and acquisition of typesetting programs. These offices have highly specialized “knowledge workers,” i.e., computer technicians, programmers, and network managers who perform what are traditionally termed staff support duties.

ESD has become the de facto network engineering office for Production, and for other parts of GPO. ESD has earned a reputation within GPO for the expertise it has brought to systems standardization and support for Production; it now invites non-Production offices to use its personnel to upgrade and configure systems in other parts of the building.

GSD has expertise in systems communications, data retrieval and distribution and internal and remote applications development.

Recommendation 5. GPO should realign the organizational structure to integrate production-related services, and streamline Production Department divisions to improve in-plant operations.

Because organizational change requires effective cross-functional communication, an organizational realignment should be instituted only after Recommendation #4 has been implemented. The shift to a cross-functional process focus and the resulting process and functional improvements undertaken as a result will facilitate the organizational realignment proposed here.

Similarly, a reorganization of this scope should not begin until after a strategic manufacturing plan, discussed in Recommendation # 6, is in place. The strategic manufacturing plan should be tied to and driven by a GPO strategic plan that articulates the overall GPO mission and vision. For example, if the GPO strategy called for a cultural transition to a low-cost print manufacturing operation, organizational and structural changes would be required to support this change in focus. Cost leadership goals of this nature usually imply an organization and structure based on tight control systems, overhead minimization, pursuit of scale economies, and dedication to the learning curve. Other operational strategies would have significantly different structures.⁴⁴

⁴⁴ Michael E. Porter, *Competitive Advantage*. New York (1985), 23.

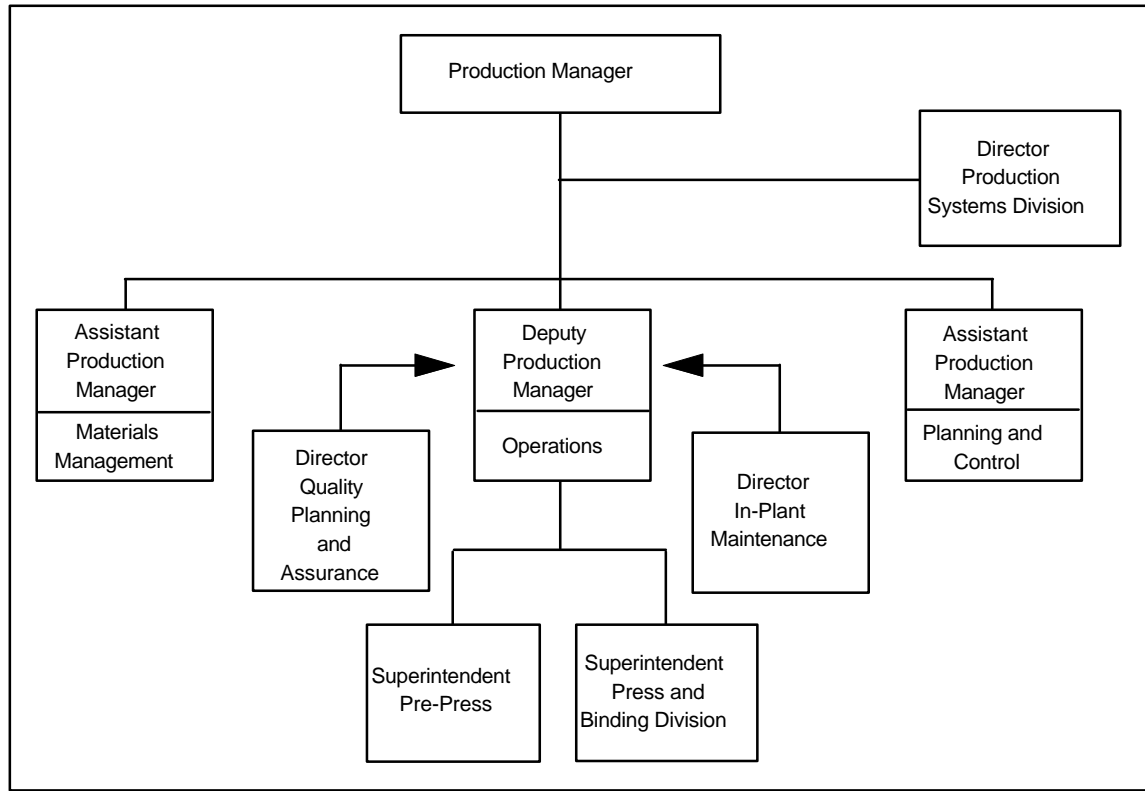
The following recommendations for reorganization are based on our conclusion that GPO must recognize the need for cultural changes that support a more manufacturing-gearred, process-focused printing operation. The Production Department's goals in making these changes should be to lower cost, improve operational efficiency, and improve both process and product quality.

Production cannot effectively shift to a manufacturing model within its current organizational structure. Manufacturing models require that all functions affecting production be closely aligned. By establishing a streamlined, process-focused production organization, as shown in Exhibit 4-5, GPO can identify areas for overhead cost reduction, process improvement, and reduction in management layers, and it can lower material and production costs.

The realignment illustrated in Exhibit 4-5 has three key objectives:

- *First, to eliminate islands of control and decrease the number of functional areas and managers within the Production Department.* Elimination of hand-offs and links in the authority and process chain will streamline the production process. Fewer departments with larger spans of control contribute to a broader understanding of the overall process and promote process-wide problem solving.
- *Second, to incorporate critical production-related services into the Department.* MMS, Maintenance, and QCTD provide services that are both underutilized and poorly understood by managers and supervisors in the Production Department. Conversely, key staff in these functions do not benefit from a daily awareness of production-related issues. Rather than contributing proactively to production efficiency and quality, they wait to be called upon to provide service or solve problems that may have been prevented if they had the information and the motivation to plan rather than react. Incorporating key parts of these offices into

**Exhibit 4-5
Proposed In-Plant Production Organization**



Production would ensure that functions critical to the production operation are integral to daily operations, process control, and defect prevention.

- Third, to bundle key operational areas under an operations-focused manager, while freeing up staff support functions to directly support and advise the Production Manager on information technology issues.* The expertise of the Electronic and Graphic Systems offices is already separated from daily ink-on-paper production. To be most effective, the Production Manager must have at least a generalist's knowledge of information technology systems and their impact on production. The current and continuing importance of information technology within the Production Department, and the importance of Production's role in collaborating with the Office of Information Resource Management (OIRM) and outside vendors for the development of new systems, makes it logical to have knowledgeable advisors within the Department to assist the Production Manager in areas of information technology strategy development and implementation. The Typography and Design Office would be included with the Electronic and Graphic Systems to develop technological synergies among these computer-oriented operations. These combined functions, led by a single director, would be called the Production Systems Division, and would become a direct staff support office under the Production Manager. This office would serve as the Production Manager's direct liaison with GPO's new Director of Information Technology. In

turn, grouping the primary components of ink-on-paper production, i.e., Pre-press, Press, and Binding, under an operations-focused Deputy Production Manager, affords specialized managerial attention to those areas and allows the Production Manager the freedom to take a more strategic view to issues within the Department.

Realign Congressional Print Management, Production Planning and Scheduling, and Production Control into a single Production Planning and Control Office. This Office would be led by the Assistant Production Manager for Planning and Control.

In the new term, Congress is likely to retain GPO as its designated printer. Therefore, congressional influence on in-plant printing schedules and the demands it makes on in-plant resources will continue unchanged. Because both congressional and agency work use the same in-plant resources, merging the planning and scheduling function into a single office could yield significant improvements in schedule coordination, accuracy, and flexibility. Production Control should be within the planning organization in order to facilitate accurate identification of available equipment to meet production requirements. Paper Control should be integrated into Production Control to improve regular identification of paper ordering requirements.

To integrate these functions effectively, the Production Department should take the following steps:

- Conduct a detailed analysis of current inefficiencies and chronic problems in the scheduling process caused by the organizational separation of these functions. Focus on improvements in information sharing and coordination at the Job Plan and Production Manager's List generation point.
- Develop a Realignment Plan to ensure current planning and scheduling are not negatively affected during realignment implementation.
- Align functions to support process outcomes and not simply functional requirements.
- Charter the Assistant Production Manager's role to include developing methods and tools to optimize the product mix of congressional and agency products through the acquisition of new technology. In addition, the Assistant Production Manager's role should include working with Customer Services (DARD) and Congressional Print Management to develop an integrated, customer-focused, market growth plan.

Include the Quality Control and Technical Department within the Production Management Department and integrate QCTD expertise into daily in-plant operations. The new Quality Office would be led by a Director of Quality Planning and Assurance, who would report directly to the Deputy Production Manager for Operations.

QCTD should be integrated as a resource to conduct a variety of regular measurements and analyses that help to identify improvements in process capability, control, quality, and overall productivity.

To integrate QCTD effectively, the Production Department should take the following steps:

- Communicate to all employees the need for QCTD's skills and how to access them, and build consensus to include QCTD as an equal partner in the production process
- Use QCTD's statistical expertise to develop and conduct a survey asking managers and employees to identify the most frequent obstacles they encounter in key areas, including information, process and performance measurement, equipment, and incoming materials
- Based on QCTD's analysis of survey results, and with the support of division supervisors, develop a task plan and a schedule of analysis projects for QCTD to perform
- Charge the Deputy Production Manager for Operations with responsibility for putting policies and procedures in place to ensure that quality planning and assurance is integrated into each step of production to achieve positive process control and defect prevention.

Realign the Materials Management Service as an Office under Production Management to achieve efficiencies in combined inventory ordering and management functions. This Office would be led by the Assistant Production Manager for Materials Management.

By making MMS a part of the Production Department, GPO would achieve closer alignment of the functions that are critical to the in-plant production of operation. More specifically, the realignment would—

- Merge paper procurement, inventory, and supply with production to streamline procurement practices. This merger directly links the source of paper demand, the proposed Production Planning and Control, with the organization responsible for supply management, Paper and Materials Control.
- Link Materials Management with production to streamline the management structure and thus reduce ordering costs.

Realignment of Materials Management should include the following steps:

- Identify those elements within MMS that currently affect and/or support the production operation, such as paper storage and procurement; production-related

supplies, equipment, and repair parts procurement and management; and distribution

- Coordinate and implement inventory reduction and procurement simplification initiatives (see Recommendation 11)
- Identify options for reducing management and overhead layers
- Charge of the Assistant Production Manager for Materials with the responsibility to work closely with the Assistant Production Manager for Planning and Control to develop “pull-based” materials ordering and inventory systems that minimize large holding stocks and are tied to production demand versus safety stock inventory model.

Realign the maintenance function as an Office under Production Management. The new Maintenance Office would be led by a Director of In-plant Maintenance, who would report directly to the Deputy Production Manager for Operations.

By making the Maintenance Division a part of the Production Department, GPO would achieve closer alignment of the functions that are critical to the in-plant production operation. More specifically, the realignment would—

- Increase the attention and priority given to preventive maintenance activities within the Department
- Bring the capabilities of the new JOTS maintenance system, with its machine history and scheduling capabilities, directly onto the plant floor
- Increase the “uptime” of aging equipment by implementing a total productive maintenance model.

The charter of the Director of In-plant Maintenance should include working closely with the Deputy Production Manager for Operations to develop methods and tools to increase the level of involvement of the in-plant worker in daily maintenance activities and information gathering regarding equipment performance and reliability.

Group the Pre-Press, Press, and Binding Divisions under the Deputy Production Manager for Operations.

The grouping of these divisions would more closely align functions that are critical to the in-plant production operation. The realignment would allow goals and strategies for process improvement and market growth to be tailored for two very different types of operations: the electronic-focused pre-press activities and the ink-on-paper press and binding activities.

Led by a single superintendent, the Pre-Press Division would include the following functions:

- EPD
- Copy Preparation
- Computer-to-Plate
- Remaining Negative and Plate functions.

The goals for Pre-Press would include growing and managing an electronic pre-press business and printing-on-demand capability, including increasing the utilization of high-resolution scanning and graphic arts capabilities by working closely with the Typography and Design Office now grouped with Electronic and Graphic Systems.

The new Press and Binding division would be led by a single superintendent. Depending on issues of control and management, this superintendent could appoint a deputy superintendent for Press and another for Binding. Goals for the press and binding operations would include establishing a single integrated operation to eliminate persistent and expensive problems such as “back to press,” and streamlining and smoothing the material hand-offs between Press and Binding. This operation would be expected to work closely with the Assistant Production Manager for Planning and Control to facilitate the introduction of real-time in-plant machine and production monitoring equipment that would link to the new PEP system discussed in Recommendation 8. This equipment would improve scheduling and job tracking accuracy throughout the in-plant operation, and its effective implementation would heavily depend on the leadership of the Press and Binding Superintendents.

Finding 6. In-Plant Production does no strategic manufacturing planning.

Budget development and submission are as close as the Production Department gets to in-plant strategic planning. Budget planning, however, is tactical and operational rather than strategic. Its purpose is to secure resources for operations as they currently are rather than to define what they should be in the future. Several issues identified in our analysis point to a need for a documented strategic plan to address manufacturing-specific issues.

No complete implementation plans have accompanied the introduction of new CTP technology.

Incoming CTP technology will affect labor utilization in such pre-press operations as camera and negative sections, and will alter production rates for activities formally performed in these areas. EPD has acknowledged the changes in labor utilization and personnel displacement will occur as CTP technology is introduced. However, no documented plan specifically indicates how employees will be reassigned and trained. In addition, there is no documented plan that analyzes how CTP will affect production rates and the flow impacts of downstream operations.

Production has not formulated a capital procurement and replacement plan to address the replacement of antiquated equipment, or the possible efficiencies of adding auxiliary equipment to existing platforms. Because JCP approval is needed for large capital purchases, one of the most persistent complaints among Production personnel is the time it takes to get JCP approval. Therefore, such a plan is critical.

Lack of planning to correct recurring production problems makes long-term process improvements difficult.

Production has not developed a documented plan to eliminate recurring problems such as the number of jobs that must be sent back to press; the average annual waste and spoilage rates of 37 percent; the inaccurate information in the PEP system and in corresponding management reports; and the level of backlog or delinquent work in the Bindery Division. Some of these issues, e.g., the back-to-press problem, are being addressed in an ad hoc fashion. In general, most managers accept these issues as part of daily operations, and not as exceptions that inhibit in-plant productivity.

Consistent downward trends in labor and machine utilization and the mix of agency and congressional work require planning to optimize production capacity. This includes developing strategies to increase agency work during low periods of congressional demand such as during recesses and election years.

Most managers believe that the current schedule-driven focus and the resulting need to react continually to process-related scheduling, material quality, and labor/management issues, negates the applicability of planning. Several managers believe that documented plans run counter to the production focus of the organization. Direction is therefore ambiguous because documented plans are perceived to be potential sources of organizational conflict and are consequently not developed. Because of this, actions are taken without a clear analysis of the outcome. For example, to achieve headcount reductions, Binding recently cut all jobs with the title of “assistant” rather than identifying specific reductions based on mission and need and taking into account the effects that the reductions might have on the stakeholders. These situations and the reactive environment that they cause are among the strongest arguments for a documented strategic manufacturing plan.

Recommendation 6. GPO should develop an in-plant strategic manufacturing plan.

An in-plant strategic manufacturing plan is required to address the issues raised in Finding #6. However, development of a strategic plan is not a one-time activity intended to address a single set of issues. Strategic planning should be a regular management activity, and a new plan should be developed every 2 years. The plan that is in place should be reviewed frequently. Therefore, it is important to create a smooth planning process that can be repeated regularly and that looks beyond the burning issues of the day to address all aspects of Production’s current mission and its vision of the future. Steps to put such a process in place and develop a solid manufacturing strategic plan follow.

Production management should develop and implement a formal in-plant planning process.

To develop an effective manufacturing plan, the Production Department should form a cross-functional Strategic Planning Team composed of internal management and employee representatives, and facilitated by non-GPO subject matter experts. This cross-functional and management/union partnership will be necessary to ensure that the plan will have buy-in from the entire spectrum of employees needed for its successful implementation. Team facilitation by non-GPO personnel will help the team to understand some planning concepts that may be new to them and that can bring a valuable unbiased viewpoint to the planning process. We recommend that the facilitator have both strategic planning and printing experience, but if a choice between printing knowledge and planning knowledge is required, the team should opt for a knowledgeable strategic planner.

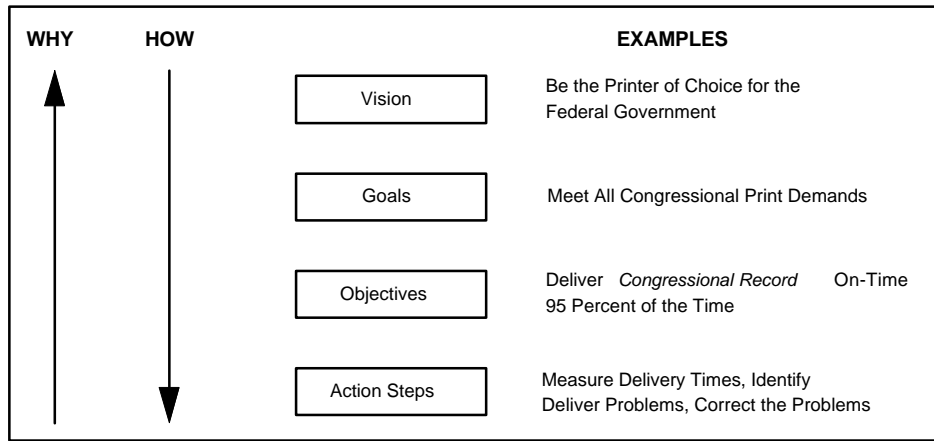
Ideally, the Production Department strategic manufacturing plan would complement and be driven by a well-structured GPO strategic plan. The Strategic Planning Team should therefore begin by analyzing information normally included in a “corporate level” plan.

- Identifying and analyzing current customer requirements, and to the degree possible, future customer requirements based on such things as planned technology or policy changes. These requirements should be gathered, analyzed, and ranked in importance in partnership with the Congressional Printing Management Division within Customer Services.
- Analyzing where current in-plant capabilities meet current customer needs, and where current capabilities need to be improved to satisfy current and future customer needs. This analysis would produce a gap analysis that highlights the most critical areas for improvement.
- In conjunction with these analyses, the Strategic Planning Team should ensure that it identifies key areas for communication and process improvement within in-plant operations themselves. If the gap analysis is done correctly, it should highlight major “trouble spots” within and between different functional areas of production that must be addressed to satisfy the mission of GPO.

Once this initial analysis is complete, the Strategic Planning Team should develop a set of high-level goals to “close the gaps.” As illustrated in Exhibit 4-6, these goals should be kept at a sufficiently high level to allow for specific objectives and action items to be developed that cut across organizational boundaries. The exhibit shows how an organization’s *goals*, *objectives*, and specific *action steps* relate to its overall *vision*. GPO’s *vision* in the example is to be the printer of choice for the Federal Government. A key *goal* that supports that vision is to meet all congressional print demands. Other goals may include providing specialized high-quality services to agencies, such as classified printing or Web services. *Objectives* are benchmarks that, assuming they are achieved,

directly contribute to achievement of the goal. On-time delivery of the *Congressional Record* is a key congressional demand, and would certainly constitute such a contribution. *Action steps* are the specific, day-to-day means to ensure achievement of the objectives. Continuous monitoring of delivery times and problems helps to ensure that the demand is consistently met.

Exhibit 4-6
The Strategic Planning Process: How the Pieces Relate



The in-plant planning process should be used to develop a strategic manufacturing plan that addresses people, processes, and technology.

The importance of strategic planning is reflected in the efforts of leading commercial printers such as RR Donnelley & Sons, which in 1996 set its top priority as sharpening its strategic focus and defined a small number of guidelines to ensure that capital and attention were most effectively concentrated.

Throughout the planning process, strategy formulators must be careful to include the needs of customers, suppliers, employees, and upper-level management within their framework. The Strategic Planning Team should also periodically brief GPO upper management throughout the process to gain their concurrence on problems and solutions. GPO upper management should be involved in the planning process through an integration team approach. This approach allows lower-level managers and workers to develop the plan with general GPO guidance but also with a great deal of latitude for innovation and flexibility from the people closest to in-plant operations.

To emphasize a focus on results, action items developed during the planning process would then be assigned to specific groups or individuals in differing functional areas for implementation, and their progress assessed by the Production Manager. These actions should be tied to an implementation schedule that delineates the appropriate steps to take and who should take them.

Important high-level goals to be addressed by GPO's plan should include the following:

- Improve cross-functional communication and problem solving
- Develop and implement more systematic manufacturing and process control techniques
- Improve in-plant information systems, including computer and paper-based systems
- Develop strategies to increase overall machine utilization and chargeable hours.

To achieve these high-level goals, specific objectives should then be developed by the Strategic Planning Team. These objectives may be categorized relative to people, processes, and technology and may include—

- People
 - Achieve 100 percent in-plant training on total quality management tools and methods
 - Develop performance incentives to promote improved cross-functional communication and problem solving
 - Develop methods to reduce late arrivals, absenteeism, and worker compensation claims.
- Processes
 - Improve labor and machine utilization through internal scheduling and planning process improvements
 - Increase percentage of long-run agency work through market growth strategies developed in partnership with Customer Service
 - Develop methods to track the root cause(s) of process or quality problems to the machine level.
- Technology
 - Effectively integrate direct-to-plate (also known as computer-to-plate) technology without significant negative effects on downstream operations
 - Develop a long-range capital purchase plan, including plans for the phased decommissioning and disposal of aged equipment
 - Work with JCP to reduce capital equipment acquisition time
 - Identify opportunities for automation of information collection and analysis.

An important subsection of the manufacturing plan should include specific guidance for the generation of an in-plant strategic information plan. This plan should outline goals to develop computer-based models of the entire in-plant operation, including exact

equipment capabilities and costs. This should also include improvements in job performance reports, data sheets, control charts, and other documentation needed by management and workers.

Finding 7. GPO in-plant does not effectively use systematic manufacturing approaches to control process capability, quality, and cost.

GPO's in-plant operations receive two types of "raw materials": 1) information from congressional and agency customers in various forms, including paper manuscript, electronic files and, in some cases, photographic negatives and semi-finished products; and 2) the materials of production, which include blank paper, ink, and a variety of parts and other materials required to produce printed and electronic products. When combined with labor and equipment, these factors of production progressively add value through in-plant operations to produce finished products for customers. GPO's in-plant operations function, therefore, as a job shop-type manufacturing system. There is, however, a lack of routine systematic manufacturing management approaches employed throughout the in-plant operation.

Production standards, i.e., machine output, are based on a combination of historical output averages and union-negotiated targets rather than actual process capability.

According to in-plant personnel, current production standards were developed more than 15 years ago and were based on medians of several high and low production runs. Since their initial development, there have been no documented studies of machine speed optimization performed to recalibrate these standards to account for the age of equipment and other physical production factors. EPD keyboarding/proofreading sections have standards based on keystroke output and words proofread per document, respectively. Output in these sections is accurately measured using current computer summary data. However, agreement on the use of these standards has been held up in negotiations with the unions since approximately 1992, when new computers were introduced into the keyboarding section, and they are not currently used as a guide to improve productivity in these sections.

The introduction of new computer-to-plate or direct-to-plate technology in the pressroom will change the rate at which incoming electronic files can be converted into plate-ready material. In the cost justification submission to the JCP for this technology, calculations of the number of displaced pre-press employees were given, but there was no analysis of the effects of this technology on other production processes. To date, this new technology has not been analyzed for its impact on "upstream and downstream" production standards.

A lack of root cause analysis of production-related processes results in continuing and expensive problems.

Root cause analysis is used in production processes to determine the "source" reason for problems. As more people, material, and equipment become involved in a production

process, root cause analysis becomes more valuable because it enables workers and managers to sort through many possible combinations of factors. For example, shortages of planned versus actual output between press and bindery are a persistent and expensive problem, resulting in “back to press” production runs. Back-to-press runs require additional, non-billable labor in Production Planning, Press, and Binding, and possible charges in other production departments such as Copy Preparation and Pre-press, depending on the type of product being produced. Back-to-press runs also require repeated machine “makereadys” and cause interruptions to scheduled work.

Within the Production Department, Spoilage Reports are designed to report back to presses, but managers admit they are not routinely issued. For reports that are issued, managers also admit that they are not used to systematically determine the root cause of specific spoilage situations. For example, in-plant personnel said one “solution” to back to presses was that Planning and Scheduling simply adjusted upward the allowable amount of spoilage expected per job. In effect, this solution results in a larger run than should be required.

Back to presses are easier to spot when the job is large. Small jobs that may be flagged as missing the planned signature count are more likely to be lost in transit between press and bindery, causing a needless back-to-press run before the original job is located. The misplacement of small jobs may result from small job pallets being unloaded from elevators and then being ignored until Bindery or Production Planning notices the discrepancy and calls the pressroom.

An analysis of Postal Bulletin #21958 was provided to the In-plant Production Team in response to a request for examples of internal analyses that had been used to correct back to presses, but it is unclear from this document what was identified as the actual cause for a back to press occurrence. What is clear from the analysis is the lack of positive process control for this specific job. For example—

- The total quantity ordered was 133,353.
- The total quantity delivered to the Laurel warehouse on November 6, 1997, was 131,354.
- An additional back to press of 7,985 was delivered to the Laurel warehouse on November 7, 1997.
- Signature bundles delivered to the bindery ranged from 135,044 to 149,058. According to the report, these numbers are only approximate.
- A grand total of 139,339 bulletins—6,000 more than ordered—was eventually delivered to the Laurel warehouse.

Improvements in signature counting are one of the simplest solutions to back to presses, but in-plant personnel report that checks of output counters on press equipment are not routinely done, nor is there a procedure in place to periodically sample output counts to

ensure that they are accurate. Signature count verification between press and bindery is done on a visual basis when pallets enter the drop zone area of the bindery from the pressroom.

Because of the high incidence of back to presses for a particular product, the Production Manager recently called a meeting with press and bindery representatives to address the problem. In-plant personnel said that new scales were planned to increase accuracy of signature count and spoilage weight, but it is not apparent that this approach will completely correct the root cause(s) of the problem.

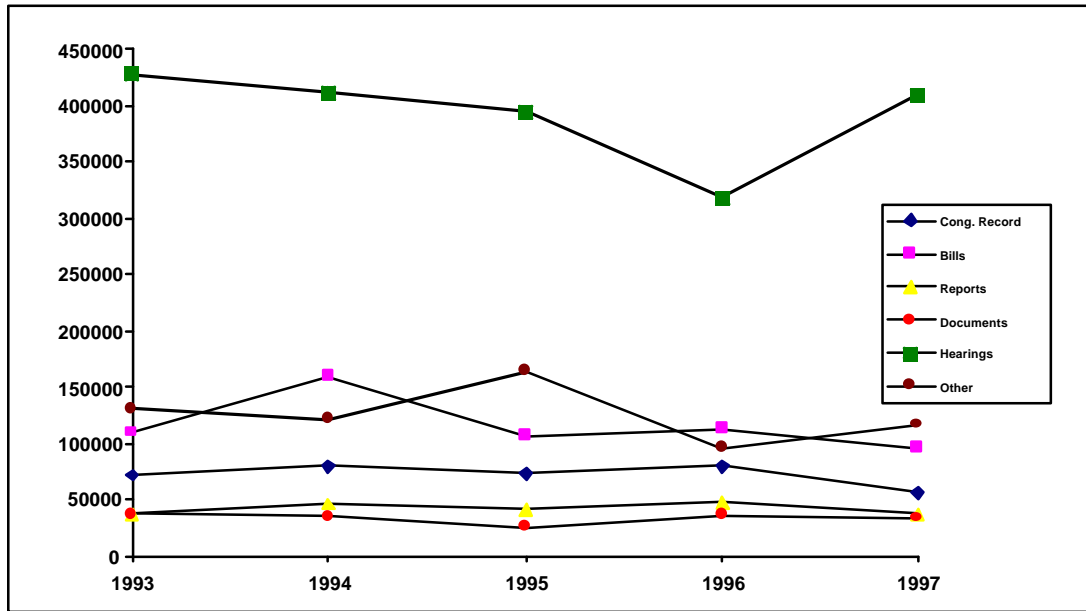
Lack of routine use and retention of problem documentation makes it difficult to quickly solve repetitive problems.

Process-related problems are usually verbally communicated between workers and supervisors. Press Shift Status Reports are designed to inform an incoming shift of important information on conditions encountered by the outgoing shift, but these reports are not analyzed for process improvement purposes and are normally disposed of after a few days. In addition, there is no single source of documentation in Production Planning, EPD, Copy Preparation, the pressroom, or bindery of recurring problems and their corresponding solutions. The lack of single source limits the ability to track and analyze process trends over time.

Statistical methods are not effectively used throughout the in-plant operation to supplement worker knowledge.

A lack of forecasting capability results in high contingency costs and the potential for underutilized machine capacity. Management believes that systematic workload forecasting in particular is unrealistic in the face of daily demand variation in congressional workload, and has not attempted it. However, as shown in Exhibit 4-7, trend analysis of annual congressional workload indicates relatively predictable annual performance for several congressional products. The assertion that workload forecasting was impossible was contradicted by statements from production personnel that there are known qualitative factors that correlate to daily congressional workload, such as recesses, election-related activities, and a “legislatively busy” Congress.

**Exhibit 4-7
Workload Trends**



Statistical sampling methods are being used in the Paper Testing Unit of QCTD to determine incoming paper quality. QCTD has used a new paper sampling method to reduce sampling costs and sample sizes, and they have reported a 95 percent specification-to-compliance rate.

The timelines and content of other sampling activities, however, do not easily enable production processes to be improved. For example, the Waste Report, generated monthly, is based on daily end-product evaluations of pounds of waste but does not include an analysis of the reason for waste generation nor its specific source within the plant. Repeated waste from undiscovered causes is therefore more likely to go uncorrected. As discussed previously, this lack of attention to identifying and correcting root causes of process inefficiency or lack of process control is a continuing theme throughout in-plant operations.

At the request of the In-plant Production Team, QCTD compiled a list of in-plant GPO process control activities. Many of the activities described in the list can yield valuable process control and improvement information if the results of these control activities are properly documented and time is taken to analyze and correct the problems for process variation. As stated before, the routine inclusion of QCTD in daily process sampling and improvement would also complement the activities noted in this document.

Within GPO in-plant, “quality” is usually interpreted to mean print quality, i.e., the complexity and closeness of registration of the printed product rather than positive process control and defect prevention.

Quality Level 1 is the highest print quality, such as color illustrations in medical books, and Quality Level 5 is the lowest, such as black and white newspaper-type production. The In-plant Production Team analyzed “quality” within the Production Department from the standpoint of cost effective, predictable process control and defect prevention.

Within GPO in-plant, comparisons to industry quality standards are largely limited to paper and ink (material) quality and do not include benchmarking to other industry standards, such as average machine downtime, average make-ready time, other material-related factors, and maintenance costs. There is a Report of Production and/or Material Loss, but it is specific to defective paper or other material. On the topic of comparing GPO operations to industry data, it is tempting to say that the age and condition of GPO equipment and the types of products that GPO produces nullify comparisons to commercial printers who can afford to invest in the best and newest equipment and concentrate on specific products. However, this view is not completely accurate when applied to most of the bindery equipment, the passport and postal card presses, and the newer presses, such as the Group 98 equipment in the main pressroom.

There is a lack of training in systematic manufacturing topics for managers and workers.

Most in-plant manufacturing training is craft-oriented, accomplished through an on-the-job approach and a journeyman-apprentice relationship. For example, the quality control person for the pressroom is a journeyman level pressman without specific training in quality control methods. Training for new equipment or processes is usually done by the manufacturer’s factory representative and then passed on from employee to employee. The GPO Training Department is used for the balance of training, but a review of the current training catalogue yields the following:

- Aside from shop floor mathematics, there are no courses in quantitative methods such as basic statistics.
- There are no courses in equipment troubleshooting.
- There are no courses in bindery-related equipment.
- There are no courses in quality control or quality assurance.
- There are no courses specific to industrial management.

Recommendation 7. GPO should improve in-plant performance by combining existing craft-based knowledge with systematic manufacturing methods.

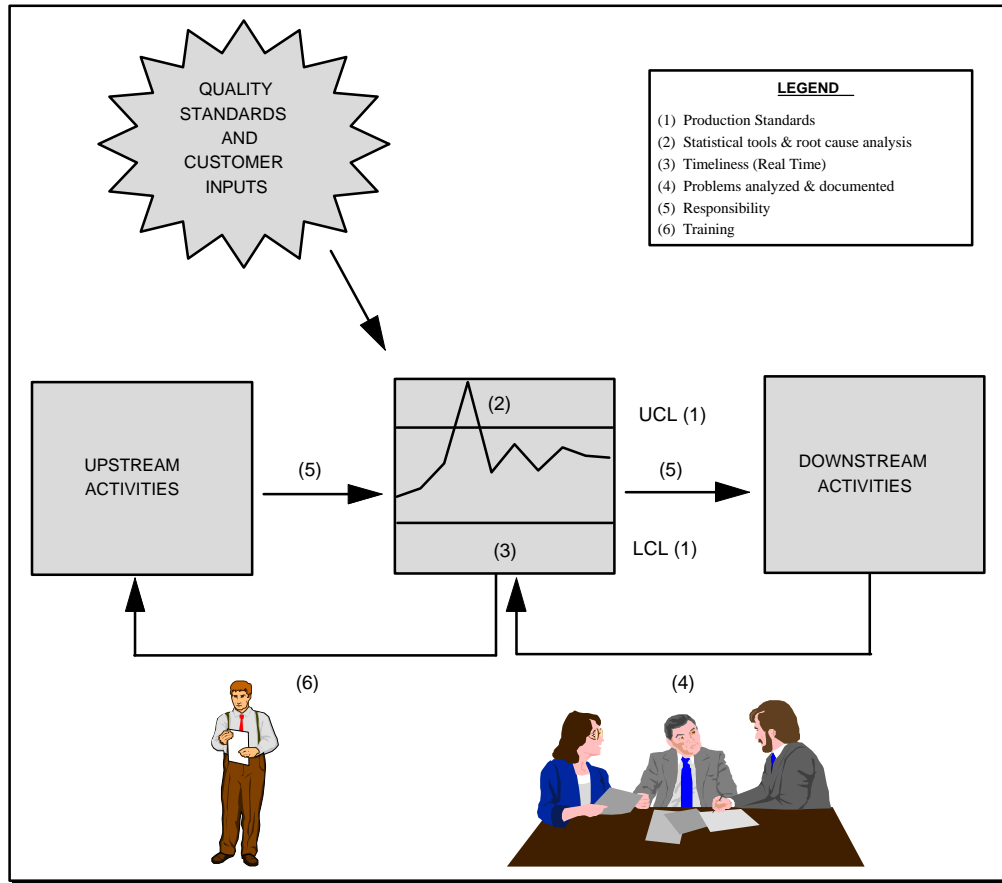
In-plant production can promote continuous process and performance improvements by making more systematic use of resident craft knowledge and by adopting systematic manufacturing methods to identify and address problems. The following recommendation describes systematic methods including root cause analysis and statistical analysis of key measures, such as productivity. It also outlines steps that in-plant can take to successfully adopt these methods.

As shown in Exhibit 4-8, a systematic manufacturing model is based on the following elements:

- Production standards are formed by an analysis of upper and lower control limits of process, i.e., equipment, capability, and customer requirements.
- When measured performance fails to meet standards, analytical tools are used to determine the reasons for performance outside of requirements.
- Problems are analyzed, documented, and shared with all functions concerned with correcting the problem.
- Responsibility for the quality of the completed product is distributed to all functions involved in the process.
- The most important component of the model is a well-trained and motivated worker who is given ownership of the process and direct responsibility for improving it.

This internal focus on systematic manufacturing methods is being followed by leading commercial firms. For example, firms such as Cadmus (\$280 million in sales) and Twedle Litho (\$52.5 million in sales) report they are working toward having all of their plants

Exhibit 4-8 Systematic Manufacturing Model



ISO 9002 certified. To combat competitive price pressure, Quebecor Printing (\$3 billion in sales) consistently strives to reduce its costs through two methods, significant investment in new equipment and implementation of total quality manufacturing combined with a philosophy of employee empowerment. As *American Printer Magazine* noted in its Web Offset Report, “This continuing switch from a craft-oriented production process to a manufacturing production process will positively impact the productivity and cost-effectiveness of printing operations.”

A 1993 industry survey conducted by DuPont Publishing and *American Printer Magazine*, on the importance of productivity and quality improvement yielded the results shown in Exhibit 4-9.

Exhibit 4-9 Survey Results

	Productivity Improvement	Quality Improvement
Extremely Important	67%	63%
Very Important	31%	31%

Somewhat Important	1%	4%
Not Important	1%	1%
Do Not Know	0%	1%

Although the printers surveyed expressed a keen interest in both productivity and quality improvement, the percentage of printers taking appropriate measures to improve their productivity and quality is not as high, as presented in Exhibits 4-10 and 4-11.

Exhibit 4-10
Are Productivity Measures Implemented?

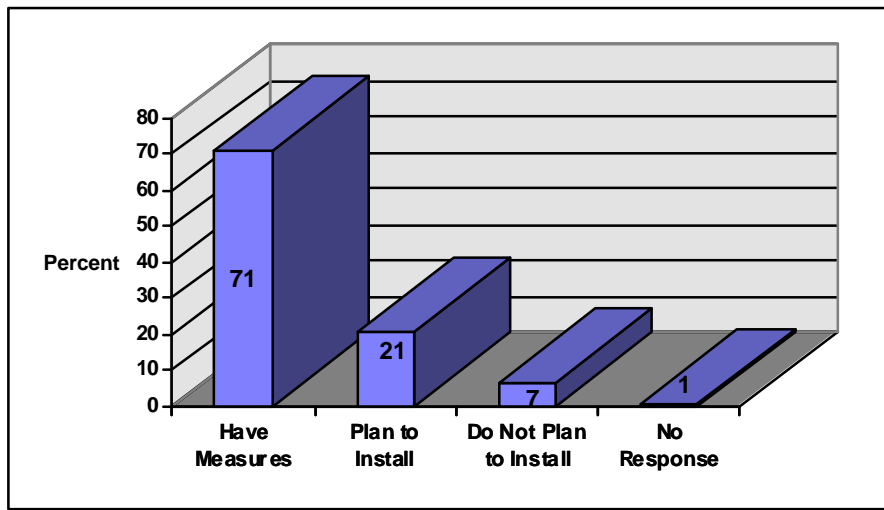
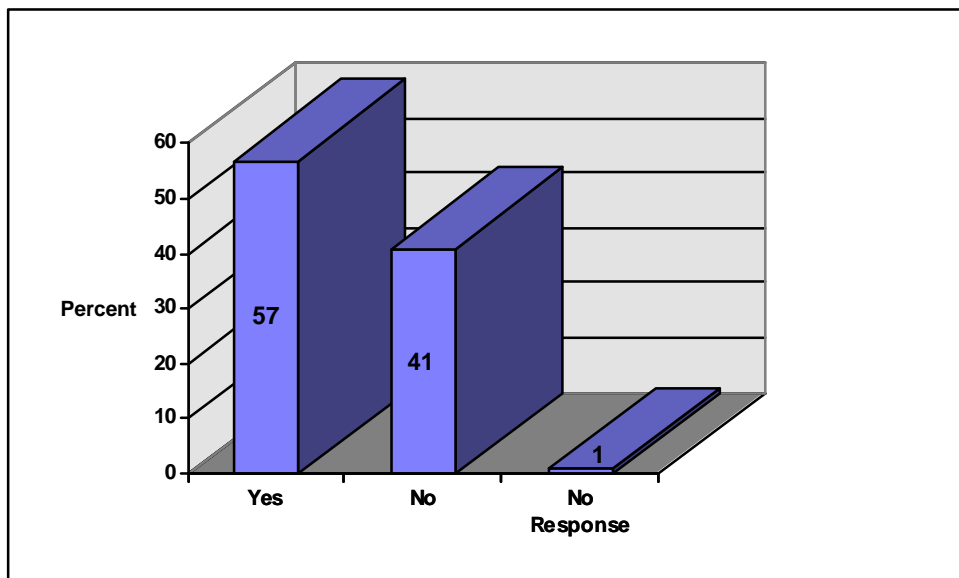


Exhibit 4-11
Are Quality Improvement Programs Implemented?



As these results indicate, even leading-edge commercial printers face challenges in transitioning into a systematic manufacturing environment. Therefore, GPO must lay the fundamental groundwork before applying these tools to improve its operations. Specific steps to prepare staff to implement analytical tools, set and measure appropriate standards, and document the tools and standards are outlined below.

Develop training in systematic manufacturing topics for managers and workers.

This training should be designed as a complement to the current craft-oriented journeyperson-apprentice training relationship. In conjunction with the GPO Training Department, a training curriculum should be developed that includes—

- Why systematic manufacturing methods are important and what must be changed about the current way of doing business (for managers and employees)
- Understanding in-plant process relationships (for managers and employees)
- Machine and process familiarity led by journeypeople, in an on-the-job training (OJT) setting (for employees)
- Basic machine and process operation, including troubleshooting (for managers and employees)
- Basic shop floor statistics (for managers and employees)
- Basic total quality control, including root cause analysis and other problem solving techniques (for managers and employees)
- Basic industrial management, including the basics of engineering economy (for managers).

This approach will better prepare in-plant personnel to identify, solve, and implement process-specific problems and continuously improve in-plant performance. In addition, it does not discount the importance of craft-based knowledge but rather prepares the knowledgeable worker to be a better problem solver and steward of overall process performance.

Revise or develop quality and production standards based on the Strategic Manufacturing Plan.

While this recommendation could be implemented without considering the results of Recommendations 4 and 6, its effectiveness will be enhanced if the revision of quality and production standards are guided by customer requirements and the vision articulated in the in-plant strategic plan, i.e., “What business are we really in?” In addition, the supporting analysis and implementation for many of these recommendations could be facilitated by using various types of commercially available software as discussed in Recommendation 8.

Based on our analysis, there should be a review of all existing process and quality measures to determine the following:

- Are we measuring the right things? For example, not measuring and documenting causes of maintenance calls prevents the development of useful equipment trend data.
- Are we measuring things right? For example, measuring pounds of paper waste or spoilage without identifying the specific source is useless in reducing the causes of waste.

The results of this review may indicate that numerous measurements and/or reports are not needed or are useless in actual process improvement. Conversely, this analysis may also indicate that a whole new series of measurements should be developed that can be used to correct the causes of problems versus measuring the negative effects of poor performance after the fact.

- Complete a machine optimization study in press and bindery to determine production capacity based on current equipment characteristics and use this information to better balance workload and manning estimates. Used in conjunction with improved scheduling and planning software, this information could also improve the ability to run optimized mixes of congressional and agency work.
- Implement existing output production standards in EPD keyboarding and proofreading sections to evaluate and track division performance.
- Incorporate comparisons to industry standards where applicable. Although such comparisons must be carefully chosen, comparisons to some industry benchmarks are applicable, such as some labor-related data, financial data, and material data. As new equipment is added, such as the computer to plate pre-press technology, productivity-related comparisons become more relevant. In addition, without setting stretch goals from industry, significant process improvement is less likely to take place.
- Determine ways to measure press and bindery crew performance, including the performance of management, to identify GPO internal best practices and specific training or performance improvement needs for employees.

Use root cause and statistical analysis to predict and prevent problems rather than only react to them.

The goals of these analyses should be two-fold: identify process or quality-related problems in the in-plant process as soon as possible to prevent labor and materials being wasted on unacceptable products and identify and correct the reason for the problem, not just its symptom. Develop methods or tools to—

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- Consistently obtain accurate signature counts from press to bindery, including standardizing press bundle sizes
 - Minimize “acceptable” waste and spoilage rates
 - Reduce machine makeready and setup times in press and bindery
 - Ensure positive tracking of all pallets and stored materials
 - Eliminate the long storage times of “fill-in” work in bindery
 - Ensure that all production-related information is collected in an accurate and timely manner
 - Identify and correct the most frequent equipment, material, and labor-related causes of poor quality through root cause analysis and the assignment of responsibility for correcting these factors to specific groups or individuals.

Production should also build on its success at identifying material-related causes of web paper breaks and systematically record and track process or quality-related problems, such as unplanned machine downtime to the machine level. Tracking and presenting data at the machine level will assist in smoother shift transfers and increase employee involvement in process control. In addition, documentation of data to this level will help to optimize the improved functionality of the new maintenance Job Order Tracking System. The predictive and preventive maintenance capabilities of the new system will require better machine-specific information to be fully utilized. This approach will have additional benefits:

- Reports will objectively measure cost and performance. When sitting down to talk about performance with an employee, a manager can use the report as an objective third party. Such use can help to ensure fairness and equal treatment of employees by managers.
- Specific information will allow supervisors to know where the problems are so that they can confirm that their chosen course of corrective action is effective and can be followed quickly to resolve problems before costs mount.

Along with these items, production should begin an analysis of the applicability in forecasting the daily volume of congressional products. This analysis should include an analysis of—

- The daily volume of key congressional products, i.e., top ten by volume or frequency
- The daily non-chargeable machine and labor hours.

As enough data are collected, managers should analyze averages and variations against known qualitative factors that correlate to daily congressional workloads, such as recesses, election-related activities, and a “legislatively busy” Congress. Over time,

Production staff should identify whether congressional workload can indeed be forecast within predictable limits or ranges of safety given these qualitative factors. This information is valuable for several reasons:

- As staff leave or retire, this information can be used to better manage further hiring and shift staffing decisions and ultimately reduce the amount of non-chargeable labor.
- These data can be used to assist Production Planning and Control in production management.
- These data can be used by Customer Services and Production Planning to periodically evaluate and revise agency product delivery capabilities and to optimize in-plant product mixes.

In conjunction with statistical analysis techniques, major changes to in-plant processes or capital equipment should be accompanied by an engineering economy study. These studies should include a cost benefit analysis that would include cash flow streams of investment and payback, net present worth analysis, and break-even points for a given project. This analysis would be similar to, but more extensive than the CTP justification presented to the JCP. Such analysis, when properly done, would assist the Production Department to make economically sound decisions and would increase the JCP's confidence in approving additional significant investments.

Regularly document, review, and take corrective action based on equipment and process performance data.

In-plant production should make the collection of equipment-specific performance data as easy and unobtrusive to the actual production process as possible. Many printing operations are finding that improvements to in-plant equipment are actually occurring around the equipment, not directly on it. These improvements involve retrofitting equipment with automatic measuring devices and sensors that automatically feed data into a plant floor management information system of the type discussed in Recommendation 8. Some of the existing in-plant equipment is too old to be easily retrofitted into such a system. But this situation most likely is not the case with the Group 98 web presses, the passport and postal card presses, and much of the binding equipment. This information should be available to the worker and posted at the machine and in the shift foreman's office.

No amount of data collection activities will allow in-plant to improve operations, however, if they are not documented and reviewed for corrective action. As part of each shift change, previous shift performance data and work-in-process information should routinely be reviewed by the oncoming shift and should later be archived. Superintendents should institute weekly quality review sessions with all foremen to address problems in process variation and control. The charter of this review session would be to continually analyze opportunities to eliminate non-value-added costs such as inspection, rework, and

excessive inventories. Results of these sessions should be similarly documented and follow-ups taken by superintendents to ensure corrective actions were taken.

Finding 8. Existing information management systems fail to provide the types of information needed for accurate process planning, control, and improvement.

GPO in-plant information systems and the information that they generate were analyzed as part of the functional and process-focused analysis described previously. Because of the importance of accurate information in effective planning, execution, and management oversight, analysis of production-related information and its use made up nearly one-third of the entire in-plant analysis.

The PEP system fails to provide accurate and integrated information, thus limiting effective production planning and management.

The failure of current in-plant information technologies to provide accurate and dependable management information is best evidenced by PEP, the existing production management system. Department superintendents and foremen from all areas of in-plant commented that data provided by the system are inaccurate. When given a choice between using the PEP system or a paper job jacket to determine job attributes and status, all interviewees said that reviewing the paper job jacket would be the method of choice. In the absence of a paper job jacket, the telephone is often used to track a job rather than relying on the information contained in the PEP system. The single most significant and frequent problem with respect to in-plant information is the difficulty in accurately determining the status and location of any particular job. Several factors contribute to this difficulty:

- Once the initial jacket information is entered into the system in Production Planning and Scheduling, the PEP system has no automatic capability to display changes to the way the original input is made, e.g., a night shift change to PEP information originally entered by the day shift. This situation can result in different information for the same job being contained on the paper jacket, which stays with the job, versus the electronic PEP file.
- Changes may be required to the paper jacket as it progresses through the production process. These changes may be the result of additional customer input or process-related modifications. Any changes to the paper job jacket are supposed to be reflected by a corresponding change in the PEP system, but managers admit that this is not a foolproof process.
- Short-run production processes, such as DocuTech reproduction, may bypass and/or outpace existing jacket tracking procedures and technologies altogether. In addition, some agency customers may call GPO contacts outside of Customer Services or Production Planning for printing services, also effectively bypassing the PEP system until the job is invoiced.

- The system does not allow for tracking of incremental job completion. For example, as a job of 20,000 units is run in the pressroom, the system cannot display the percentage complete at a point in time. Production Planning, as well as downstream functions, must either call or physically go to the pressroom to determine job progress. In addition, responsibility for the job passes to the next step in the production process if only one signature is delivered to that next step. Using the previous example, when the first signature or bundle arrives in the bindery from the pressroom, any responsibility for the delinquency of that entire job is assigned to the bindery within the PEP system.
- With no user-friendly graphical interfaces or pull-down menus, navigation between screens is cumbersome and there is no relational information capability. For example, the Scheduling Committee in Production Planning and Scheduling must re-key jacket information into the system once an agency approves the initial job estimate. The bindery cannot see the in-plant date on its PEP screen; it only sees the delivery date. The job quantity is not included in the bindery screen data and when the bindery shows that a job is passed to the Transportation or Delivery Sections, the date of receipt by shipping is not input automatically. This latter situation contributes to not knowing exactly where the job is when bindery shows completion.

The PEP system therefore contributes to a confusing production environment because information contained in the system is not consistent with actual shop floor conditions.

The Production Department suffers from limitations in mainframe systems in other areas as well.

The mainframe environments of the Materials Management Service (MMPCS II) and JOTS applications also suffer from many of the deficiencies of PEP. For example, MMPCS II, used to track and manage paper inventories, is only partially linked to the PEP system. Under the current configuration, it only receives and replies to requests for allocating paper resources once a jacket number is assigned.

Due in part to the functional separation between Production and MMS information systems, discontinued equipment and materials are not automatically updated in the MMPCS II system. This leads to the MMPCS II system automatically reordering the discontinued items when reorder points are reached. This material must then go through the surplus material process or alternative uses for the material must be found.

MMPCS II does not provide graphical user interfaces or graphical inventory trend information. It is prone to “locking-up” when used on Windows interface terminals.

Because of the importance of accurate maintenance information, and given the added criticality of this information based on the age of much of the in-plant equipment, JOTS in particular was closely analyzed. Although the Maintenance Department is not organizationally part of the Production Department, development of JOTS provides

valuable insight into an additional drawback of large, mainframe-based applications: they are expensive to develop and maintain. The internal development of the JOTS application was halted by the Maintenance Department after several years of work and expenditures of \$1.38 million dollars yielded a system with a fraction of the desired functionality. As noted in Finding 9, the current system does not contain machine maintenance history, maintenance schedules, or any predictive maintenance capabilities. These capabilities will, however, be available on the COTS maintenance application that the Maintenance Department has acquired for slightly over \$4,000.00, plus approximately the costs of paying a person for programming in 1 year.

Recommendation 8. The Production Department needs to improve information management capabilities in next-generation systems.

As noted in our high-level analysis of information technology, several factors contribute to the lack of required functionality of both production information systems and other information systems found throughout the organization:

- Lack of planning
- Lack of a structured application development methodology
- Lack of systems integration.

To prevent these factors from affecting improvements in future in-plant information systems, any development or acquisition effort must not be pursued as a series of separate, disjointed projects. Instead, the goals and objectives of the strategic manufacturing plan, discussed in Recommendation 6, should define the general information technology requirements necessary to meet the needs of in-plant operations. These general requirements should then be further defined in an In-plant Information Technology Plan. The development of this plan and its proposed elements are the focus of this recommendation.

Develop and implement an In-plant Technology Plan with the assistance of an outside facilitator.

Because this structured approach is new to many in the Production Department, we recommend engaging an outside facilitator who can help in-plant management develop and implement the In-plant Information Technology Plan. The role of the facilitator would be to—

- Assist in specification development
- Assist in resolving systems integration issues
- Assist in analysis of COTS packages
- Assist in coordinating internal planning and development
- Assist in the briefing management and facilitating meetings.

Establish an organized, systematic approach to technology plan development, including interface and communication with other GPO organizations

Once the facilitator is in place, the following steps should be taken:

Step 1. Form an In-plant Technology Committee. The objectives of the Committee should include—

- Phased replacement of the PEPS system
- Linkage of the new job ordering and tracking system to materials, financial, and time and attendance systems
- Retrofitting of in-plant equipment to support real-time process measurement, data collection, and feedback capabilities that would link to the new job ordering and tracking system.

Taking the replacement-focused approach to the PEP system should allow Committee members to “think out of the box” and to develop a robust list of functional requirements for a new job order and tracking system.

Based on interviews with many current PEP system users, the new integrated system should include—

- Incremental job completion and tracking capability.
- Electronic job jackets, with the capability of printing hard copies anywhere in the plant, via in-plant intranet.
- Ability to use light pen or other peripheral devices for bar code updating of job jackets to the machine level.
- Automatic identification of overdue jobs based on the original schedule, including notification to the Customer Service Representative. The system should also be able to flag variances in planned labor and machine time, material usage, or total cost. Paper usage could be tracked to include statistics on actual roll yield, roll to press matching, relationships between speed and breakage, and root causes of quality problems and excessive costs. In combination with the just-in-time inventory capabilities discussed in Recommendation 11, this information could be used to decrease excessive paper inventory, ordering costs, waste, and spoilage.
- Rule-based control system to optimize workflow by indicating to the scheduler production availability in each department. Load could be leveled while increasing equipment utilization. Planning, Pre-press, Press, and Bindery modules should be linked to the master scheduler to optimize cross functional flow.
- Graphical user interfaces or pull-down menus.

- Customizable report capability. This capability, when matched with the more systematic approaches to production management discussed earlier, would allow specific problems to be analyzed to the machine or even the worker level.

All of this real-time information should be made available to the worker at the machine level, and its use as a primary tool for process management should be integrated into the existing in-plant culture. Historical data can also highlight the need for training on machine operations if some problems are deemed recurrent. Summary information can provide management performance statistics for presses, shifts, runs, and even crews. This level of technology can be of tremendous help to GPO's efforts to provide the best possible service to its customers.

During the replacement analysis and development phase, the In-plant Technology Committee should use lessons learned from other government agencies that have

learn from the successful internal development of the new Maintenance JOTS system. The JOTS cost module will give averages and variances of machine performance and

pull-down menu screens. In addition, GPO should bring in industry representatives who have

at one time thought that they could not afford these types of technology, and who did not have dedicated internal information resource management staffs, now say that they could

replacement to lessen negative impacts on in-plant production.

Step 3.

would provide a comprehensive, automated time and attendance capability integrated with the production management system. Information from this module should feed directly

should provide data at the facility, section, and machine level that accurately reflects reporting and chargeable hours.

Step 4. The In-plant Technology Committee should also identify in-plant equipment that

sensing devices. Several in-plant management systems currently on the market use input from these devices to effectively measure and modify material and work flow schedules.

With the help of OIRM, the Committee should develop a systems migration and phase-in schedule to effectively transfer data from existing mainframe systems into the

ensure that the migration efforts do not adversely affect in-plant operations during the migration phase. Once the decision of the new system(s) is made, the In-plant Technology

Debbi Toth, "Managing Data to Manage Success," *Graphic Arts Monthly*,

contract. Training should also include system documentation and a warranty and troubleshooting agreement.

Finding 9. Paper-based production information is poorly structured, disseminated, and controlled.

As noted in Finding 7, the paper job jacket is one of the most important pieces of information in the entire production operation. Because of this dependence on paper and the lack of confidence many personnel expressed in information contained in the PEP system, the In-plant Production Team analyzed other paper-based reports, datasheets, and production-related information. The focus of this analysis was to determine where and how well these reports and other hard copy information were used as tools to plan, control, and improve in-plant operations.

Paper-based production information was assessed from the standpoints of—

- Compilation
- Content and use
- Control.

Compilation: Inputting of data is too irregular or late to be accurate.

The pressroom does not use PROBE, the GPO-wide time and attendance system, for machine and job tracking. Instead, pressmen put their time on individual press books and then transfer both labor and machine time at the end of each shift to paper timesheets. These timesheets are in turn forwarded to the Comptroller's Office for processing. This time lapse between running the job and recording job time creates the potential for inaccurate machine utilization and time charging data by averaging or smoothing labor or machine hours over jobs of several different sizes.

Job data are input into the PEP system at the end of each shift by either a shift foreman or a clerk. This information in turn is used to compile several important management reports including—

- Summary of Work Report
- Daily Report of Press Loading
- Bindery Workload Report.

If there is not time to complete the data entry, it is left unfinished, resulting in inaccurate information. The effects of these lapses in manual inputting of information can be significant and contribute to the lack of confidence in information contained in both PEP and hard copy management reports. For example, the bindery shows large amounts of “delinquent” work. In some cases, this delinquency is attributable to the programming logic of the PEP system as discussed in Finding 7 and to other systemic effects, such as changes in delivery schedules that interrupt planned work. In other cases, however,

inaccurate data are the result of delays in manually updating PEP system data. For example, the March 9, 1998, Bindery Workload Report shows several large Social Security Administration jobs (Jacket Numbers 171–168, 177–163, 177–148, and 177–165) as delinquent. According to Planning and Scheduling, however, these jobs were completed and invoiced in late 1997.

The Quality Audit and Waste Reports are issued monthly. In addition to the lack of pertinent information contained in them, monthly issuance makes it impossible to detect and correct daily process-related problems.

Content and Use: Information does not help employees to continuously improve work processes.

While in-plant production has numerous production and “quality-related” information, it is not very useful in improving operations. For example, the January 1998 Paper Waste Report includes the percent of total paper issued to GPO in-plant, excluding outside bindery, by rolls and sheets. But the waste generated is listed as a single line item. There is no way to trace the source of waste to a particular area of the plant, much less to a specific machine or process. The 3-month moving average of waste paper indicates an average annual waste of approximately 37 percent, equating to approximately \$13 million of annual waste.

The In-plant Product Quality Audit Report consists of a series of graphs using a 4-month moving average. There are dramatic points of inflection on numerous graphs that indicate either changes in process control or sampling variation. There is no explanation of the causes of this performance within the report. In addition, audited data indicate that defect rates were significantly above established limits for several periods of time. Again, there was no explanation of the causes of this performance.

As discussed in Finding 4, shortages of planned product between press and bindery are a persistent and expensive problem, resulting in a “back to press.” Spoilage Reports are designed to report back to presses, but managers admit they are not routinely used. For those reports that are issued, managers admit that they are not used to actually determine the root cause of the problem but rather are used to notify “upstream” functions that a shortage has been detected.

On the plant floor, workers do not have documented procedures to supplement their knowledge. When asked about information, such as job aids and work instructions, the primary information used was the job jacket or Offset Order, neither of which is useful in helping workers improve the way they perform tasks. In addition, there are currently no troubleshooting guides in place at the equipment level, although the pressroom says that troubleshooting guides are planned. Production Planning and Copy Preparation were the only sections that indicated that they gave workers operational-type reports used to manage and assess work. Reports given to workers in other sections were limited to personnel-related information such as leave and hazardous substances communication

data. The GPO Printing Attributes Book defines job-specific attributes such as paper size and printing registration, but there is no documented quality plan for any in-plant division.

There is a lack of documented machine maintenance history, maintenance schedules, and predictive maintenance capabilities. Without equipment-specific maintenance histories, troubleshooting and repairs become more expensive and time-consuming. In addition, machine failure rates and causes cannot be used to predict breakdowns before they happen, contributing to a costly “run to failure” approach. Back-up procedures regarding process problems were consistently defined by workers within the context of overtime

documented equipment contingency plans.

\$2 million installation of the Group 98 web presses was only a single-line document that read “Install web presses.” It included no line item estimates or work breakdowns of various installation sub-operations for different crafts.

Control: There is a lack of documentation standardization and revision control.

Our review of current documentation in several divisions showed a lack of standard formats, revision control, and a single source for comprehensive procedural information for a given functional area. Floor audits revealed outdated procedures included in the same Policies and Procedures Book with updated material. Updates are sometimes provided in looseleaf form and may be undated, or are handwritten into the manuals.

This situation is made worse by the fact that in some departments, update notices are randomly posted on bulletin boards, and employees are held responsible for updating the material.⁴⁶ This lack of accurate and controlled documentation is particularly important when one considers that much of the intellectual capital of GPO is contained in people’s heads. When people leave or are absent, that information stays with them. This was

of a shipped order could not get the information in the Delivery Section because the person who knew the answer was out that day.

for improvement. For example, three primary reports used by Production Planning and Scheduling and plant floor operations are Summary of Work Report, Daily Report of

particular uses these reports to determine the status of current jobs and to plan future work. However, information in the Summary of Work Report cannot be used to compare

Operation Report for the following reasons:

⁴⁶ This is the accepted procedure for strippers in Copy Preparation to update their procedure books.

- The Summary of Work Report is a daily report that lists items relative to days delinquent and non-delinquent.
- The Daily Report of Press Loading is also a daily report, but tracks press loading in ten-day increments by hours, impressions, and days.
- The Bindery Workload by Operation Report gives detail by machine type and summarizes work by total number of jobs, total number of jobs delinquent, and percentage of jobs delinquent.
- Two other critical reports, the Production Manager's List and the List of Urgent Work are more schedule-specific, but also cannot easily be used to reference against the other reports.

Recommendation 9. GPO should evaluate information needs and ensure that consistent and accurate information reaches the right users at the right time and facilitates proactive management of the production process.

GPO in-plant currently generates much of the data that it needs to effectively and efficiently plan, control, and improve its in-plant operations. Data contained on billing jackets, printing and binding jackets, production control cards, offset data, and press and machine reports contain valuable information that could be used to compare numerous operational functions, machines, and workers. But in paper format, these comparisons are labor intensive and often impossible. Many commercial printers are realizing that it is not possible to run a high-quality printing business with low-quality information, such as stacks of paper records, bills, and handwritten notes. They are replacing paper-based documents with electronic job tickets and relational databases that can display, compare, and generate all the reports that they need for order entry, planning, tracking, and invoicing. In conjunction with Recommendation 8, GPO should develop a plan to replace much of its paper-based documentation it currently uses with electronic forms. As discussed previously, many of these systems are relatively inexpensive and are significantly easier to maintain and modify than GPO's current mainframe technology. In addition, the reports that they create are much easier to read, can be generated in real time, and can be printed as a paper copy and used at the machine level.

Compilation: Identify opportunities to automate both initial data inputting/collection and updating, using relational databases and optical character (bar coding) technologies.

Production Planning and Scheduling staff are currently analyzing bar coding technologies for use in an upgraded PROBE system, and the bindery is using bar coding to mark and locate stored work. This technology should be applied throughout the plant to lessen errors induced in the manual updating, handwritten notes, and xeroxed copies for changes to job jackets and other in-plant documentation. For those data collection activities that

are not easily automated, managers and employees should be held accountable for errors or delays to in-process work caused by inattention to documentation-related activities.

Quality audit and in-plant performance data should be sampled, compiled, and provided daily to in-plant managers and employees so that they can effectively control and adjust the production process to ensure that it remains within defined control limits. Machine-specific information should be collected and retained at the machine to allow operators and managers to assess machine performance on a by-job basis.

Content and Use: Ensure that information structure and content can be used to actually control and improve the production process.

Information should be used to control and improve the production process rather than to provide reams of batch-generated reports that go largely unread and are not effectively designed to highlight problems. Several steps need to be taken including—

- Revise Paper Waste and Quality Audit Reports to trace the causes of waste and spoilage to specific sources at the machine level. These reports should then be used by the responsible crew and supervisor to identify and correct the specific causes for excessive material waste.
- Ensure that existing quality-related and process integrity reports, such as the Spoilage and Shift Status Reports, are routinely completed, retained, and analyzed to improve in-plant processes. In addition, these reports should be revised to ensure that the information contained in them is actually useful in determining the root cause of in-process defects or unplanned losses in machine or labor time and excessive production costs.
- Rationalize the content of information in the primary management reports, such as the Summary of Work Report, Daily Report of Press Loading, Bindery Workload by Operation Report, Production Manager's List, and List of Urgent Work, so that the units of measurement, i.e., days of delay and units of production, are consistent across the reports and are structured in a manner that can be used to manage and improve production processes. In addition, the Production Department should use the expertise of QCTD to draft a section-specific quality plan for use by in-plant staff. Similar to plans drafted for government contractors, this plan would supplement existing attribute-specific documentation and would provide process-focused procedures and work instructions to assist employees in maintaining positive process control.
- The Production Department should identify means to have valuable production-related information systematically and automatically provided to the Production Manager's Office and to the appropriate functional managers. Production management should meet with the Comptroller's office to establish the necessary relationships, reporting channels, and report formats. For example, jacket cost summary information is available that provides a detailed presentation of jacket number (by product type, such as congressional documents), cost, machine hours,

machine class, actual impressions, and total copies. This information should be made routinely available to plant floor workers and supervisors. If this information recommendation, specific, machine-level analysis could be done.

Control: Develop documentation standards for all polices, procedures, and work

The purpose of these standards would be to improve the way paper-based information is used as a tool to improve productivity and process control. These standards should be

ways of presenting information, including the incorporation of graphics, and have standard fonts and page structure. In addition, a revision and copy-control procedure

contains only the most recent instructions and that superseded material is replaced in a timely manner. Supervisors should conduct periodic audits of procedure books to verify

In addition, all Production divisions need to work together to revise procedures for tracking job delinquencies and provide this information in a single, integrated report made

systematically track and review this reporting for accuracy to be sure that jobs are not lost or forgotten in the system, especially profitable agency work that may be put on hold to

Finding 10. Production lacks consistent methods to properly select, train, promote, a retain personnel in critical skill areas.

As part of the analysis of in-plant production operations, issues were identified

term demands of in-plant printing capabilities, particularly for those in critical skill areas such as electronic pre-press (including direct-to-plate), information systems, application development, and supervisory and skilled-trade succession. GPO's in-plant production operation has undergone significant changes in the past 5 years that have influenced personnel management in the production department:

- Production personnel head-count has decreased significantly from over 2,300 in 1993 to less than 1,700 in 1998 (down 26 percent), accompanied by a decline in chargeable labor hours from 1.25 million to 789,000 (down 37 percent).
- The Production Department has purchased new information technology systems to provide data and information over the Internet through *GPO Access*.
- The Production Department has purchased new technologies to modernize the printing process, including direct-to-plate pre-press equipment.

- Significant proportions of the workforce in most Production Divisions are becoming retirement eligible (16 percent overall).

Technological changes and limitations on hiring new employees, combined with an aging workforce, are posing a potentially serious threat to maintaining the necessary in-plant production capability, due in part to a lack of proactive management attention.

There are no fully documented contingency plans to ensure that staff with critical skills are retained as positions become vacant from retirements and/or normal attrition.

This situation is particularly true for technology-related jobs. Exhibit 4-12 is a summary of the percentage of personnel eligible for regular retirement.

**Exhibit 4-12
Percentage of GPO Personnel Eligible for Regular Retirement**

Office of the Production Manager	20%
Electronic Systems	7%
Graphic Systems	17%
Electronic Photocomposition	27%
Press	17%
Binding	20%
Federal Government Overall	11%

Once GPO figures on early retirement eligibility are considered, these numbers would approach or exceed the overall GPO numbers of 60 percent of total staff eligible for early or regular retirement by the end of 1998. The overall Federal Government average for retirement eligible personnel is 11 percent.⁴⁷ With the significant proportion of Production Department staff eligible for retirement, large numbers of positions could be left vacant or without adequately trained personnel. GPO needs to downsize intelligently without affecting capabilities.

The acquisition of new technologies has been made without fully developed plans to assess the effects on worker knowledge, skills, job classification, and reassignment.

Although GPO is acquiring new technologies that will directly influence and displace workers within the Production Department, there are no fully developed documented plans to assess the impact of these technologies on employee skills and job descriptions. The most recent example of this finding is the procurement of CTP technology that could affect as many as 171 staff in the Copy Preparation, Negative, and Plate sections. The project justification states that “Labor requirements in the three sections of the Production Department are expected to reduce approximately 66 and implementing the new technology. The reduction in labor will be accomplished

⁴⁷

U.S. Office of Personnel Management, 1997 Edition.

through normal attrition, training, and voluntary reassignments.” The project justification further states that an estimated minimum of 20 percent staffing reduction (34 staff) is expected.

GPO estimates that 133 of the affected staff will be eligible for early or optional retirement, and that “those employees who do not choose to retire will be retrained and reassigned as necessary.” This limited analysis in no way identifies—

- Specific skills that need to be retained
- Needs for workers in other production divisions
- Specifications required for retraining.

While the installation of CTP is the type of project that GPO should pursue to improve efficiency and reduce operating costs, impacts to personnel utilization and long-term staffing impacts should not be neglected.

Functional knowledge is primarily gained through on-the-job training in an apprentice-journeyman relationship, which does not encourage changes to status quo work methods.

OJT is a valuable learning tool for workers, but it should not be the only method of learning. Effective OJT is supplemented by other formal training, and the employee is provided with documentation as a reference during the learning process.

Exclusive reliance on OJT is risky for two essential reasons: First, the journeyman may not teach the apprentice properly. Incorrect techniques and habits may unwittingly be passed on. Second, and more important, in a rapidly changing industry, the teachers need to learn new technologies and incorporate new aspects of the craft into what they demonstrate to less-experienced or less-knowledgeable workers. Absent this learning channel, GPO production methods could become inefficient and outdated at the worker level.

Formal training by printing industry experts and the adoption of industry best practices are not encouraged, resulting in out-of-date management practices.

As in many organizations that experience downsizing, GPO’s training budget was reduced along with general reductions in agency expenses. GPO does not gain outside printing industry knowledge by regularly inviting experts to speak or do demonstrations on a regular basis. Attendance at industry seminars and conferences and formal training programs are no longer supported.

GPO no longer uses the primary tool (the printing specialist test) to evaluate aptitude for increased technical responsibility. According to interviews with managers, the printing specialist test has been out of use for a number of years.

Review of the May 1997 GPO *Training Catalog* indicates that the production and skilled crafts-related training courses offered by the Training and Career Development Branch are not adequate to meet the future demand. The limitations of the current offerings are not conducive to cross-functional training, refresher training, or new skills development.

Supervisory Training

No courses are offered to assist managers and supervisors to improve their quality or technical analysis capabilities that are key to a manufacturing operation. Additionally, under the current training eligibility requirements, an individual must already be a manager or supervisor prior to taking such courses. There are courses that are well suited to provide pre-supervisory training to non-managers; however, non-managers are ineligible for management courses.

Craft and Trade Training

Training to supplement apprentice training and OJT does not cover all skill areas. With the exception of offset press training, no other classroom or computer-based-training programs are offered for skilled trades (e.g., binding and electronic pre-press). Only offset press training is offered to pressmen. No training courses are offered for letter-press, postal card, passport, or camera/negative-related equipment. Similarly, there are no courses in total quality management (TQM), basic maintenance and troubleshooting, safety and health, or industrial hygiene (other than hand safety).

Technology Training

Technology training is limited to personal computer skills and applications training, and basic training in technology usage. Current course offerings do not provide training to assist workers to adapt to important technology-based transformations, such as training new operators, programmers, and applications developers. For example, all major printers, including GPO, are transitioning from making a reproducible for printing to online document development and CTP printing technologies. Databases now drive printing technologies, and this development requires sharp programming and database management skills.

Recommendation 10. Production must take aggressive action to adequately recruit, train, and retain staff in critical skill areas.

The Production Department, in concert with GPO Training and Career Development staff and the Personnel Office, must take positive steps to ensure that in-plant personnel are adequately trained to meet demands for in-house printing and information technology utilization. The following recommendations are proposed.

Develop tailored operator-training curricula for each production area that include a mix of learning approaches.

Operator training should take several forms in addition to traditional apprenticeship operations and needs. Structured OJT could prove to be very effective but should be based on specific course objectives, given by qualified instructors. Additionally, classroom available for all in-plant production operations.

Managers report that training can take a worker away from the job for anywhere from a decrease, or at least break up, the time that training takes away from the job, modular courses should be developed that offer focused segments of training on specific topics. at a lower price for their operations.

absenteeism and turnover rates. If employees believe they have the potential to improve and grow within GPO, they are likely to be more loyal and more productive than they are

Develop personnel redeployment and contingency plans to address changes in the production process resulting from the introduction of new equipment and processes.

plans that provide clear paths for training, managing, moving, or promoting employees affected by new processes and equipment. These plans should include addressing the

include input from departments other than Production so that redeployment opportunities can be identified. Plans must also assure that retraining requirements are not overlooked

Increase opportunities for membership in industry associations, attendance at industry

Production employees should be encouraged to learn about their trade and to share GPO production experience with the printing industry through contact with other professionals

industry trends, emerging new technologies, and methods to improve operational performance of the production operation. These opportunities should be made available

influence on plant-level production operations.

Similarly, Production staff at the foreman level and above should be encouraged to attend and make presentations at industry trade shows and conferences. The benefits of this type of participation include—

- Hands-on exposure to new equipment, technologies, and processes
- Opportunity to share lessons learned in the GPO production operation with the industry at large
- Learning from the experiences of others in the industry
- Encouragement of pride of profession and improvement in performance
- Experience with the best practices that could be applied to GPO production operations.

Many organizations offer options for such outside exposure. One option, for example, could be a policy of support for membership in one professional organization and attendance at one industry conference per year, for conference fees and travel expenses not exceeding a certain amount. Production management should collectively decide on a policy and develop a list of professional associations that employees can consider joining. Printing professional associations include—

- National Association of Printers and Lithographers (NAPL)
 - Printing Industries of America (PIA)
 - Web Offset Association
 - International Thermographers Association (ITA)
- Binding Industries of America (BIA)
- American Printing History Association (APHA).

Employee attendance at industry conferences and trade shows can benefit not just the employee who attends but the rest of the craft area, as well. Managers can maximize the value of supporting attendance at industry conferences by asking employees to report on what they learned to an all-hands meeting or a team forum. A small section “library” can be established for association and conference materials, trade publications, and employee reports on their experiences when such reports are written.

Finding 11. GPO’s large diverse paper inventories require large amounts of warehouse space, multiple suppliers, and a complex paper procurement process.

Inventory management is one of the key links in the production process, and paper inventory management in particular is critical to the products and services offered by GPO. Methods and practices used to manage large inventories of paper have a direct impact on the cost and quality of the products produced in the Production Department. The MMS manages the paper procurement and inventory management process for GPO, primarily as a service to the Production Department.

GPO maintains on average a 3- to 4-month supply of high turnover paper on hand or on kept on hand is based on historical knowledge and concern that if a paper shortage were paper and supplies and premature cash outlays to purchase paper create cost disadvantages to GPO.

provide the lowest cost procurement option.

Congressional Record and The remainder of paper is purchased using quarterly contracts. GPO must coordinate the specifications and award organized. However it is unnecessarily burdensome and labor intensive because the of the current quarter's contract.

Current contracts impose minimum order sizes. When a small amount of a particular paper size or color not frequently utilized is needed, a full lot must be ordered based on the contract schedule. Excess paper is then held in storage without a specified need.

Most of the over 350 paper items are kept in stock to meet potential rather than actual demand. This practice is due in part to the contractual procurement lead times and lot size requirements. For example, as of March 9, 1998, of a combined stock of 62,136,797 pounds, only 105 items representing 6,513,521 pounds had been obligated for specific uses or print jobs (10 percent). While it is understood these paper obligations change daily, this example illustrates the magnitude of the problem.

A primary reason given for the use of quarterly contracts to purchase paper is that GPO (and merchants) can take advantage of paper price fluctuations. There have been significant paper price fluctuations from quarter to quarter over the past 3 years. However, when taken in the aggregate, only minor savings have been realized, as shown in Exhibit 4-13.

Exhibit 4-13
Quarterly Paper Contract Price Changes

Contract Period	Price Difference from Previous Contract Period (\$)	Percentage Difference from Previous Contract Period
January 1998	(8,321.60)	-0.214

October 1997	280,348.70	+7.250
July 1997	249,310.40	+7.096
April 1997	40,266.86	+1.196
January 1997	(616,009.60)	-16.590
October 1996	(167,499.30)	-4.141
July 1996	367,555.20	+12.840
April 1996	(1,007,642.90)	-23.670
January 1996	(1,091,963.00)	-18.210
October 1995	(452,893.40)	-5.574
July 1995	(234,560.10)	-3.568
April 1995	1,080,988.20	+17.049
January 1995	1,523,111.40	+29.434
Net Savings	(37,309.14)	

The effort and manpower cost used to procure paper on a quarterly basis significantly outweigh the overall net \$37,309 savings over the past 3 years. Accordingly, alternatives should be evaluated to reduce both the procurement and holding costs associated with paper inventory management.

Paper inventory management, procurement, and storage are all done by separate organizational elements adding to management layers and ordering costs.

As previously noted, MMS procures and stores paper, but the Paper and Materials Control Section of the Production Department sets the inventory levels, reorder points, and paper contract quantities. This function is accomplished primarily by one individual, operating from many years of experience. The methods used to establish the various paper levels are based on historical knowledge, supported by an analysis of the previous quarter and the average quarterly usage over the previous 15 months (generated by the MMPCS II system). There is also a working paper inventory maintained by the Press Division to accommodate paper needs over a period of time.

This approach has ensured that adequate paper inventories have been available, even during paper shortages in past years. However, paper stores may be maintained at higher levels than actually needed to meet demand. Demand for a particular paper type can literally change overnight, and the primary means used to combat this concern is to have adequate variety and quantities of paper in stock. This situation is caused by the current procurement structure and associated lead times needed to procure paper. While management may be more comfortable with a larger safety stock, this means maintaining excess warehouse space and higher-than-needed cash outlays to procure and store the paper.

Recommendation 11. GPO should improve inventory management practices by reducing ordering and carrying costs.

Management can reduce operating costs in a number of areas including warehouse space, costs associated with procuring materials, and costs associated with disposing of old,

unused materials. While the value of the paper procured and maintained is only a portion of the total amount of materials procured each year, it is the largest volume material maintained in GPO inventory. There are residual benefits from analyzing the functions and impacts associated with material procurement and storage by identifying other areas of the operation needing improvement to accommodate the changes in the front-end supply line. The recommendations below are focused on paper inventory, but the logic behind them applies to all materials procured and stored by GPO.

Establish strategic partnerships with a few mills and/or merchants to move toward a modified just-in-time (JIT) inventory system that satisfies Title 44 and FAR specifications.

The volume of paper procured by GPO in FY 97 was 38.2 million pounds and over 2.2 billion sheets. While this may not be the largest amount in the paper industry, it does make GPO a sizable customer that has some negotiating power with its suppliers. GPO should leverage its purchasing power to negotiate reduced order-to-delivery times with a few mills and/or merchants. Current order times of 30–40 days require GPO to maintain a larger-than-needed safety stock. GPO can also include incentives and associated

suppliers that are willing to support GPO logistics needs, rewarding those suppliers that

This approach to strategic supply chain management is a vanguard practice in cost reduction in the manufacturing industry at large. It is quickly becoming a key practice in

noted in an industry trade publication article, "Distribution is becoming a value-added service that involves forecasting, stocking, timely delivery and pricing considerations,

GPO should identify opportunities to streamline the paper procurement process.

In recent years, MMS has been operating at a loss (\$4 million each year), which indicates are not adequate to cover the cost of the operation. Therefore, strategies for cost reduction should be evaluated.

suppliers. Contracts should include clauses that allow paper prices to be renegotiated on a periodic basis or when paper prices change (up or down) by more than an agreed upon

take advantage of significant price fluctuations. Clauses that encourage short delivery times should also be included through the use of incentives or scaled pricing. More

⁴⁸ William C. Lampartner, "Paper, Paper, Everywhere," *American Printer*, October 1997.

importantly, GPO can reduce the amount of time spent on negotiating contracts and establishing contract specifications and bidder lists and devote more time to effectively supporting the in-plant production operation by reducing the cost of paper procurement and management.

GPO should streamline and use the open market purchases process for those paper items that are infrequently used. In doing so, reductions in inventory, existing contract size, specifications, and scope can be made to more effectively manage a smaller paper inventory. There is also the potential that price advantages can be gained on the open market. One example shows that the use of an open market purchase to supplement the inventory for a large print job actually resulted in procuring paper at a price 12 percent below the price of the paper in inventory, with an order to delivery time of 2 weeks.⁴⁹

GPO should coordinate with the Joint Committee on Printing to establish broader application of commercial grade paper standards and to institute more flexible procurement practices.

This recommendation, and the previous two could not be effectively accomplished without the support of the JCP. The JCP is a key player in establishing paper procurement, setting quality specifications and requirements, and approving the type and size of contracts awarded by GPO. GPO should coordinate with JCP to establish a working group to evaluate mechanisms to streamline the procurement process. In addition to evaluating procurement practices and methods described above, GPO should evaluate the practicability of using more flexible paper standards than is currently the case to allow GPO to purchase COTS grade colors and papers.

This approach could be applied to all paper types currently being managed by GPO, but could be tried in pilot programs on infrequently used, low-volume, specialty paper types to demonstrate the efficacy of the approach. The potential exists to reduce procurement costs by purchasing directly from the market, minimizing the need for a cumbersome specification development and procurement process, and by reducing costs by buying commercially available papers.

Based on JIT capabilities, GPO should (re)evaluate the potential to consolidate or eliminate warehouse space.

MMS currently maintains 12–13 million pounds of paper on hand or on order, which

Exhibit 4-14 presents the results of analysis of GPO records compared with the Printing Industry of America benchmark ratios.

⁴⁹

market unit price .3588.

These statistics indicate that GPO maintains four to five times the amount of paper inventory as the commercial industry. Even taking into consideration the unique nature of the GPO business, relationships with Congress, and the requirement to meet almost any demand presented, GPO still has room to improve.

Exhibit 4-14
Inventory Turnover

	GPO 1998 to date (all paper)	GPO 1997 (all paper)	All Printing Firms Over \$80 M in Sales	Commercial and Advertising Firms	Magazine and Periodical Firms
Average Paper Inventory Turnover Per Year	2.41	2.61	10.72	14.97	9.73
Paper Number of Days Supply On Hand	151	140	34	24	38

GPO should strive to achieve a 50 percent reduction in paper inventory, thereby doubling the turnover. Of the 12 million pounds of paper maintained on hand, 6 million pounds is stored at Springbelt at any given time, with the remainder stored in Building 4 and the main GPO building basement. By meeting the 50 percent reduction in inventory, GPO could effectively eliminate the need for the Springbelt warehouse and achieve \$1 million to \$1.5 million in savings annually.

Production and Materials Management should use lessons learned about reengineering efforts from other government agencies, such as the Air Force Logistic System and other Department of Defense units logistics, that are evaluating similar contractual streamlining and inventory management changes.

Finding 12. In-Plant Production has operated at a financial deficit during the period FY 93 to FY 96, earning a profit in FY 97.

The in-plant production operation did not generate sufficient revenue to cover costs over the period FY 93 to 96, turning a profit of \$8.7 million in FY 97. Revenue has been slightly declining from \$214.4 million in 1993 to \$202.9 million in 1997 (down 5 percent), with a low of \$195.8 million in 1996. The profit for FY 97 can primarily be attributed to a series of 10 price increases for various elements in the production process, reduction in personnel expenses due to staff attrition, and lower supplies and materials expenses. Exhibit 4-15 is a summary of in-plant financial indicators illustrating unfavorable trends over the past 5 years.

Exhibit 4-15
In-Plant Financial Indicators

Indicator	FY 96–FY 97	FY 93–FY 96	5-Year Trend*
Total Revenue	Up 3.6%	Down 8.6%	-/+
Total Direct Expenses	Down 5.7%	Down 11.2%	+
Operating Margin	Up 4.5%	Up 5.1%	+
Net Income	Profit \$8.7 M	Loss each year	-
Cost Allocations (Overhead)	Down 2.5%	Down 8.2%	+
Cost Allocation/Full Time Equivalent	Up 4.2%	Up 18.9%	-
Chargeable Labor Hours	Down 7.2%	Down 32.4%	-

Indicator	FY 96–FY 97	FY 93–FY 96	5-Year Trend*
Chargeable Machine Hours	Down 10.5%	Down 38.3%	-
Employees on Board	Down 6.4%	Down 22.8%	+/-
Actual Hours Worked	Down 6.9%	Down 25%	-
Overtime Hours	Down 30.6%	Down 49.4%	+/-
Overtime Per Employee	Down 25.5%	Down 35.8%	+/-
Total Hours Worked Per Employee	Down 1.6%	Down 8%	-
Average Revenue per Chargeable Hour	Up 12.1%	Up 36.5%	+
Compensation Per Employee	Up 22.1%	Up 9.8%	N/A

* A positive sign indicates a favorable trend; a negative indicates an unfavorable change.

The revenue generated by just three of the eight Production-related areas covered operating costs in FY 97.

Five areas covered operating costs at the margin (before overhead cost allocations). Overall, in-plant production had a profit of \$8.7 million for FY 97. Exhibit 4-16 provides a breakdown of each production division's profit and loss for 1997.

**Exhibit 4-16
1997 In-Plant Production-Related Finances⁵⁰**

Division	Revenue (\$)	Expenses (\$)	Margin (\$)	Overhead Allocation (\$)	Margin Before Overhead (\$)
Electronic Systems	1,624,371	1,656,619	(32,248)	155,106	122,858
Graphic Systems	3,192,466	4,340,120	(1,147,654)	124,988	(1,022,666)
EPD	41,628,987	33,085,456	8,543,531	7,585,701	16,129,232
Press	60,665,264	53,686,653	6,978,611	15,595,283	22,573,894
Binding	36,017,669	38,054,975	(2,037,305)	13,234,405	11,197,100
Typography and Design	1,550,616	1,622,470	(71,854)	(315,453)	(387,307)
Congressional Print Management	8,222,578	8,368,490	(145,910)	1,947,834	1,801,924
Other Chargeable Work*	7,764,169	7,031,249	732,920	845,562	1,578,482

* Includes: congressional security screening, quality control, agency detailees, delivery, financial management services, materials management services, engineering charges, information resources management, and surcharges.

Despite some efficiencies, strong evidence suggests that the in-plant operation is far from optimal.

Total hours worked per employee consistently declined between FY 93 and FY 97. In FY 97, the average in-plant worker accumulated 1,374 total hours worked (down from 1518 in 1993), with the remainder of hours presumably charged to vacation, sick leave, and overhead accounts.

⁵⁰ FY 1997 GPO General Ledger Data, In-Plant Production.

The FY 97 number represents approximately 75 percent of a typically available effective work-year for an employee (in any industry) working an 8-hour work-day (accounting for 3 weeks vacation, 1 week sick leave, and 10 paid holidays). This indicates that GPO in-plant workers are less than fully applied to direct work.

Similarly, combined chargeable labor and machine hours (hours charged to a printing jacket) for FY 97 account for only 521 hours, down from 940 in 1993 (a 44 percent drop). The magnitude of this drop is significant, particularly in light of comparison with the relative percentage of total hours worked. It should be noted, however, that chargeable labor hours equal machine hours regardless of the number of FTEs working, e.g., 5 FTEs for 1 hour equals 1 chargeable hour. The cost of the full labor time is accounted for in the machine rate billed to a customer. This calculation indicates that overall, workers are not being effectively used to produce and maximize in-plant printing jobs. This could be caused by several factors:

- Fewer in-plant jobs available to assign to workers on hand
- Workers operating more efficiently
- Increase in equipment downtime
- Production planning not optimizing available employees and/or equipment.

Interestingly, the revenue per chargeable hour has increased significantly over the same period (up to \$230.04 from \$150.23). While at first glance this increase might be attributed to increased worker productivity, it is in fact accounted for primarily through product and service price increases.

Another factor contributing to the lower cost effectiveness of the in-plant production operation is the steady increase in labor costs over time. Average total annual compensation and benefits per employee has risen from \$54,429 in FY 93 to \$62,808 in FY 97, representing a 15 percent total increase over 5 years. The comparison with the commercial printing industry average of \$47,963 for all employees in printing plants with over \$80 million in sales is striking.

There was no clear indication of any regular practices for disseminating information on product costing, pricing, and subsequent product margins to appropriate GPO divisions and managers.

As a result, Customer Services and Production management do not have a clear picture of what products should be promoted, discontinued, or further evaluated based on product profitability. GPO Production and Customer Services management should have a clear understanding of product cost and price information in order to sell to customers those products that will be financially favorable to GPO. Similarly, with a clear understanding of product costs and related pricing, management can focus attention on specific activities and processes to make necessary cost improvements.

Overhead cost allocation is an increasingly large cost burden to the Production divisions.

While the overhead burden has decreased on average 2 percent annually over the FY 93 to 97 period, a much greater drop has occurred in Production headcount (down 27.8 percent). Headcount is a key basis for allocating overhead to the respective departments and divisions. (The other is floor space.) This comparison indicates that although production headcount has dropped, corresponding reductions in overhead have not followed. The net result is that over time a proportionally larger amount of overhead staff and costs is being used to support a much smaller in-plant production operation. It is thus increasingly difficult for Production to cover overhead costs.

The Production Department was unable to clearly identify machine utilization rates and how much plant capacity was used to produce congressional rather than agency products.

As shown in Exhibit 4-17, of total in-plant billings, 41 percent are congressional printing and binding and 59 percent are agency (including Superintendent of Documents salaries and expenses appropriation riders). However, data on how much of total plant capacity is used to produce congressional products rather than agency products are ambiguous.

**Exhibit 4-17
Total Plant Revenue***

In-Plant Printing (millions)	FY 97	FY 96	FY 95	FY 94	FY 93
Congressional Printing and Binding	82.5	82.4	73.1	76.4	80.0
<i>Federal Register</i>	29.6	26.5	27.0	26.4	26.6
<i>Code of Federal Regulations</i>	13.6	14.7	15.2	12.1	13.1
Departmental and S&E	77.3	72.3	91.0	87.0	94.7
Total	203	195.9	206.3	201.9	214.4

* Pre-elimination Revenue

The stated GPO Production mission is to support congressional printing needs; however, the majority of revenue generated by in-plant production is from agency-related work (which includes the Office of *Federal Register*). The Production Department was unable to clearly identify machine utilization rates and the amount of plant capacity that was used to produce congressional work. This development poses serious difficulties for optimizing use of equipment and establishing processes to more effectively schedule and manage agency work to maximize revenue based on an understanding of both available capacity and the cost of producing various products.

We also evaluated the feasibility of reducing the in-plant press room operations from the current three shifts to two. This analysis required calculating the total available productive capacity of the presses and comparing this value with the total average productive capacity used. The difference in these values is equivalent to nonproductive capacity and can then be used to evaluate shift utilization. This seemingly straightforward evaluation was complicated by two factors:

- GPO productivity and management reports, e.g., Machine Detail Report, Foreman’s Report, contain data for hours expended per jacket and/or per press operation. However, based on discussions with the GPO Comptroller’s Office, most of the hour values contained in these reports are a combination of both machine and labor hours. Therefore “pure” machine hours, the type needed for the above calculation of productive versus nonproductive machine utilization, are impossible to determine for all press operation codes.
- The shift analysis must also consider the effects of qualitative manufacturing management factors on press utilization, i.e., how efficiently are press operations planned, measured, and controlled to maximize productive capacity across all shifts. Efficiencies in these areas can often “free up” additional shift hours. As discussed in previous sections of this report, these efficiency-related factors include—
 - A lack of effective cross-functional communication and problem solving in many aspects of in-plant operation
 - A lack of systematic manufacturing approaches to control process capability, quality, and cost
 - Limitations on the functionality and data content of information systems necessary to effectively balance and optimize production capability.

Because these factors, by their nature, are qualitative, their effects on shift hour requirements cannot be specifically calculated. Their individual and/or combined effects on shift capability could only be quantified by using a computer-based manufacturing simulation, which is beyond the scope of this management audit.

The shift analysis therefore, required making the best use of less than ideal production data gleaned from available GPO reports. This analysis involved the following steps:

- Step 1: Determine the annual available three-shift pressroom capacity, in hours.
- Step 2: Determine the best available press (shift) utilization information source(s).
- Step 3: Using the utilization information, determine to the best degree possible, those press operations that reflect “pure” idle machine capacity, i.e., those operation codes that contain only chargeable machine hours without additional labor hours. The selection of operation codes in this manner would reduce the likelihood of inflated idle hours being used in the analysis.

Step 1—Principal manufacturing machinery within the Production Department is divided into several press groups. Our analysis focused on those press groups that produce the major portions of congressional products. When these presses are not producing congressional materials, they also produce agency work such as the *Official Gazette for Patents, Books and Pamphlets*, and the *Code of Federal Regulations*. Based on the

Monthly Detail Machine Report, congressional print requisitions are produced by the press groups listed in Exhibit 4-18.

**Exhibit 4-18
Machines Available**

Press Group	Machines Available
Group 82	1
Group 83	6
Group 84	2
Group 85	9
Group 86	3
Group 88	2
Group 92	2
Group 98	3

Although actual operational capacity levels are not currently available from GPO, available yearly operational capacity for each press production group was calculated using the following formula:

$$\text{Press Machines in Group} \times \text{Annual Machine Hours per Press} = \text{Available Machine Hours};$$

where,

$$\text{Machine Hours per Press} = 24 \text{ hours} \times 5 \text{ days} \times 52 \text{ weeks} = 6240 \text{ hours/year.}$$

Using this formula, the following available annual machine hours per press group were calculated (see Exhibit 4-19).

**Exhibit 4-19
Available Hours by Press Group**

Press Group	Available Machine Hours in FY 97
Group 82	6,240
Group 83	37,440
Group 84	12,480
Group 85	56,150
Group 86	18,720
Group 88	12,480
Group 92	12,480
Group 98	18,720
Total	174,710

Step 2—Based on discussions with the Comptroller's Office and a review of the content of various production management reports, the Production Rate Determination Report for FY 97 was identified as the best source of utilization information for this analysis. This

report contains the full range of press operation and class codes summarized by press group and hours of production.

Step 3—The Schedule of Operations and Classes of Work Manual divides these operation and class codes into two groups: chargeable and nonchargeable. In addition, distinctions exist within these two groups for activities that depict the presses as standing, i.e., nonproductive, or as operational.

As discussed above however, many of these operation and class codes may contain both labor and chargeable machine hour values. Based on current GPO data processing limitations, it is impossible to separate these total hours into their component hours. Analysis indicated that the operation codes shown in Exhibit 4-20 are likely to contain a combination of chargeable machine and labor hours.

Exhibit 4-20
Nonproductive Operating Codes with Labor Hours

Operating Code Number	Operating Code Description
120 19	Waiting for congressional work
200 13	Adjustments and repairs by Engineering service
200 14	Waiting for forms, stock, plates

These codes were not included in the shift analysis because the hour values contained in them could have resulted in inflated nonproductive calculations. For example:

- Code 120 19: May contain press crew hours because these personnel are waiting for a particular congressional plate to arrive in the pressroom from the Camera and Negative section.
- Code 200 13: May contain press crew hours because these personnel are waiting for repairs to be completed.
- Code 200 14: May contain press crew hours because these personnel are waiting for these materials.

Conversely, the codes listed in Exhibit 4-21 were determined as the most likely to contain only chargeable, i.e., “pure” machine hours:

Exhibit 4-21
Nonproductive Operating Codes Without Labor Hours

Operating Code Number	Operating Code Description
300 10	No work available
300 11	Out of commission
300 12	No crew available
300 14	Press held in reserve

Using the Production Rate Determination Report, the machine standing hours per press group, were calculated for each of these operations codes (see Exhibit 4-22).

Exhibit 4-22
Machine Standing Hours Per Press Group

	300 10	300 11	300 12	300 14	Total Hours
Group 82	2,127.1	179.8	753.0	15.5	3,075.4
Group 83	7,239.7	3,370.4	10,754.4	12.0	21,376.5
Group 84	3,679.0	2,324.1	1,484.7	15.0	7,502.8
Group 85	9,914.9	5,301.8	7,256.0	107.8	22,580.5
Group 86	973.1	3,056.2	947.1	0.0	4,976.4
Group 88	4,057.0	970.7	1,112.3	0.0	6,140.0
Group 92	5,769.2	389.5	133.0	0.0	6,291.7
Group 98	2,156.5	1,628.9	429.3	6.5	4,221.2
Total	35,916.5	17,221.4	22,869.8	156.8	76,164.5

Comparison of available machine hours versus actual standing hours yields the non-operational percentages shown in Exhibit 4-23.

Exhibit 4-23
Non-Operational Percentages by Press Group

Press Group	Available Machine Hours in FY 97	Actual Standing Hours in FY 97	Percent Non-Operational
Group 82	8,240	3,075	49.28
Group 83	37,440	21,377	57.10
Group 84	12,480	7,503	60.12
Group 85	56,150	22,581	40.21
Group 86	18,720	4,976	26.58
Group 88	12,480	6,140	49.20
Group 92	12,480	6,292	50.41
Group 98	18,720	4,221	22.54
Total	174,710	76,165	43.59

These numbers reflect the most “optimistic” utilization rates because chargeable machine data for codes 120 19, 200 13, and 200 14 were excluded for the reasons explained above.

The following conclusions can be drawn from these numbers. Based on discussions with printing industry experts, “desirable” utilization rates for well-managed commercial one-shift press operations are typically in the range of 70–75 percent. For two-shift operations, these values may increase to low 80 percent values based on the ability of organizations to maximize line balancing between different equipment. When three shifts are added, utilization numbers may actually decrease to the 75–80 percent range unless computer-based scheduling tools and an effective marketing and sales function can keep

the presses running. Obviously, these numbers may vary from company to company based on cost and revenue structures, technology employed, the types of products produced, and the variability of production schedules. However, it is not unusual when reviewing current printing industry literature to find world-class printers reporting utilization numbers even higher than these.

Because of the limitations of current GPO production data and the lack of a manufacturing simulation to develop and test line balancing alternatives, a definitive statement concerning the feasibility of reducing press operations from three to two shifts cannot be made. What can be stated is that significant opportunities exist to increase the utilization of Press Groups 82, 83, 84, 85, 88, and 92, while the utilization rates of Press Groups 86 and 98 approximate sound commercial utilization values. It must be emphasized however, that utilization rates for all presses could appear more or less attractive if labor hours could be extracted from many of the operation and class codes to determine true machine running times.

GPO does not use financial or operational benchmarks of commercial or government printers to evaluate production performance.

Although there are clearly significant differences between commercial printing and GPO operations, given GPO's unique customer base and government structure, a number of parallels and benchmarks can be used to identify areas in which GPO management can make improvements. Exhibit 4-24 below is a top level "value-added" comparison between the overall GPO in-plant production operation in FY 96 and 97 and the FY 97 performance of comparably sized commercial printers.⁵¹ This is an illustration of how benchmark analysis could be used by GPO.

Exhibit 4-24
Value Added Comparison (in percentages)

	GPO 1997	GPO 1996	All Printing Firms*	Printing Firms > \$ 80 M*
Value Added by Printing	100	100	100	100
Production Payroll	64.73	72.03	42.52	41.71
Production Facility Expenses	3.79	4.3	23.4	25.58
Total Production Cost of Product	68.52	76.33	65.92	67.29
Gross Profit	31.48	23.67	34.08	32.71
Overhead Allocation (SGA)	26.19	29.39	26.11	18.65
Income (EBIT)	5.29	-5.72	7.97	14.06

Source: 1997 Printing Industries of America Ratios.

Value added is defined as sales of a company's own manufacture and can be used as a benchmark to evaluate financial and operational performance. It is calculated as sales less

⁵¹ 1997 Printing Industries of America (PIA) Ratios: *The Printer's Guide to Strategic Management, Productivity and Profits*.

material costs and outside services, with the difference being the amount of value that is added to the product as a result of the in-house printing process. As a result of the analysis being made in this way, the distortion introduced by material costs is eliminated, and comparison of operations that could have significantly different material costs is possible.

An analysis of Exhibit 4-24 indicates the following:

- GPO has a cost advantage over the printing industry in production facility expenses because most GPO facilities and equipment are fully paid off and a significant portion of the equipment is fully depreciated.
- GPO payroll costs are a significantly greater portion of total expenses than payroll costs in commercial industry.
- GPO has slightly higher overall overhead costs than does the commercial industry. Although the nature of commercial overhead is different because of the greater proportion of selling, general, and administrative costs, the comparison is important because GPO Production's overhead is higher even without some of these costs.
- GPO's net production profit/loss occurs at a very early point, prior to the point where the commercial industry also removes taxes and interest costs. The fact that GPO does not pay interest or taxes should be a cost advantage.

Recommendation 12. GPO should improve financial performance by reducing costs and improving operational performance.

Provide production divisions with the tools and information to evaluate and manage actual costs of the respective operations, and hold the divisions accountable for their financial performance (before allocation of overhead).

Ideally, the production operation should be viewed as a series of processes rather than as stove-piped divisions. However, until organizational and cultural changes are effected, profit center accountability should be assigned to each division, along with the proper information and tools. This procedure would give each Superintendent/Manager the necessary tools to reduce his/her respective cost of operations and improve the financial performance of the in-plant production operation. To make this change effective, the cost of operations must be provided to each division on a routine basis. This information includes material costs, machine/equipment costs and utilization rates, personnel costs, maintenance costs, and cost of waste and spoilage. Accordingly, each manager's individual performance standards should include division financial, and production performance targets to ensure that the appropriate accountability and responsibility is established for achieving cost reductions.

Production should attempt to reduce employee and labor costs as a means of reducing cost of operations.

GPO's labor costs are significantly higher than those of the commercial printing industry, as shown in Exhibit 4-25.

Exhibit 4-25
Comparative Labor Costs (\$)

	GPO 1997	GPO 1996	All Firms—All Employees	All Firms— Factory Employees	Firms >\$80M — All Employees	Firms >\$80 M — Factory Employees
Annual Payroll/Full Time Equivalent Including Taxes and Benefits	62,808	59,779	45,099	39,274	47,963	40,012

With the full understanding that GPO recently renegotiated labor contracts with the unions, GPO should nonetheless attempt to reduce overall labor costs with annual targets. Consideration should be given to reducing management layers and combining functions as part of future organizational realignments described previously. Some costs can be reduced through attrition, as higher paid personnel retire and are replaced by lower cost junior personnel.

GPO should implement activity-based costing (ABC) to better identify cost drivers and users of overhead, and to identify areas for management attention to reduce overhead and improve operation efficiency.

GPO has already overcome perhaps the most difficult step in implementing ABC, which is cost capturing at the activity level. GPO currently captures over 2,000 cost elements related to its various activities. GPO, with outside assistance, should identify the cost drivers associated with in-plant production (and other areas as appropriate), consistent with ABC practices. By combining and refining the various cost elements and assigning them to the groups and processes that actually use the overhead, GPO would have a more realistic overhead allocation picture. This procedure differs from the current process of allocation based on floor space and headcount, which are not true indicators of cost usage.

Identify and/or capture true product cost information in order to actively market the profitable products.

GPO should ensure that Customer Services and production management have accurate product cost information. There is currently no visibility into product margins and subsequent identification of profit and loss leaders. Once ABC has been implemented, true product cost information is the logical next step. Production Department managers would then be aware of the relative efficiency of different operations and their corresponding contribution to product cost. This information can be used by Production personnel to identify ways to reduce product costs as necessary, and Customer Services could then actively sell and market the more profitable products and services.

Provide systems and methods for identifying machine utilization and plant capacity to improve overall plant effectiveness.

Given the congressional focus of the production operation, availability of accurate information about machine utilization and related plant capacity utilization would allow planners and managers to more effectively plan and schedule work to meet agency *and* congressional needs than they currently do. Accordingly, equipment could be more effectively scheduled to provide the lowest cost means of completing jobs, rather than furnished simply on a requested due date according to the availability of machines to meet that date. Agency work currently provides proportionally more revenue than congressional work. Once methods to improve plant efficiency and increase reliable on-time delivery are identified and implemented, more agency orders could be filled by in-plant production. The production department should begin its utilization improvement efforts by focusing on the Press Groups 82, 83, 84, 85, 88, and 92, since our analysis discovered significant nonproductive hours on these machines.

GPO should implement periodic benchmarking against commercial and other government printing operations to identify financial and operational improvement opportunities.

Useful benchmarks exist for comparisons between GPO in-plant printing and the commercial printing industry. Although there are significant differences between the GPO context and commercial benchmarks, those differences alone are not cause for discounting recommended changes; nor should GPO simply make changes indicated by commercial benchmarks. These comparisons should rather be used by GPO management to analyze the reasons for the differences and then address those factors that can and should be changed.

Finding 13. There is interest among commercial printers to produce the *Congressional Record*.

As part of our final report, we were asked to specifically investigate the feasibility of outsourcing production of the *Congressional Record*. This analysis involved developing a list of qualitative and quantitative factors related to *Congressional Record* production and then surveying a select number of commercial printers to determine their views on the attractiveness of the work.

Using the input of personnel from GPO's Congressional Print Management Division, the set of requirements shown on Exhibit 4-26 developed. Because of the importance of service-related factors in *Record* production, including the ability to process a variety of incoming information formats and provide a dedicated composition staff, this list contains both technical production specifications as well as customer-focused service requirements.

Exhibit 4-26

Congressional Record Production Requirements

1. Ability to process a variety of original incoming information formats, including raw manuscript and electronic files containing text from various word processors (Word, Word Perfect, ASCII) and graphics from several different locations on Capitol Hill.
2. Provide a dedicated composition staff with 24-hour availability.
3. Ensure incoming original disks are scanned for viruses and other incompatibilities.
4. Ability to accommodate late additions to a completed *Record* (up to 1 a.m. or later) and deliver completed *Record* prior to Congress convening approximately 9:30 a.m. of the same day. Minimum threshold of 510 copies to Senate, 509 copies to House, with a total daily volume of 2,800 copies to the Hill.
5. Ability to do security scan of all *Records* for bombs and other threatening objects prior to delivery.
6. Willingness and ability to accommodate wide daily variations in size of *Record*, e.g., 0-600 pp. per *Record*. Daily average: 9,800 copies @200 pp./copy. Trim size: 8 1/4" x 11" (Ability to saddle stitch any *Record* under 104 pp.)
7. Ability to produce and perfect-bind annual average of 259,000,000 *Record* copy pages.
8. Ability to produce and perfect-bind annual average 30,900,000 *Record Index* copy pages.
9. Ability to assemble 277 complete sets annually of bound *Record* and *Index* (on permanent paper).
10. Ability to provide daily on-site (Senate) customer support. Average annual labor hours: 4,200. This covers about 2 detailees at the Office of the Official Recorders of Debate at the Senate and is reimbursed by the Congress to the printer at the end of the year.
11. Ability to provide on-demand, 24-hour messenger service to Capitol Hill to pick up late *Record* manuscripts. Service is reimbursed by the Congress to the printer.
12. Willingness to dedicate the equipment and labor allocated to *Record* production when Congress is in session, including commitment to pull other work-in-process off press to support production of the *Record*.
13. Ability to assume financial and legal responsibility for production and delivery of the *Record*.
14. Ability to provide free public access to *Record* on the World Wide Web by 11 a.m. daily and to also transmit the file (for free) to House Information Resources, the Library of Congress, and to the Superintendent of Documents for the depository library program. This service is paid for by the respective recipients.
15. Ability to electronically link and convert to other GPO databases, e.g., bill database, conference report database for inclusion of these products into the *Record* without additional cost.
16. Ability to mail, by second class postage, 6,500 copies per day.
17. Printing attributes: Quality Level 5, single color, soy ink, 100 percent recycled paper (28 lb. newsprint).

Four of the largest commercial printers in the United States were surveyed regarding their interest in producing the *Record*. These printers were asked whether they were technically capable of fulfilling the production requirements currently met by the GPO, and whether they would be interested in pursuing the work should it become available. All four printers responded that they would be able to meet the technical production requirements. Three of the four printers expressed a high level of interest in actually pursuing the business.

The printers reported that there has been serious commercial interest in this and other current GPO work for some time. Despite their awareness that this inquiry was not a request for proposals. Three of the printers were prepared to bid on production of the *Record* if they were given more detailed specifications and workflow information than that provided to them in the list shown in Exhibit 4-26.

Responses by the commercial printers are grouped by major topic categories and summarized below.

Production and Dissemination. Two of the printers said that they were prepared to invest in dedicated production lines to produce the *Record* to current specifications. In fact, one respondent noted that it produces large runs of similar perfect-bound products such as catalogs or telephone directories at a higher quality level, at least level 4 rather than level 5. This is also the case for commercially printed government agency products such as IRS tax forms. Printers likened production of indexed and bound sets of the *Record* and its *Index* to special book contracts or encyclopedia production.

The printers were also prepared to provide all of the electronic and Internet services currently provided by the GPO, free to the public, and would be ready and willing to provide additional Web-based services and additional linkages. According to these printers, posting the *Record* on the Internet by 11 a.m. would pose no technical difficulties. Almost all large printers have fully-integrated media capabilities today. One of the printers remarked that actual printing makes up a significantly decreasing portion of the business. According to this printer, "Printing is an adjunct; a systems solution is what you're looking for." The increasing importance of "up-front" electronic pre-production was also supported by numerous interviews with GPO personnel as well as in review of current industry best practices.

Facilities Location. Most of the printers surveyed seemed to agree that the requirements for production of the *Record* would best be met with a local production facility. Two of the four printers surveyed currently have operations within a 100-mile radius of Washington. However, one midwestern printer reported that it had done part of the printing of the "good news" tax bill and had bettered GPO's delivery of the work in Washington by more than 24 hours, even given remote production of the job.

Security. The requirement to scan printed material slated for delivery to Capitol Hill for bombs or other potentially threatening material would be a new task for most of the printers surveyed, but they were confident that they would be able to meet this requirement. They emphasized the high level of security already in place at their facilities to protect sensitive and valuable commercial information such as financial statements, budgets, and production of corporate securities. One of the printers cited the very tight security required for its operations producing several foreign currencies as evidence of experience with special security requirements. All said that scanning inputs for computer viruses is a routine requirement.

Customer Service. Although their responses focused mainly on the technical printing production and electronic dissemination requirements, the printers surveyed said that they would be able to meet the demanding customer service requirements of Congress. One respondent remarked that "we have done all of this for somebody else." The printer then provided illustrations of how it had fulfilled each of the requirements for other customers, with the exception of bomb inspection. All of the printers were prepared to provide a dedicated composition staff and to meet the demanding turnaround times necessitated by late inputs to the *Record* up to 1 a.m. or later. They would provide courier and delivery

capability to receive these inputs and to get the printed *Record* to Capitol Hill by 9:00 a.m. Respondents likened these customer service and turnaround demands to financial printing operations, in which late-breaking information and demand for near-immediate turnaround is a normal part of doing business. One printer noted that a single Initial Public Offering (IPO) filing requiring an overnight production run rivals the *Record's* production requirements.

In addition, the printers surveyed said that they would create the capability to provide full-time, permanent detailees to the Senate for daily support. Most of the printers reported prior experience with providing on-site staff to key customers, although this support was not necessarily permanent. All four of the printers surveyed have the necessary resources to bear the upfront cost associated with this requirement. Respondents remarked that the printing business is becoming increasingly customer service-oriented, and that printers are continuously learning to meet new customer support needs. This statement is again supported by analyses of current industry best practices and the growth strategies of many of the leading commercial operations.

Pricing. Two of the four printers provided “ballpark” figures for meeting the production requirements of the *Record*. Despite different bases for an annualized calculation, the estimates were quite close. One printer estimated the cost at \$30,000 a day, including data input, pre-press, press and binding. The other printer estimated production cost at two cents per page. These figures are very rough estimates and do not cover all of the customer service and Internet requirements listed above. A more detailed analysis of costs would be required if Congress wished to pursue this alternative.

Potential for Additional Benefits to the Government from Commercial Sourcing. The printers surveyed believed that, given the opportunity to conduct a due diligence study of the *Record*, they could provide enhanced and more robust printing and electronic delivery options to Congress and other Government customers. These printers see outsourced production of the *Record* as an opportunity to demonstrate their capabilities to efficiently, effectively, and securely produce and distribute key government information. In the words of one printer, they would demonstrate a total systems, cradle-to-grave capability that would link broadly with other resources, including those on the Internet. One printer stated that his goal is to become a solutions integrator for government so that government can be free to concentrate on its “core business” of legislating and can rely on printing professionals to get critical information to the public as quickly and as economically as the state of the art allows.

Recommendation 13. GPO should conduct an outsourcing study to more accurately assess the feasibility of outsourcing the Congressional Record.

As discussed above, even commercial printers who desire to produce the *Congressional Record*, request an opportunity to conduct a due diligence study of the specific technical and service requirements associated with *Record* production before actually proposing the work. Given the potential impacts on Congress of commercial *Record* production, such as

interruptions caused by labor walkouts or strikes and the potential impacts on other congressional products, a study of this nature is indicated. A detailed economic analysis equivalent to an A-76 study would be the next logical step in this analysis. To the degree possible, this study should consider the tangible cost impacts of a potential outsourcing decision, as well as the numerous qualitative and/or service-level impacts to Congress as they would likely lose some of the current flexibility they enjoy by having dedicated print facilities within a few blocks of Capitol Hill. This factor should be considered because we found little support among congressional staff for relinquishing control of the in-plant production capability of GPO.

To determine how GPO can become more efficient and effective in in-plant production, we examined the strengths, weaknesses, opportunities, and threats (SWOT) to a future strategy.

**Exhibit 4-27
SWOT Matrix**

Production Functional Area	Strengths	Weaknesses	Opportunities	Threats
Management Processes and Organization Structure		<ul style="list-style-type: none"> • Narrow division-specific focus, which does not encourage understanding of entire production process and limits production efficiency. • Fragmented and/or duplicated management functions across departments. • Insufficient performance measures and tracking. • Inadequate strategic and technology planning 	<ul style="list-style-type: none"> • Establish in-plant process improvement team to obtain innovative approaches to correct operational deficiencies. • Improve management by accessing production-related information that currently resides in nonproduction divisions. • Realign current support operations into production by shifting to a manufacturing model 	<ul style="list-style-type: none"> • Failure to correct management processes will deteriorate the level of service provided to Congress and agencies.

Production Functional Area	Strengths	Weaknesses	Opportunities	Threats
Technology Utilization	<ul style="list-style-type: none"> Production managers willing to evaluate and integrate new technologies into current production operations. Established information access and dissemination systems to support customer demand for electronic products. 	<ul style="list-style-type: none"> Ad hoc and inconsistent system development methodology. Production management systems that are based primarily on non-integrated legacy systems that are not Year-2000 compliant. No process for developing/maintaining information architecture. Shortage of staff with technology background to meet future technology demands. Fragmented I/T modifications resulting in system incompatibilities and limited functionality 	<ul style="list-style-type: none"> Integrated technology planning and GPO-wide system upgrades could reduce operating costs. Allocate more resources to production managers to encourage integration of new printing technologies. 	<ul style="list-style-type: none"> Inability to recruit and retain staff with technology background, which could limit service effectiveness. Lack of centralized technology plan, which could inhibit technology implementation. Inability to offer new technologies, which could erode possible revenue streams.
Customer Service	<ul style="list-style-type: none"> Rapid response and service provided to varying congressional demands. Excellent relationships with Hill staff and customers. 	<ul style="list-style-type: none"> Service provided to agencies not on a par with the service provided to Congress. Very limited contact with agency customers. Production capabilities are proactively marketed to agency customers. 	<ul style="list-style-type: none"> Actively promote GPO's production capabilities to increase agency interaction, which could increase revenue sources. Identify largest agency customers, and establish good relationships to secure revenue flow. 	<ul style="list-style-type: none"> Loss of revenue sources as congressional print demand decreases and agency demand has not been addressed appropriately. Inability to establish good relationships with agencies, which could damage perception of GPO.
Planning, Estimating, and Job Tracking	<ul style="list-style-type: none"> GPO currently is able to meet all printing needs of congressional customers. 	<ul style="list-style-type: none"> Planning processes. No effective integrated planning and job management systems. No real-time feedback between production processes and planning and scheduling systems. No systems or processes in place for demand forecasting. Decision making on in-house versus procured jobs divided between Production Planning and Customer Service Requisition Section, resulting in the loss of work suitable for in-plant production. 	<ul style="list-style-type: none"> Develop GPO consulting team to train agency print representatives on printing requirements (offset decline in agency print specialists). Plan to pilot a system developed in-house that tracks print jobs through the production process, using a dedicated file server and terminals that will interface with PEPS. Establish joint job evaluation and planning between Customer Service and Production Planning to increase capacity utilization. 	<ul style="list-style-type: none"> Limited ability to effectively plan and manage agency work due to fluctuation of congressional work. Inability to address communication breakdowns, which could constitute substantial losses to in-plant production.

Production Functional Area	Strengths	Weaknesses	Opportunities	Threats
<p>Electronic Media Production</p> <ul style="list-style-type: none"> • Electronic Photo-composition Division (EPD) • Graphic Systems • Electronic Systems 	<ul style="list-style-type: none"> • Up-to-date technology to manage, store, and produce electronic documents. • Web-accessible documents being recognized as a critical element of GPO business, rather than as a useful by-product of the print process. • Computer-to-plate (CTP) technology being implemented to improve quality, throughput, and operating costs. • GPO Web page provides access to the public of all documents produced by GPO on real time basis free of charge. 	<ul style="list-style-type: none"> • Need for training/hiring of Text Processing operators that is outpacing the ability to train internally. • Union rules that restrict how trainees are selected; many are not interested and drop out. 	<ul style="list-style-type: none"> • Work with the Hill to get more congressional product transmitted electronically. • Leverage knowledge gained in dissemination of electronic products to win agency work that is currently being procured. 	<ul style="list-style-type: none"> • Reduced demand for printed products, which may threaten low-cost position of electronic documents (printed products carry the cost burden). • Declining subscriber base as information in databases that were sold in the past (WestPub, WestLaw) becomes available free over the Web. • Operators not adequately trained to maximize the benefits of CTP technology.
<p>Ink-on-Paper Production</p> <ul style="list-style-type: none"> • Copy Prep • Negative Section • Plate Section • Press • Bindery 	<ul style="list-style-type: none"> • Ability to meet variable schedules and volume demands of congressional customers. • Implementing new direct-to-plate technology to streamline pre-press functions. 	<ul style="list-style-type: none"> • High overhead cost structure. • Managers who do not know cost of production operations. • Quality control: no formal process controls (SPC) controls in place. • Production capacity not optimized. • Nonuse of systematic manufacturing tools. 	<ul style="list-style-type: none"> • Fully automate production planning process to improve equipment scheduling and incremental process. • Use knowledge gained in computer-to-plate (CTP) implementation to guide other process improvements. 	<ul style="list-style-type: none"> • Agencies acquiring their own print capabilities. • Commercially procured print services significantly less expensive than in-plant printing. • Trend to electronic media, reducing the demand for printed products. • Attrition of quality, trained personnel due to buyouts and retirement. • Failure to obtain JCP approval for adoption of new printing practices that would yield process improvements.

Production Functional Area	Strengths	Weaknesses	Opportunities	Threats
Procurement and Inventory	<ul style="list-style-type: none"> • Well-trained, knowledgeable staff on materials management, procurement, and transportation. • Materials Management Service (MMS), a self-described service organization to the rest of GPO. 	<ul style="list-style-type: none"> • MMS is on a 20-year-old mainframe. • Surcharges on paper products—35 percent—do not cover cost of MMS operation. • Inventories set by employees' historical knowledge. • No barcode system in place for material inventory. • Fragmented transportation/delivery responsibilities. • Underutilized storage/warehouse capacity. 	<ul style="list-style-type: none"> • Implement streamlined contractual mechanisms to improve procurement process and item costs. • Establish "just in time" (JIT) relationships with suppliers. • Consolidate warehousing operations. • Get MMS in the production planning loop so that it can plan to have needed supplies. 	<ul style="list-style-type: none"> • Loss of agency paper sales revenues due to high costs/surcharges. • Revenue that does not cover overhead. • Loss of intellectual capital and process knowledge as senior staff retire.
Quality Assurance	<ul style="list-style-type: none"> • Provides monthly Quality Audit Report based on daily end product sample evaluations and monthly waste report on production process paper use. 	<ul style="list-style-type: none"> • Limited analytical services provided by QCTD to Production. • Errors and delinquencies that are not corrected upon discovery, but are passed by QCTD from one production area to another. 	<ul style="list-style-type: none"> • Update QATAP to commercial standards and use for in-house production, not just for procured printing. • Improve production quality by establishing a quality feedback process for the production operation. 	<ul style="list-style-type: none"> • Failure to establish and uphold consistent quality standards, which will prolong inefficiencies.
Maintenance	<ul style="list-style-type: none"> • Quick response to repair calls. • New client-server maintenance system. 	<ul style="list-style-type: none"> • Lack of current predictive and preventive maintenance capabilities. • No current machine histories. 	<ul style="list-style-type: none"> • Maximize utilization of current equipment by setting up preventive maintenance schedules. 	<ul style="list-style-type: none"> • Increasing internal labor charge rates.

5. HUMAN RESOURCES

5.1 BACKGROUND

The Booz Allen team, as part of the U.S. Government Printing Office (GPO) management audit, followed a structured approach that examined personnel issues from both a functional and workforce effectiveness perspective. From a functional perspective, we reviewed how well the Office of Personnel meets GPO's overall mission with respect to organizational structure, personnel systems, and organizational processes. From a workforce effectiveness perspective, we examined how the Office of Personnel's associated practices, policies, and procedures in the following seven functional areas contribute to selecting, developing, and retaining a quality workforce:

- Overall human resources strategy
- Organizational dynamics and position management
- Recruitment and selection
- Compensation and benefits
- Performance management
- Training and development
- Labor-management relations.

The Booz Allen team began its efforts by developing an analysis plan to determine the specific information needed in each of the seven functional areas. Relevant best practices in human resources were incorporated in the analysis plan and used as a guide to formulate specific questions. The analysis plan helped determine which strategy (e.g., interview, survey question, GPO document) was most appropriate for data collection. Additionally, the analysis plan matched Booz Allen findings and recommendations with each functional area. Exhibit 5-1 presents an example of a section in the analysis plan.

Exhibit 5-1
Example of Analysis Plan Section

Functional Area Performance Management		
Elements	Question/Issue to be Addressed	Source of Data
Performance Objectives	<ul style="list-style-type: none"> • Are performance objectives and measurements clearly defined? • Are they aligned with agency objectives and measures? • Do employees understand what is needed to advance at GPO? • Does the performance management process help identify development opportunities? 	<ul style="list-style-type: none"> • GPO document • Interview • Survey • Survey
Performance Appraisal/ Feedback	<ul style="list-style-type: none"> • How are appraisals conducted—is there 360-degree feedback? • Are there clear linkages to compensation or training? • Are there agreed on goals? • Are low-performing employees dismissed if their performance does not improve? Are high-performing employees promoted? 	<ul style="list-style-type: none"> • Interview • Interview • GPO document • Survey
Recognition and Awards	<ul style="list-style-type: none"> • Do managers give verbal recognition to deserving employees? • Are there awards that are consistent with business objectives? 	<ul style="list-style-type: none"> • Survey • Interview

To collect information relevant to GPO's personnel issues, the Booz Allen team employed a series of strategies, including the following:

- Reviewed relevant GPO documents and files (e.g., previous audits)
- Conducted interviews with key GPO officials and functional managers
- Conducted a workforce survey on key personnel and organizational effectiveness issues (Throughout the report we have highlighted the results of certain survey items. Appendix H describes the entire survey and results, including a breakout of blue-collar and white-collar responses.)
- Conducted a series of focus groups with a representative cross-section of GPO employees throughout the agency.

To summarize findings and develop recommendations, we analyzed the information using the following techniques:

- Determined quantitative and qualitative perspectives
- Compared collected data against established criteria to determine GPO's overall effectiveness in terms of posture and environment
- Compared collected data with best practice models in human resources
- Made cross-cutting comparisons with other Booz Allen operational teams.

To formulate our findings and recommendations, we evaluated the effectiveness of personnel systems, policies, and practices with respect to cost, quality, service, innovation, and technology. We followed a systematic eight-step approach, outlined in Section 1 of this report, to identify the strengths, weaknesses, opportunities, and threats (SWOT) involved in creating a more effective and efficient GPO. This SWOT matrix appears at the end of this section.

5.2 OVERALL HUMAN RESOURCES STRATEGY

This portion of Booz Allen's study assesses the overall human resources strategy at GPO and how the Office of Personnel is positioning itself to provide effective human resources policies and programs to employees. As part of the review, Booz Allen investigated the strategic planning efforts of the personnel function and the level of preparedness within the Office of Personnel to meet future workforce needs. Given the major transitions in staffing (e.g., downsizing) that have occurred and the movement to an electronic printing environment at GPO, an assessment of the strategic role of human resources is critical.

A review of previous Office of Personnel planning and policy efforts reveals an extensive framework and methodology at GPO for providing effective human resources management. The most recent tactical plan for human resources, created in October 1992,⁵² outlined a series of findings and recommendations with respect to three primary issues at GPO—staffing, environment, and compensation. The plan also provided a comprehensive review of prevailing literature supporting these issues. The most recent agency-wide strategic plan, issued in

⁵² U.S. Government Printing Office, *GPO/2001: Human Resources*, Washington, DC: October 1992.

January 1993, emphasized the importance of the human resources management function.⁵³ The agency-wide strategic plan also discussed the future role of GPO's training program, including the importance of training as job skill requirements become more complex and demanding.

GPO has a comprehensive listing of instructions for human resources. The instructions designated under the 600 series provide an overview and methodology for completing and implementing programs and activities under the purview of the Office of Personnel. Included in the instructions are policies addressing issues such as recruitment and employment, training, labor-management relations, and position management.

In determining findings and recommendations for this section, Booz Allen reviewed previous strategic planning efforts for human resources and evaluated current GPO instructions. To assess the current strategic role of the personnel function, we conducted interviews with key GPO personnel and held focus groups with employees. Furthermore, we included questions on our employee survey regarding human resources strategy. We conducted these activities to determine if any major themes or issues existed in the interaction and coordination among the different human resources programs. Our findings and corresponding recommendations are presented as follows.

FINDINGS AND RECOMMENDATIONS

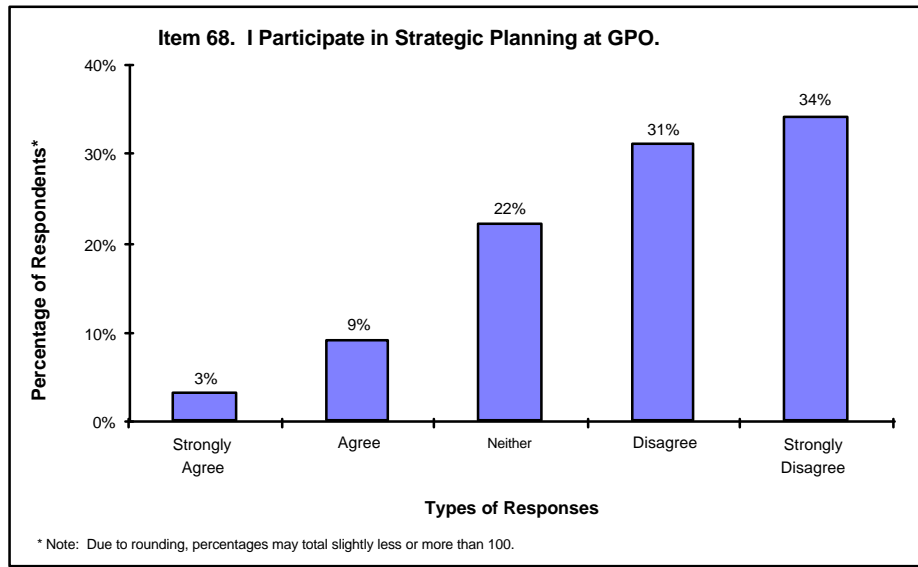
Finding 1. To a large extent, the personnel function responds reactively to problems. There is no strategic plan, and many opportunities for preventing problems and preparing the workforce for the future are not being seized.

In October 1992, as part of the GPO 2001 effort, GPO developed a thorough human resources strategic plan. However, because this plan was never implemented, employees are unsure about GPO's future and their roles in the workforce. Failure to implement the strategic plan, combined with the elimination of, or lack of funding for, various personnel programs and practices since the early 1990s, has negatively affected employee morale and organizational effectiveness. These sentiments were expressed during several interviews, focus groups, and in the employee survey.

Specifically, Exhibit 5-2 displays the results of one of our survey items concerning the strategic role of human resources. As Exhibit 5-2 illustrates, about two-thirds (65 percent) of employees state that they do not participate in strategic planning efforts.

⁵³ U.S. Government Printing Office, *GPO Moving Forward in the Electronic Age*, Washington, DC: January 1993.

Exhibit 5-2 Item 68 Results



The findings reflect the reactive nature of the Office of Personnel. This reactivity, pervasive throughout the personnel function, is further evidenced by the following:

- Training is provided only if it is directly related to an employee's current position; GPO no longer conducts needs assessments to determine current and future training requirements.
- Personnel does not conduct succession planning to manage attrition and develop high-potential employees.
- Workload and staffing analyses are not conducted to forecast future staffing needs.
- GPO does not have a framework for integrating the various phases of the personnel cycle (e.g., recruitment and selection, performance evaluation, career development, and training).
- Position Management no longer conducts proactive position reviews or classification audits as it did in the 1980s.

Recommendation 1. GPO should implement a human resources strategic plan and partner with line managers.

A critical first step in improving GPO's personnel function is to design and implement a new human resources (HR) strategic plan, incorporating information from the 1992 GPO 2001 HR plan and this Booz Allen management audit. Implementation of an improved and up-to-date HR strategic plan will improve GPO's efficiency and effectiveness. Literature reporting a positive link between strategic planning and organizational performance further documents the importance of conducting strategic planning activities.⁵⁴ Specific actions to support strategic planning efforts include the implementation of a standing planning council (consisting of employees from different levels within GPO) and a continual assessment of effectiveness through the use of routine surveys.

One of the components of GPO's HR strategic plan should be a competency model that links the various phases of the personnel life cycle. A variety of tools are available to assist GPO in developing such a competency model. For example, the Office of Personnel Management (OPM) has developed an automated database, *The Human Resource Manager*,⁵⁵ which includes competency related information for more than 200 Federal occupations. GPO personnel and line managers can use this integrated database for all human resources activities, including job design, recruitment and selection, performance evaluation, career development, and training.

If GPO is to remain effective, the role of GPO's personnel function must also be revitalized. In best practices organizations, the role of HR is evolving from a largely administrative function to that of a strategic partner with line management. Ulrich,⁵⁶ in describing the new role of HR, states that "achieving organizational effectiveness must be the work of HR." GPO upper management should recognize the importance of the personnel function to GPO's future and integrate the human resources strategic plan components with its overall agency-wide strategic planning effort.

Finding 2. The Office of Personnel maintains an inventory of written instructions for implementing effective human resources programs, but there is a lack of consistency and accountability in their application.

A review of the GPO instructions under the responsibility of the Office of Personnel reveals numerous examples of beneficial policies and programs. Although these instructions provide the framework necessary for managing human resources and are distributed to supervisors and employees, Booz Allen discovered that several of these policies and programs lack funding or implementation. Exhibit 5-3 lists three examples of instructions that are not funded or fully followed.

⁵⁴ C. Miller and L.B. Cardinal, "Strategic Planning and Firm Performance: A Synthesis of More Than Two Decades," *Academy of Management Journal*, 37, no. 6 (1994): 1649–1665.

⁵⁵ Information on the *Human Resource Manager* provided by the U.S. Office of Personnel Management, Employment Service.

⁵⁶ D. Ulrich, "A New Mandate for Human Resources," *Harvard Business Review* (Jan.–Feb. 1998): 124–134.

Exhibit 5-3
GPO Instructions Not Currently Funded or Followed

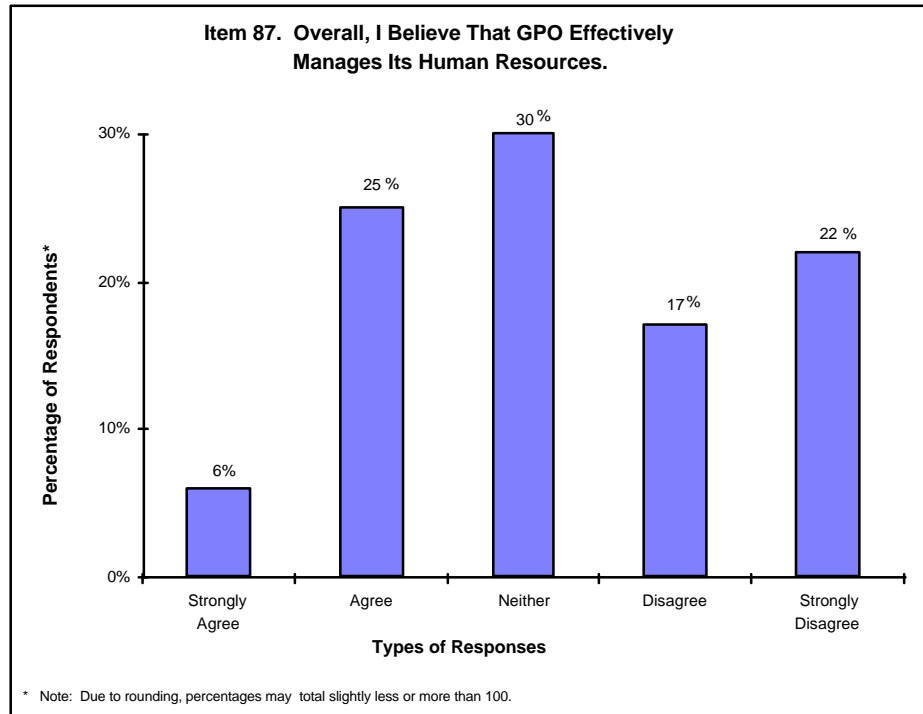
Instruction	Status
Instruction 625: Training curriculum required for supervisors and managers	Not conducted
Instruction 635: Classification surveys conducted by position management	Not conducted
Instruction 675: Awards and Incentives Program	Not funded

The Office of Personnel's inconsistency in adhering to its own internal instructions minimizes the effectiveness of recent planning efforts. For example, several of the recommendations in the GPO 2001 tactical plan suggested following existing instructions, such as reinstating position management's classification surveys. Findings from our interviews, however, reveal that the human resources strategic plan and 1993 agency-wide strategic plan were essentially dead on arrival. Neither past strategic plans nor internal instructions have been consistently followed or implemented by the Office of Personnel.

As a result of the lack of consistency and adherence to an existing personnel framework of policies and programs, many GPO employees and managers are unsure about what policies exist and how they are relevant to current practices. Results from our focus groups and interviews indicate employees, supervisors, and managers are unsure about the status and application of previous personnel programs—such as the awards and incentives program. This lack of clarity may cause employees to question the effectiveness of the personnel function. Exhibit 5-4 illustrates the results from one employee survey item.

As Exhibit 5-4 illustrates, nearly 4 out of 10 (39 percent) employees either disagreed or strongly disagreed that GPO effectively manages its human resources. To address employee concerns and promote confidence in GPO's workforce regarding the functions of the Office of Personnel, beneficial human resources policies and programs must be consistently and continually followed.

Exhibit 5-4 Item 87 Results



Recommendation 2. GPO should review existing personnel instructions and implement policies and programs that address the goals and priorities outlined in the new strategic plan for human resources.

As a first step in following this recommendation, GPO should revise and reissue its existing framework of personnel instructions, policies, and programs. In Booz Allen's experience, best practice organizations employ human resources policies that support the organization and current strategies. GPO's major task during the review process is to ensure that its existing policy infrastructure meets and corresponds with the objectives specified in the new human resources strategic plan. GPO should also eliminate or revise its outdated instructions and provide a more effective mechanism for communicating new and revised instructions to all employees (e.g., through an employee handbook, intranet, *Typeline* newsletter, or human resources programs document). These policies should be reviewed continually and updated as necessary to ensure they remain relevant to current objectives.

Both during and following the revision process, the Office of Personnel should seize opportunities to partner with professional human resources organizations (e.g., International Performance Management Association, National Performance Review, Society for Human Resources Management, Council for Excellence in Government) and other forums to gain exposure to alternative human resources strategies. Moreover, the personnel function should actively conduct periodic best practices reviews by analyzing existing literature and conducting interviews with other organizations. Using such

mechanisms, the Office of Personnel will ensure that its policies and programs remain leading edge and beneficial to employees.

Finding 3. The lack of automation in the Office of Personnel leads to inefficiencies in its function. The development of the intranet is a positive first step toward improving communication and effectiveness.

Results from our interviews and review of internal GPO documents indicate that the lack of automation in different personnel-related functions hinders administration and tracking of programs and diminishes their effectiveness. Currently, the majority of human resources data that are tracked at GPO rely on an antiquated mainframe system. Line employees do not have on-line access to personnel-related information. Our findings revealed several personnel-related functions at GPO whose efficiency may be inhibited because of the lack of automation—including the Office of Employment, Position Management, the Office of Labor/Employee Relations, and the Office of Equal Employment Opportunity. For example, several of our interviewees stated that the ability of employees to directly input and make changes to their benefits elections would help to reduce the workload of Benefits Unit personnel. The Benefits Unit—like several other divisions of the Office of Personnel—is responsible for many administrative and paper-based tasks that inhibit it from conducting strategic and value-added activities.

The Office of Personnel, in conjunction with the Office of Information Resources Management, is pilot testing an organizational intranet that would provide job openings and directory information electronically. When it is fully implemented and operational, the intranet could also be used for various other human resources programs.

Recommendation 3. GPO should implement an automated human resources information system that integrates personnel-related functions and provides improved functionality.

To increase the efficiency of personnel-related functions and improve productivity, GPO should implement the proposed human resources information system (HRIS) to integrate major human resources programs. GPO has already taken a first step toward this goal by converting some of its mainframe applications to a PC-based user-friendly network system. Recommendations provided in the information technology section of this report should be referenced to ensure the HRIS has a system architecture and application standards compatible with other GPO technology. This HRIS will allow the Office of Personnel to monitor and review its own interdepartmental activities, such as recruitment sources and position audits) and determine where resources are needed most, ultimately leading to improvements in functional performance. The HRIS will also eliminate the need for Office of Personnel employees to receive extensive mainframe training. Current HRISs are typically viewed as user friendly and easy to learn. GPO should consider also the use of alternative commercial off-the-shelf software to support specific human resources programs that cannot be provided through the HRIS.

In addition to the HRIS, GPO should implement a fully operational version of its organizational intranet. GPO should consider using the intranet as a tool for providing job openings and directory information on-line, including many other personnel-related activities, such as—

- Communicating corporate strategy information
- Outlining existing personnel-related instructions, policies, and program information
- Disseminating information regarding GPO training programs and opportunities, and allowing on-line enrollment in such programs
- Allowing line employees to access and change their benefits elections electronically
- Providing the option for all GPO employees to provide employee performance ratings on line, as part of the 360-degree review process.

To provide all employees access to the intranet, GPO should consider creating user-accessible kiosks in designated areas throughout GPO. GPO may wish to provide access to the intranet through terminals in the Office of Personnel or in the Office of Information Resources Management. Many major organizations, such as AT&T, Compaq Computer, Levi Strauss, and OPM use intranets.⁵⁷ A recent article reports that 63 percent of U.S. organizations are developing or have already developed intranet systems.⁵⁸ Although the use of such systems is still relatively new, preliminary results indicate that the use of intranet applications, both in the public and private sectors, results in a positive return on investment.⁵⁹

5.3 ORGANIZATIONAL DYNAMICS AND POSITION MANAGEMENT

This section addresses from a personnel perspective those issues that emerge across all departments and services at GPO. This portion of Booz Allen's study reviews and assesses information such as GPO's demographic profile, organizational structure, workload, position management characteristics, and use of teamwork and communication.

To gain an historical perspective regarding transitions in structural and reporting relationships at GPO, Booz Allen reviewed previous and current organizational charts and conducted interviews on the topic. Exhibit 5-5 presents a previous GPO organizational chart issued effective October 6, 1991.⁶⁰

⁵⁷ "Nearly Two of Three Companies Are Replying or Planning to Deploy Intranets," *PR Newswire*, 13 September 1996.

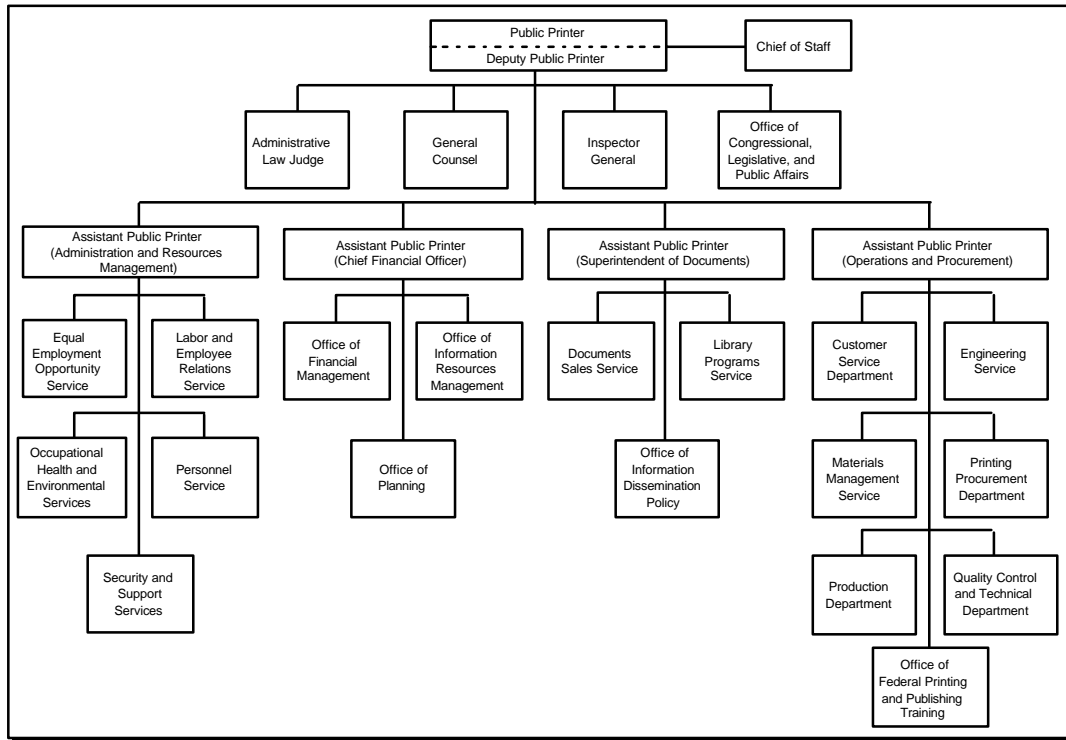
⁵⁸ Amy Cortese, "Here Comes the Intranet," *Business Week*, 26 February 1996, 76+.

⁵⁹ Gene Koprowski, "Intranets Unleashed," *Client/Server Computing*, August 1997, 76-83.

⁶⁰ Data furnished by the Office of Personnel, U.S. Government Printing Office.

As Exhibit 5-5 illustrates, nine official positions had direct reporting relationships with the Public Printer and Deputy Public Printer in 1991. Exhibit 5-6 presents GPO's current organizational chart, issued effective February 1, 1998.⁶¹

**Exhibit 5-5
GPO 1991 Organizational Chart**



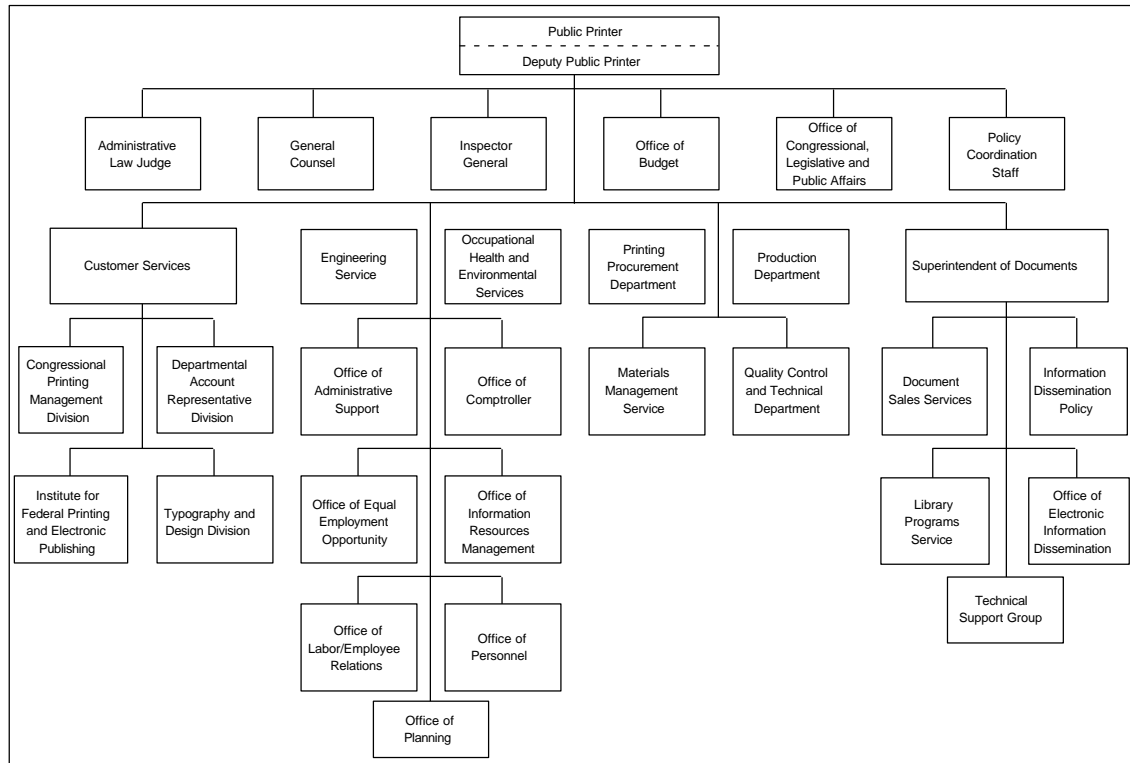
GPO's current structure, compared with its previous organizational chart, reveals a trend toward having an increased number of official positions reporting directly to the Public Printer and Deputy Public Printer. Although not shown in the previous exhibits, the 1993 and 1995 organizational charts portray 13 and 15 direct reports, respectively, to the Deputy Public Printer and Public Printer.⁶² In contrast, the 1998 organizational chart reflects 21 official positions with direct reporting relationships.

Another major change between the 1991 and 1998 organizational structures at GPO was the removal of the Assistant Public Printer positions. Results from our interviews with various GPO personnel indicated that eliminating those positions represented a significant recent change in organizational structure and communication at GPO.

⁶¹ Ibid.

⁶² Ibid.

Exhibit 5-6 GPO 1998 Organizational Chart



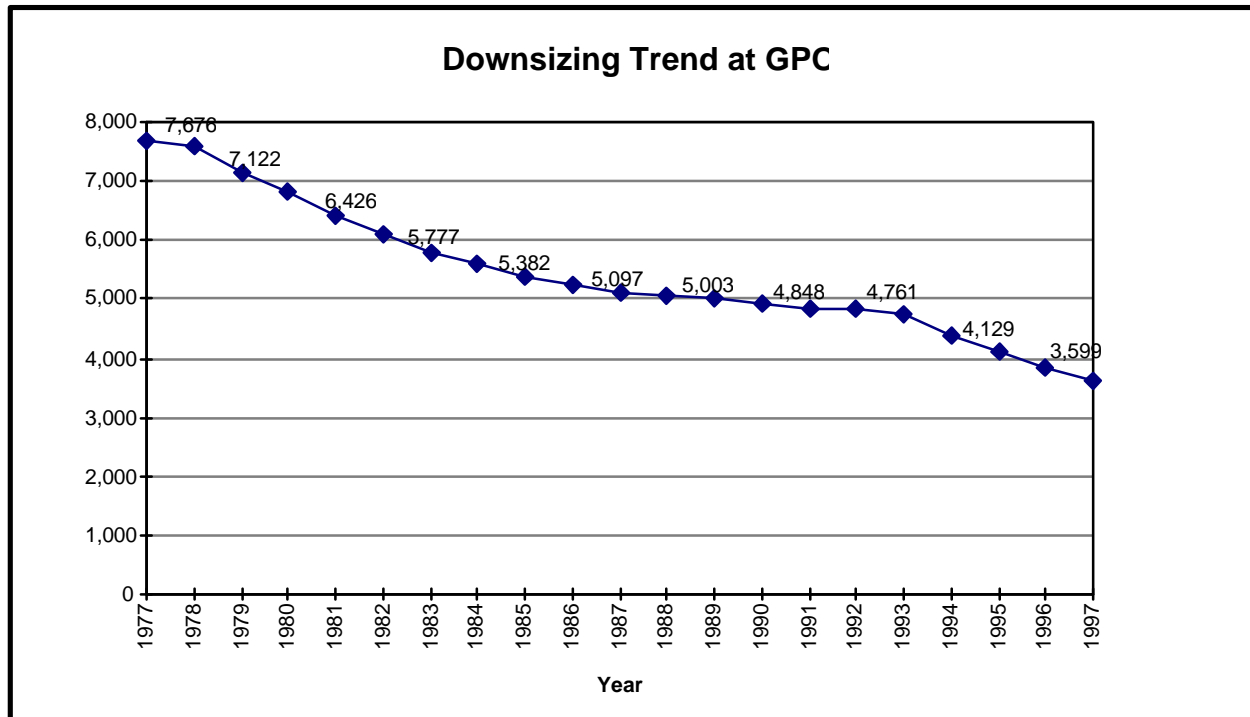
Given the changes in its organizational structure, Booz Allen also investigated trends in GPO's staffing levels. As a result of congressionally imposed full-time equivalent (FTE) ceilings, downsizing, and attrition, the average annual number of FTEs at GPO has decreased from 7,676 in 1977 to 3,599 in 1997. As of January 9, 1998, a total of 3,511 employees worked at GPO.⁶³ Exhibit 5-7 illustrates the decreases in GPO staff over time.

A review of GPO's employees eligible for retirement indicates that by the end of 1997, approximately 1,978 employees (56 percent) were eligible for either early (38 percent) or optional (18 percent) retirement. Assuming no new hires or attrition of staff, approximately 2,112 employees (60 percent) will be eligible for retirement by the end of 1998.

In addition to investigating issues regarding organizational dynamics, Booz Allen sought also to review and assess position management activities within the Office of Personnel. The primary role of GPO's Position Management Branch is to manage position description and classification activities and to ensure that this information corresponds to appropriate pay category, title, series, and grade designations for GPO positions. Specifically, Position Management works in conjunction with line supervisors and managers when positions are created or modified to develop appropriate job descriptions and classifications for those positions. The

⁶³ Ibid.

Exhibit 5-7
Average Annual FTE Staffing Levels



Position Management Branch consists of two classification specialists and two classification assistants reporting directly to the Chief of Position Management. As of the writing of this report, GPO was soliciting applications to fill a third classification specialist position.

Position Management also conducts position audits primarily in response to requests from supervisors or managers. During the position audit, Position Management staff meet with supervisors, managers, and employees to determine the appropriateness of position description and classification assignments. New or modified position descriptions and classifications may result from the position audits. Other information regarding the role of the Position Management Branch was obtained from GPO Instruction 635.1.

Position Management maintains paper copies of both description and classification information for various positions at GPO. The classification standards used for the major groups of employees at GPO are—

- White-collar Printing Grade (PG) employees—These positions are evaluated using OPM federal classification standards.
- Printing Plant Workers (PPW)—These positions are evaluated using Department of the Army Auxiliary Standards.
- Journeyman Bindery Workers (JBW)—These positions are evaluated using classification standards outlined in GPO Instruction 640.9A.

No formal position descriptions or classification structures exist for journey people, craft workers, and their corresponding supervisory and leader positions. Furthermore, supervisory and leader positions for the PPWs are not classified. In total, about 27 percent of the positions within GPO are not classified.

The Position Management Branch also manages classification and position description appeals submitted by employees. Although no formal tracking system exists to monitor these appeals, interviews with GPO personnel reveal that, on average, employees submit fewer than five appeals per year. Employees disputing their classification status can file their appeals with the Public Printer, who works in conjunction with Position Management to determine whether to take any corrective actions. The Public Printer retains final authority in deciding whether any action is necessary.

GPO Instruction 635.1 discusses a classification survey, in which Position Management works in conjunction with supervisors to ensure proper span of control, position assignments, job descriptions, and classifications throughout GPO. Instruction 635.1 provides a methodology and process for conducting the classification survey, which is designed also to solicit information from employees regarding the appropriateness of the GPO Position Management Branch. Although Instruction 635.1 provides the framework for conducting a classification survey, the most recent classification survey conducted at GPO was about 10 years ago.

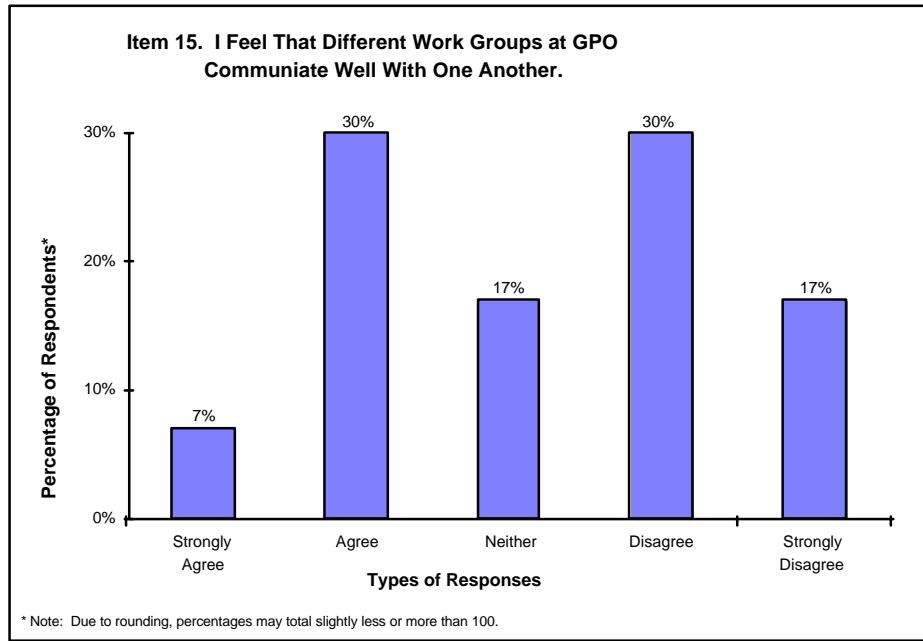
FINDINGS AND RECOMMENDATIONS

Booz Allen's findings and corresponding recommendations regarding organizational dynamics and position management are presented as follows:

Finding 4. There are insufficient opportunities and vehicles for effective organizational communication at GPO.

Communication at all organizational levels at GPO is lacking. One of the major concerns raised during the focus group and interview sessions was the inconsistency and ineffectiveness of communication as it exists at GPO. The lack of formal meetings conducted at GPO provides further evidence of this finding. Specifically, formal cross-functional meetings between department/service heads at GPO and the Public Printer do not routinely occur. Instead, such meetings are conducted ad hoc or are driven by particular subjects or issues as they surface (e.g., meetings regarding the recent *CBDNet* initiative). This leads to parties or organizations that do not possess full knowledge of the situation conducting activities. For example, we learned that the lack of formal cross-functional meetings at GPO, both with the Public Printer and between other levels of the organization, prevented the possibility of contributing to a forms-scanning initiative another department/service was promoting. Exhibit 5-8 presents the results from one employee survey item regarding cross-organizational communication.

Exhibit 5-8 Item 15 Results



As Exhibit 5-8 illustrates, nearly one-half (47 percent) of employees disagreed or strongly disagreed that GPO work groups communicated well with one another. Such results are indicative of many of our findings regarding ineffective communication at GPO.

The inconsistency in conducting formal and routine cross-functional meetings is symptomatic of the ineffective communication among other levels in the agency. For example, our findings from the focus groups and interviews revealed that employee staff meetings (meetings between employees and their supervisors or managers) were inconsistently held and conducted, and formal staff meetings in some GPO work areas did not occur at all. The focus group and interview sessions revealed some frustration on the part of employees who cited the pervasiveness of “grapevine” communication at GPO, and the inaccuracies and distrust that resulted from such a dynamic. Exhibit 5-9 presents some comments from the employee survey that emphasize the need for more frequent and effective communication.

In addition to assessing communication through the meetings held at GPO, Booz·Allen reviewed another major tool that GPO uses to communicate with its workforce—the *Typeline* newsletter. When we asked employees about the value of *Typeline* during our focus group sessions, none of the feedback received indicated that the newsletter was a valuable source of information. Instead, some employees expressed the opinion that the

Exhibit 5-9
Survey Comments Regarding Communication

Representative Employee Comments Regarding Communication
<p>There is a need for regular communication between employees and all levels of management. Most information received is via the grapevine first.</p> <p>At [field location], there are many changes which will be occurring, but the workforce is not adequately informed of the changes that are coming(...). It is very easy for people to become more productive and happier with conditions if there would be better communication. Not just one-way communication. Many problems exist at [field location] that go unchecked until it is too late. It takes too long for problems to be resolved or even addressed.</p>

current content of the newsletter, e.g., career service award recipients, recent GPO retirees, and descriptions of public appearances made by the Public Printer, did not provide the type of important information they needed.

Recommendation 4. GPO should implement strategies and tools to ensure sufficient inter- and intra-organizational communication throughout GPO.

As a first step in improving communication, GPO should establish regular cross-functional meetings among department and service heads to disseminate information regarding major issues, initiatives, and concerns they are facing in their work areas. The Public Printer should attend these meetings. Although business necessity requires that cross-functional meetings be held occasionally in response to an emergency or be driven by particular subjects, GPO should ensure that cross-functional meetings are routinely held with an agenda that allows participants to voice comments regarding topics affecting their work areas.

The information gathered at meetings held with department and service heads should be used when conducting meetings between department and service heads and the managers and supervisors who report to them. Moreover, the cross-functional meetings should serve as an example for supervisors and managers, and these employees should be strongly encouraged to conduct routine staff meetings with their subordinates. Such staff meetings should be used as forums for soliciting feedback from employees, and for discussing information that the supervisor or manager learned in his or her meeting with department and service heads. The staff meetings will ensure that employee concerns and feedback are addressed because supervisors and managers can, in turn, relay these comments to department and service heads, and eventually to the Public Printer.

Regarding the GPO's employee newsletters, employees indicated that they would prefer that these publications disseminate information such as the mission, vision, and direction of the agency, strategic planning efforts, the effect of downsizing on GPO and how GPO will address it, and information regarding major initiatives occurring in different departments and services. Although Booz-Allen acknowledges that GPO's published "To Keep You Informed" series does address such strategic issues, we did not receive any

feedback about the effectiveness of this publication. GPO should continue using this series to help disseminate strategic information.

In addition to formal routine meetings and the newsletter, GPO should institute alternative mechanisms that encourage two-way communication and feedback. Examples of these mechanisms are—

- Seize opportunities to use cross-functional teams that meet regularly to improve communication throughout the organization, increase awareness of successful practices and potential joint ventures, and manage major organizational initiatives as they surface. Cross-functional team participants should include employees, supervisors, and managers. GPO should view the use of cross-functional teams as one way to communicate information across GPO and to improve employee involvement in different activities at GPO.⁶⁴
- Ensure that GPO upper management conducts periodic "walk-arounds" to different work areas as a tool for soliciting employee feedback and gaining awareness regarding employee morale. Such "walk-arounds" are crucial because they convey to employees their value and importance to GPO, and reflect genuine concern on the part of upper management.
- Conduct periodic GPO "town hall" meetings between management and employees, with question-and-answer sessions that encourage employee feedback.
- Conduct routine employee satisfaction and climate surveys to solicit feedback from employees and conduct action planning to address the outcomes.
- Capitalize on the employee intranet as a tool for disseminating information across the organization. A recent survey of selected organizations with intranets found that 57 percent use intranets as a corporate communications tool.⁶⁵

Not surprisingly, recent literature supports the importance of frequent two-way communication and its positive effect on organizational effectiveness. For example, one article notes a positive link between the use of communication and productivity, and that effective managers will use communication to help overcome difficult organizational changes.⁶⁶ In a survey of Chief Executive Officers (CEO), nearly 59 percent consider frequent communication to be an important part of their positions, and 89 percent expect that the importance of communication to the CEO will increase by the year 2000.⁶⁷ There have been several recent success stories of organizations that have overcome major organizational changes through communication, including Federal Express⁶⁸ and

⁶⁴ John Leitch, "Strategy for Involving Employees," *The Journal for Quality and Participation* (September 1995): 68+.

⁶⁵ "HR Embraces Web-Based Technology," *Workforce*, May 1997, 24.

⁶⁶ Mary Young, "Managing to Communicate, Communicating to Manage: How Leading Companies Communicate," *Organizational Dynamics* (1992): 31–43.

⁶⁷ Ibid.

⁶⁸ Ibid.

Continental Airlines.⁶⁹ These examples demonstrate the positive link between communication and organizational effectiveness.

Finding 5. GPO's aging workforce leaves the agency at risk of instability and loss of organizational knowledge.

The average age and percentage of eligible retirees at GPO slightly exceed Federal workforce averages. Specifically, the average age of GPO employees is 48.0, and about 18 percent of GPO's workforce was eligible for optional retirement by the end of 1997.⁷⁰ The most recent agency-wide civilian Federal workforce averages cite the average age of Federal employees at 44.8, with a total of 17 percent (11 percent under the Civil Service Retirement System and 6 percent under the Federal Employees Retirement System) of employees eligible for optional retirement.⁷¹

In reviewing the percentage of employees eligible for retirement, Booz Allen also found a large percentage of employees who meet early-out criteria. About 38 percent of GPO employees were eligible for early-out retirement at the end of 1997. Coupled with those employees eligible for optional retirement, about 56 percent of the GPO workforce was eligible to retire at the end of 1997. Exhibit 5-10 illustrates the projected trend in the retirement rate (optional and early-out) through 2002, assuming no new hires or attrition of staff.⁷²

As Exhibit 5-10 illustrates, the percentage of eligible retirees expected by the end of 2002 is 71 percent. Unfortunately, GPO has not instituted any type of formal system to help ensure the transfer of organizational knowledge to remaining staff as these employees retire. Consequently, a significant number of veteran employees may leave GPO without any mechanism in place to ensure stability and the transfer of accumulated knowledge to existing positions throughout GPO. These concerns were also raised during the interviews and focus groups held with GPO employees.

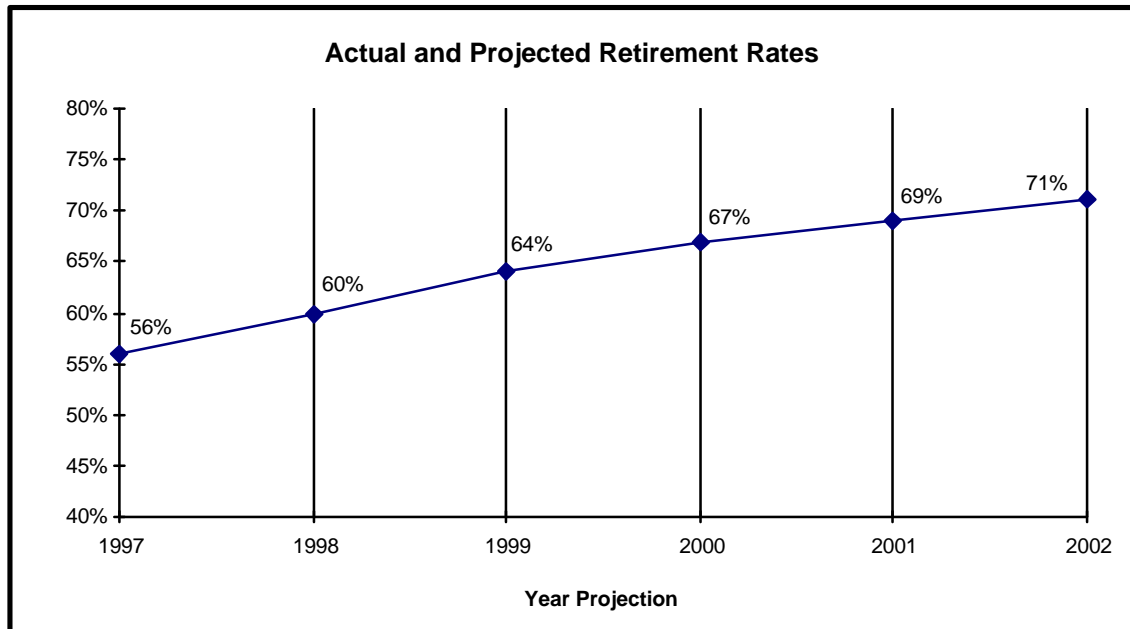
⁶⁹ Gillian Flynn, "A Flight Plan for Success," *Workforce*, July 1997, 73-78.

⁷⁰ Data furnished by the Office of Personnel, U.S. Government Printing Office.

⁷¹ *Federal Civilian Workforce Fact Book* (1997 ed.) Statistics furnished by the U.S. Office of Personnel Management.

⁷² Data furnished by the Office of Personnel U.S. Government Printing Office.

**Exhibit 5-10
Retirement Trends at GPO**



Recommendation 5. GPO should implement a system for transferring organizational knowledge to help ensure a smooth and effective succession planning process.

GPO should devise a system that works in conjunction with the succession planning process to ensure retention of agency knowledge. In general, organizational knowledge refers to an organization's experiences and specific knowledge, including information regarding management, individual culture, decision-making style, communications, job-related events, and how to apply skills in performing different jobs. Recent literature describes the significant negative effect a large number of retiring employees can have when mechanisms are not in place to compensate for loss of organizational knowledge. GPO should consider using several of the following tools to help preserve agency knowledge in lieu of attrition through retirement:⁷³

- Leveraging GPO's organizational intranet as a knowledge repository for employees—GPO could use the intranet as a reference tool for employees. The intranet could include information such as the function and purpose of different departments and services in the GPO organization, organizational contact and directory information, brief portfolio reviews of GPO employees, and GPO instructions divided according to topic. The intranet would be especially helpful in acclimating new employees to GPO.
- Using exit interview information for new employees—GPO should consider giving exit interviews to all employees who leave the organization and incorporating this

⁷³ Arnold Kransdorff, "Fight Organizational Memory Lapse," *Workforce*, September 1997, 34–39.

information in its new employee orientation and training programs. Properly structured exit interviews can provide new GPO employees with valuable lessons learned regarding GPO organizational culture and how to succeed in their positions.

- Creating oral or organizational histories—GPO should encourage its supervisory, managerial, and executive employees to create verbal or written histories of the knowledge learned in their positions that would assist new employees. Such histories can help to relay culture information experienced as part of different positions that might otherwise become lost through attrition.
- Leveraging veteran employees in training programs—GPO should seize opportunities to incorporate veteran employees experienced in different positions into its various formal and informal training programs. Employees with long tenures at GPO possess a wealth of knowledge of how to succeed and perform effectively in their positions. GPO should capitalize on such employees as a mechanism for transferring accumulated knowledge and learning experiences to other employees.

Finding 6. The Position Management Branch lacks the resources necessary to ensure effective position management across GPO, causing it to be reactive.

Feedback solicited during several of our interview sessions indicates that the Position Management Branch has become reactive in response to requests from supervisors and managers for position description and classification actions. Perhaps the most significant evidence of this fact is that classification surveys have not been conducted at GPO for about 10 years, despite having a framework, as outlined in GPO Instruction 635.1, for conducting such surveys. The classification survey was designed to be a proactive agency-wide review on the part of supervisors, employees, and the Position Management Branch. GPO does not conduct classification surveys primarily because of its insufficient resources—Position Management staff has decreased nearly 50 percent during the past 10 years.

Although GPO does not conduct classification surveys, it does manage position audits, which are designed to ensure appropriateness in the duties and responsibilities assigned to positions. Generally, however, supervisors and managers must initiate requests for position audits of their work areas to be conducted, and some may be reluctant to submit positions for review due to Position Management's lengthy turnaround time. Moreover, findings from the interviews reveal that the Position Management Branch does not hold managers and supervisors accountable for appropriate position descriptions and classifications. After a new position description or classification is developed, Position Management does not follow up with the supervisor or manager to check the appropriateness of their actions. Further, no expectations are placed on supervisors or managers to follow up with Position Management.

During our focus group and interview sessions, we received feedback regarding the inappropriateness of position descriptions and classifications for various positions

throughout GPO. Although the feedback was inconclusive, it appeared to be symptomatic of a larger trend in the Position Management Branch. Specifically, the reactivity of Position Management, coupled with the lack of supervisory and managerial accountability, is increasing the likelihood of inaccuracies and inequities in the job classification and description designations across GPO.

Recommendation 6. GPO should prioritize proactive activities in the Position Management Branch and increase the accountability of supervisors and managers to ensure effective position management.

To ensure appropriate and accurate position management throughout the organization, GPO should reinstitute its classification surveys. In addition, GPO should conduct periodic position audits and reviews on a proactive basis, rather than solely in response to requests from supervisors and managers. To help accomplish these goals, GPO should encourage supervisors and managers to become more accountable and skilled in conducting position management activities. This will ease the workload burden placed on the Position Management Branch and allow for a greater level of proactivity. In addition, GPO should consider allocating additional resources, e.g., personnel or implementation of an automated position management system such as those used by the Departments of Defense and Education,⁷⁴ to facilitate conducting classification surveys and proactive position audits.

The 1992 GPO 2001 document⁷⁵ recommended that Position Management reinstitute its classification surveys, increase accountability for these surveys, and delegate authority for conducting position management activities. The recommendations from this internal GPO document support Booz Allen's recommendations and appear to be as relevant today as they were 6 years ago. By increasing the proactivity of the Position Management Branch and relying on the existing framework for conducting effective position management, GPO can help ensure all its positions are graded and structured appropriately, leading to greater internal accuracy and equity among positions.

Finding 7. The lack of formal workload and staffing analyses at GPO leads to inconsistencies in the amount of work required across different departments/services.

Results from the focus group and interview sessions indicated certain areas within GPO had heavier workloads than others, including Industrial Cleaning, Documents, and Electronic Photo-composition. Results also showed that the amount of work required within different departments and services fluctuated greatly over time, depending on the flow of work in the organization. In addition, interviews conducted by Booz Allen's in-plant production team revealed a light workload among some areas in Production, especially during off-peak times. Feedback from the interviews and our internal GPO

⁷⁴ David Hornestay, "Problem," *Government Executive*, November 1997, 33–37.

⁷⁵ U.S. Government Printing Office, *GPO 2001: Human Resources*, Washington, DC: October 1992.

document review revealed that GPO did not engage in formal workload or staffing analyses to ensure appropriate staffing situations.

Results of the employee survey indicated that although 70 percent of employees either agreed or strongly agreed that they were satisfied with the amount of work they had to do (Item 14), but approximately 47 percent either disagreed or strongly disagreed that there were enough employees at GPO to perform the work (Item 13). These results, while seemingly contradictory, illustrate the lack of definitive knowledge at GPO regarding the workload and staffing situation. Exhibit 5-11 provides one employee's survey response regarding the staffing at GPO.

Exhibit 5-11
Survey Comment Regarding Staffing and Workload

Representative Employee Comment Regarding Staffing and Workload

In the process of overall downsizing, little if any thought has been given to increased staffing of areas that are growing in this time of downsizing. It appears that cuts are trying to be made across the board, putting a strain on resources and personnel within areas of increased responsibility.ⁱ

Recommendation 7. GPO should conduct formal workload and staffing studies and promote cross-training opportunities to ensure appropriate distribution of work across GPO.

To identify which departments and services have heavier or lighter workloads than others, GPO should conduct a formal workload and staffing study, with annual reviews. GPO should use the results from its initial workload and staffing study to align GPO's workforce according to the agency's core competencies, mission, and goals. These analyses are especially critical given the emerging changes facing GPO in its movement from a manual printing organization to an electronic-printing environment. GPO should ensure it is staffed appropriately to meet these changes. Recent literature also demonstrates a link between conducting formal staffing and workload analyses and increased organizational effectiveness.⁷⁶ In Bechet's 1993 article, the author writes, "By developing and implementing strategic staffing plans, managers can ensure the 'just-in-time' talent needed to meet changing needs and business objectives, within the context of

⁷⁷

In addition to conducting workload and staffing studies, GPO should offer cross-training opportunities to accommodate staff transitions during fluctuations in workflow. Providing employees with cross-training opportunities will help ensure more equitable workload and appropriate staffing situations at GPO to accommodate rapidly changing organizational requirements. Furthermore, such opportunities will help refine and enhance the skills of GPO's workforce.

⁷⁶ Dan Ward, "Workforce Demand Forecasting Techniques," *Human Resource Planning*, (1996): 54+.

⁷⁷ Thomas Bechet, "Aligning Staffing with Business Strategy," *Human Resource Planning*, (1993): 1+.

Finding 8. GPO supervisors and managers do not have the authority to make critical and timely personnel-related decisions.

The Public Printer or the Deputy Public Printer must directly approve training requests and hiring decisions (for creating nonrevenue generating positions). The findings from our focus groups and interviews revealed that supervisors and managers were frustrated with the lack of decision-making authority they had regarding those issues. Furthermore, some employees noted that because training and hiring decisions must ascend the chain of command to upper management for approval, an inordinate amount of time was required to make decisions. These findings are symptomatic of a general trend at GPO, which has been to increase the number of direct reports and grant oversight and decision-making authority directly to the Public Printer and the Deputy Public Printer.

Recommendation 8. GPO should increase the authority of managers and supervisors to make critical and timely personnel-related decisions.

GPO should increase the authority of supervisors and managers to make personnel-related decisions, including training and hiring. This will help ensure accountability among supervisors and managers because they will have responsibility for the training and hiring needs of their immediate staff. Furthermore, increased delegation to supervisors and managers will negate the need for largely administrative issues to be forwarded to the Public Printer and Deputy Public Printer for approval allowing upper management to increase its focus on higher-level strategic activities.

Finding 9. GPO's use of formal and informal teams provides examples of success.

The interviews conducted with key GPO personnel revealed the successful application of formal and informal team structures throughout GPO. Examples of current and previous effective team structures at GPO include the Office of Planning's planning teams and the Office of Information Resources Management's rapid applications development team. The interview results showed that most formal GPO teams were formed ad hoc or in response to major initiatives, such as the Year 2000 team and the automated IPS system team.

Results of the interviews and survey indicated great success with respect to team-based efforts at GPO. For example, GPO developed a cross-functional team in 1996 involving employees from Documents, Financial Management, Printing Procurement, and Production that worked together to provide on-line access to the *Commerce Business Daily* (i.e., *CBDNet*). The cross-functional team received the National Performance Review's Hammer Award for its performance. In addition, Documents has used cross-training team efforts successfully, including teams such as the IPS and Sales Turnaround team. The employee survey results also showed success through teamwork at GPO. Nearly 7 out of 10 (68 percent) employees either agreed or strongly agreed that teams were used to achieve work goals when appropriate (Item 8), and 75 percent agreed or strongly agreed that teams were effective in getting their work done (Item 9).

The survey and interview results both indicate past successes and agency effectiveness in using a team approach. Although the use of teams or application of teamwork may occur only on an informal basis in some departments and services, findings from our interviews and focus groups suggested that most employees viewed themselves as part of a "working team" at GPO, providing them with both an identity and a common purpose.

Recommendation 9. GPO should capitalize on successes realized from past team efforts and seize opportunities to implement team-based work units to improve communication and agency effectiveness.

In Recommendation #4, Booz Allen suggested the use of cross-functional teams as a tool for communication across GPO. GPO should further promote the development of cross-functional teams that meet regularly to manage organizational initiatives as they surface. GPO should also seize opportunities to apply formal team-based structures in different work areas, where appropriate.

Literature regarding the use and application of formal team-based structures recognizes a positive link between the use of teamwork, when appropriately applied, and organizational effectiveness.⁷⁸ In addition, several recent case studies from manufacturing organizations such as GE Fanuc⁷⁹ and Signicast Corporation⁸⁰ provide further evidence of the effectiveness of team-based structures in work environments similar to those within GPO. By seizing opportunities to implement team-based structures as appropriate, GPO should not only be able to increase communication but also to enhance organizational performance.

5.4 RECRUITMENT AND SELECTION

Because of mandated hiring freezes, GPO has not hired many external candidates during the last 5 years. As Exhibit 5-12 illustrates, 82 percent of open positions since 1993 have been filled internally.⁸¹

Exhibit 5-12
GPO Hiring Statistics—External Hires (Appointments)
and Internal Hires (Promotions)

Fiscal Year	Appointments	Promotions
1997	92 (28%)	234 (72%)
1996	64 (16%)	327 (84%)
1995	59 (15%)	333 (85%)
1994	81 (18%)	368 (82%)
1993	63 (14%)	401 (86%)

⁷⁸ Brian Janz, "Reengineering the Systems Development Process: The Link Between Autonomous Teams and *Journal of Management Information Systems* (Summer 1997): 41–68.

⁷⁹ Gillian Flynn, "Workforce 2000 Begins Here," *Workforce*, May 1997, 78–84.

⁸⁰ Ben Nagler, "Recasting Employees Into Teams," *Workforce*, January 1998, 101–106.

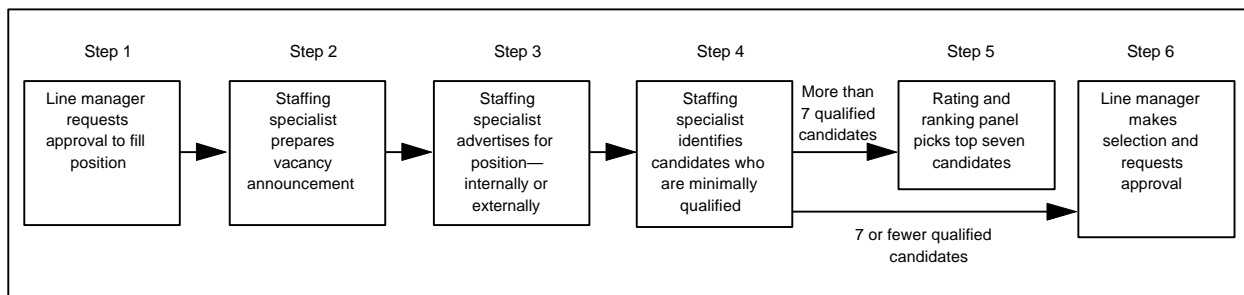
⁸¹ Data furnished by the Office of Personnel, U.S. Government Printing Office.

Fiscal Year	Appointments	Promotions
TOTAL	359 (18%)	1,663 (82%)

The primary responsibility for recruitment and selection at GPO resides with the Employment Branch of the Office of Personnel. This branch includes a branch chief, administrative assistant, and six staffing specialists and assistants who are responsible for oversight of the recruitment and selection process. In addition to Employment Branch staff, the Occupational Health and Environmental Services Department supports the selection process, as needed.

Exhibit 5-13 illustrates GPO’s recruitment and selection process, which is composed of six primary steps. First, a line manager or supervisor identifies a need to fill a position and submits a request to approve filling the position. The level of approval required differs based on the position being filled. Department heads can authorize fills for positions of grade 12 or lower. The Deputy Public Printer authorizes positions for grades 13 and 14, and the Public Printer authorizes fills for grades 15 and higher. Currently, the Public Printer must approve the establishment of nearly all new positions. (Exceptions include revenue-producing, nonsupervisory positions.)

Exhibit 5-13
GPO’s Recruitment and Selection Process



During Step 2 of the selection process, a staffing specialist in the Employment Branch of Personnel prepares a vacancy announcement, which includes a job description and the qualification standards (factors) against which candidates are evaluated. Staffing specialists develop qualification standards and rating factors following OPM guidance on the Federal hiring process. The vacancy announcements are then forwarded to the line manager for review and approval. In some cases, line managers suggest revisions to the rating factors. The staffing specialist reviews the suggested revisions, and the vacancy announcements are finalized.

Step 3 in GPO’s selection process advertises the open position for 10 days. A vast majority of positions are advertised internally; the decision to extend the search to external candidates requires approval from the Public Printer. External vacancy announcements are forwarded to OPM and electronically transmitted on OPM’s web site. External announcements include those for *status candidates*—former or current Government employees, and *all sources*

announcements, those open to anyone. OPM evaluates all sources candidates and forwards the top three to GPO. Status candidates are mixed with the pool of internal GPO candidates.

In Step 4, a staffing specialist reviews all applications received and identifies candidates who are minimally qualified for the position. If the number of minimally qualified candidates is seven or fewer, all names are forwarded to the line manager for review. If there are more than seven qualified candidates, a rating panel is formed (Step 5).

In Step 5, the Employment Branch of Personnel develops rating and ranking factors against which candidate applications are evaluated, using guidance from OPM. The line manager reviews these ratings and may recommend changes. A panel of three, composed of the following members, is selected to review candidate applications and identify the top seven:

- An individual from the hiring area
- An Equal Employment Opportunity (EEO) representative (trained by EEO office)
- An individual not from the hiring area.

The rating and ranking panel receives written guidance on how to rate candidate applications; a staffing specialist is responsible for reviewing the work of the panels to determine accurate assignment of points. The panel rates the applications and forwards, in alphabetical order, the names of the seven candidates with the highest scores to the line manager.

In Step 6, the line manager selects an individual to fill the open position from the list of candidates. The manager is not required to interview the candidates. However, if any candidate on a list is interviewed, all must be interviewed. If a candidate is selected from the all sources list, a reference check and drug screen are conducted. The manager then forwards the manager's selection to the appropriate level for approval; these levels are the same as those required for filling a position. In a small number of cases, the line manager decides not to select any of the candidates. In those instances, representatives from the Office of Personnel consult with the manager to identify alternative ways of recruiting candidates for the open position.

In certain cases (e.g., displacement), groups of employees in one department are moved into other positions within GPO. This practice is known as in-service placement. Employees who are transferred must complete qualifying exams and receive cross-training to ensure that they are prepared for their new assignments. In-service placement and cross-training have not occurred recently because of mandated hiring freezes. However, about 50 plate makers and strippers are being displaced and will likely be transferred to a section within the Electronic Photocomposition Division (EPD). These employees will be cross-trained before the move.

A variety of selection tools are available to GPO's Personnel Office and hiring managers. One such tool is a standardized interview guide developed by GPO's Occupational Health and Environmental Services. This guide provides managers with instructions on conducting effective interviews and evaluating candidate potential. It describes common errors made in the interview process, common interview questions, information on interviewing and the law, information for candidates, and a sample interview question and rating scale.

Additional tools available for use in the selection process include OPM-developed tests, tests developed internally (e.g., typing competency tests), and instructions for rating and ranking panels. The Occupational Health and Environmental Services also provides training to personnel and hiring managers as needed for large-scale hiring efforts (e.g., to staff an entire section).

FINDINGS AND RECOMMENDATIONS

Booz Allen reviewed GPO's recruitment and selection process in relation to the requirements of Federal guidelines on selection (*Uniform Guidelines on Employee Procedures* [1978]) and best management practices. The following findings and recommendations highlight our evaluation of the recruitment and selection process against these standards.

Finding 10. The lack of standardization of GPO's recruitment and selection process places the agency at risk for complaints of employment discrimination and unfair treatment.

According to the EEOC's *Uniform Guidelines*, any selection procedure that produces an adverse effect on a protected group (e.g., minorities, females, older adults) must be valid, or job related. Selection or screening procedures include interviews, work samples, physical requirements, and performance evaluations. Subjectivity in screening employees increases the chance for biases, including discrimination, to enter the selection process.

GPO's selection process lacks standardization at various stages. The primary point at which subjectivity can occur is in Step 6. In this step, line managers receive a list of candidates and select from among them. Each hiring manager determines whether interviews will be conducted for a position, who will conduct the interviews, and the nature of the interviews. Structured interview guides are available but are used only sporadically throughout GPO to evaluate candidates. Such inconsistency can lead to subjective evaluations and greatly increase the potential for bias in the hiring process. Additionally, line managers make most hiring decisions without input from team members.⁸²

The lack of standardization in GPO's selection process has two significant effects. First, perceived subjectivity leads to employee suspicions of preselection and favoritism in the hiring process. In our survey of GPO employees, nearly one-half (46 percent) of employees disagreed or strongly disagreed with the statement that "Employees are hired on the basis of their qualifications" (Item 74). Similar sentiments were raised during interview and focus group sessions. For example, employees in focus group sessions indicated concerns about subjectivity in the qualification standards listed in vacancy announcements. Insufficient communication about the selection process and the rationale behind hiring decisions exacerbates these concerns.

⁸² First-line supervisors indicated in focus groups that they have little control when selecting employees.

A second effect of subjective selection procedures is an increase in employment discrimination complaints. Our review did not include a detailed evaluation of discriminatory hiring practices at GPO; however, as Exhibit 5-14 illustrates, the most common issue associated with EEO complaints filed in 1997 (65 percent) was promotion/nonselection.⁸³

GPO has previously used standardized selection tools. For example, following the *Thompson et. al v. Sawyer (1982)* employment discrimination case, GPO developed and administered a valid assessment center to select groups of employees in the Binding Division. However, these tools have not been used sufficiently to continue to reduce the potential for bias in the selection process.

Exhibit 5-14
Formal Discrimination Complaints, by Issue, for FY 97

Issue(s) of Alleged Discrimination	Number of Complaints
Reprimand	1 (5%)
Retirement	1 (5%)
Evaluation/Appraisal	1 (5%)
Nonsexual Harassment	3 (15%)
Sexual Harassment	1 (5%)
Promotion/Nonselection	13 (65%)
TOTAL	20

Recommendation 10. GPO should standardize recruitment and selection processes and ensure consistent application through communication and training.

A critical step in improving GPO's hiring practices is to standardize various selection procedures across GPO. To create a consistent hiring process, GPO's management should undertake the following:

- Standardize the hiring process across GPO, requiring candidates for *all positions* to be rated by a panel and interviewed
- Institute multiple interviews for open positions and use a team of interviewers to evaluate candidates
- Develop or use structured interview guides based on the knowledge, skills, and abilities needed for the open positions (use guidance developed by Occupational Health and Environmental Services)
- Ask all position applicants the same set of interview questions and use consistent scoring to rate their responses

⁸³ Data furnished by Office of Personnel.

- Train interviewers on how to ask questions, EEO considerations, what is legal and what is not legal, and how to rate interviewees (Occupational Health and Environmental Services can provide this training).

GPO should use available tools to improve the accuracy of its selection process. These include tools currently available at GPO (e.g., structured interview guide) and available products from other sources. For example, OPM has developed an automated database, *Human Resource Manager*,⁸⁴ that includes competency-related information for more than 200 Federal occupations. GPO personnel and line managers can use this integrated database to develop valid job descriptions and crediting plans for vacancy announcements.

In addition to standardizing the selection process, GPO must make a concerted effort to increase awareness of the selection process and the rationale behind hiring decisions. Selection standards and policies should be publicized, and managers should provide feedback to employees who have applied for positions.

Standardization and enhanced communication of GPO's selection process would likely alleviate employee suspicions about subjectivity and reduce complaints about nonselection. A standard process would also increase the accuracy of hiring decisions, leading to an improved matching of employee skills with job demands.

The guidance described above would reduce the subjectivity of the hiring process, thereby increasing the validity of selection. Research indicates that organizational effectiveness is positively correlated with valid selection and staffing practices. This relationship is especially strong in the service industry, where a worker's skills play a greater role in performance.⁸⁵

Finding 11. The rating and ranking panels, which provide opportunities for employee involvement and accurate selection decisions, are not being used in a consistent and effective manner.

Based on interviews with subject matter experts and reviews of relevant documentation, we have concluded that GPO's panels inconsistently rate and rank applicants. The rating and ranking panels were described in Step 5 of GPO's selection process. During the rating and ranking process, individual applicants are rated on job elements designed to be job related (i.e., valid). However, inconsistencies in application of rating criteria reduce the objectivity of the process. We learned that some panels work together to reach consensus on ratings, while others work independently. Additionally, the training given to members of the rating and ranking panels is insufficient. Each panel member receives written instructions on completing the ratings, but is not trained on how to generate objective ratings or how to extract relevant information from the job application. Although

⁸⁴ Information on the *Human Resource Manager* provided by the U.S. Office of Personnel Management, Employment Service.

⁸⁵ D.E. Terpstra and E.J. Rozell, "The Relationship of Staffing Practices to Organizational Level Measures of Performance," *Personnel Psychology*, 46 (1993): 27-48.

Booz·Allen acknowledges that panels cannot be run identically, consistency should be applied in terms of the format and structure of the process.

The results of the rating and ranking panels are not optimally used for selection purposes. The names of the top seven candidates are forwarded to the hiring manager in alphabetical order, not based on rankings. In accordance with Federal mandate, managers retain the authority to select any candidate from the list. Although this maximizes managerial discretion in selecting any individual, the lack of rankings reduces the objectivity of the selection process.

Additional concerns about the rating and ranking panels were expressed in focus groups and interviews. These included concerns that panel members were not trained properly on EEO issues, panel members displayed favoritism for candidates they knew, and managers had inappropriate input into the rating and ranking criteria. Again, poor communication about the rating process exacerbates these concerns.

Recommendation 11. GPO should conduct ongoing assessments of the role and effectiveness of the rating panels.

The role of GPO's rating and ranking panels must be reassessed and revised. These panels provide an opportunity for employees to be involved in the hiring process but are not used effectively. Standard operating procedures should be developed to ensure that all rating and ranking panels reach decisions in a sound, uniform manner. Staffing specialists should be trained in thoroughly reviewing the work of these panels to ensure accuracy. The results of these panels should be presented to the line managers in order of ranking, to assist the manager in identifying the candidate with the highest potential but still allowing for managerial discretion in the process.

GPO also needs to improve the training provided to members of rating and ranking panels. The Occupational Health and Environmental Services team has the capability to provide this training and has offered this service to hiring managers. The trainees should include all individuals involved in hiring, including managers completing performance appraisals. The following training should be provided:

- Use of rating scalesóProvide a definition of rating anchors, how to interpret responses, and any weighting method that is used.
- Rating errorsóGive an introduction to common errors that can be made in rating individuals. These errors include *contrast error* (when evaluations change based on comparison with others), *halo error* (assumption that an individual who is good or bad on one dimension is good or bad on others), *leniency/severity error* (when some evaluators have the tendency to overinflate or deflate ratings), and *central tendency error* (when some evaluators tend to keep all ratings in the middle of the scale).
- How to focus on behaviors, not attributesóExplain this policy is especially important when evaluating interview candidates or completing a performance

appraisal. When describing an individual's performance, evaluators should use specific examples of actions, not descriptions like "unfriendly" or "helpful."

- Gender and racial bias—Provide information on how to recognize and avoid it.

An evaluation and revision of the rating panels would increase the accuracy of hiring practices and GPO's effectiveness. Recent literature demonstrates a positive link between organizations that assess the validity of their staffing practices and organizational performance.⁸⁶

Finding 12. The Office of Personnel is not strategically involved in staffing decisions.

Based on a review of documentation and interviews with subject matter experts, we determined that GPO lacks a strategic approach to staffing. First, there is no current formal succession plan in place. The Executive Resources Board, which previously managed succession planning at GPO, no longer exists. Often when employees retire, they are not replaced and their positions remain vacant or are eliminated. Although succession planning, along with many other human resources initiatives, has been suspended because of mandated downsizing and hiring freezes, the lack of a formal succession plan leaves GPO at risk without any plan for replacing managers.

Additionally, the Office of Personnel is not strategically involved in the transfer and placement of surplus workers. For example, about 50 plate makers and strippers are being displaced from their positions in the Press Division. Line managers and supervisors are determining whether these employees are interchangeable (identical and additional) with staff in EPD. These employees will then be cross-trained and moved into positions within EPD. The decision to transfer these employees will be made with little input from the Office of Personnel.

Recommendation 12. GPO should develop a long-term strategy for recruiting and staffing, including a succession plan.

The Office of Personnel should become strategically involved in forecasting future staffing needs. (Refer also to Recommendation #7 in 5.3 of this report). According to Bechet and Walker (1993),⁸⁷ alignment of staffing with strategy necessitates the following steps:

- Understand the business context—Personnel staff and line managers must anticipate business conditions 3 to 5 years into the future.
- Identify staffing implications—Required staffing levels and competencies required to meet future business needs must be determined.
- Determine staffing drivers—Changes that will affect workload and competency requirements (e.g., increasing reliance on electronic media) must be identified.

⁸⁶ Ibid.

⁸⁷ T.P. Bechet and J.W. Walker, "Aligning Staffing With Business Strategy," *Human Resource Planning*, 16 (1993): 1–14.

- Assess current capabilities—Current levels and competencies of staff must be estimated.
- Project future staffing availability—Levels and competencies of future staff (i.e., accounting for factors such as retirement, attrition) must be estimated.
- Identify staffing gaps—Future shortages and surpluses of staffing levels and competencies must be assessed.
- Establish action plans—Specific staffing actions needed to eliminate gaps (e.g., training, increased external recruiting) must be determined.

Strategic workforce planning helps ensure that GPO remains effective by having the appropriate competencies to meet changing work demands. Such planning also leads to increases in organizational effectiveness and productivity.

5.5 COMPENSATION AND BENEFITS

Decisions concerning pay structure and wage rates for union employees at GPO are determined through labor negotiations between management and the unions representing GPO employees. The Office of Labor/Employee Relations serves the primary role on GPO management's behalf in making decisions regarding compensation. The Office of Personnel typically manages all the policy and regulatory issues that surface after negotiations with the unions are enacted.

The compensation and pay structure for white-collar Printing Grade (PG) employees follows the structure in place for General Schedule (GS) employees in Federal executive branch agencies. In 1996 the American Federation of Government Employees and the Printing Crafts Joint Council established the 4-year agreement to adopt GS pay rates for PG employees. The GS pay structure consists of wage rates distinguished by 15 pay grades and 10 steps within each grade. In following GS pay rates, GPO also adheres to the annual pay increases set by the Federal Government. For Fiscal Year (FY) 1998, GPO PG employees received a 2.45 percent increase above the 1997 GS pay rates. As of January 9, 1998, approximately one-half of employees at GPO were PG employees.⁸⁸

Wage rates for blue-collar employees are established through labor negotiations. The most recent wage agreement for blue-collar employees, initiated in 1997 and effective until 2002, covers the wages and pay structures for the following major groups of employees:

- Journeypersons and Employees Paid Percentages of Journeyperson Rates—This pay structure consists of negotiated hourly wage rates for different journeyperson and craft employees, which include positions such as Machinists, Bookbinders, Offset Photographers, and Offset Strippers.

⁸⁸ Data furnished by the Office of Personnel, U.S. Government Printing Office, and reflected in Instruction 640-326, effective January 4, 1998.

- Printing Plant Workers (PPW)—This pay structure consists of wage rates distinguished by nine different pay grades and three steps within each grade. Work leaders and supervisors of PPWs are paid according to a percentage above the PPW wage rates.
- Journeyperson Bindery Workers—This pay structure consists of wage rates differentiated according to three grades. Work leaders for these employees are paid according to a percentage above the employee rate.

Blue-collar employees, including work leaders and supervisors for these different groups, make up about one-half of the employees at GPO.⁸⁹ The wage agreement in place at GPO also contains provisions for employees regarding their entitlement to holiday pay, emergency snow days, overtime, and nightshift differentials. Both union leaders and the Office of Labor/ Employee Relations concur that the most significant recent change to the wage agreement for blue-collar employees was the gradual reduction in the night-time differential allocation which, for most employees, will be phased from 15 percent to 10 percent by 2001. For FY 98, unions negotiated a 3 percent pay increase for blue-collar employees above the wage rates established for 1997.^{90,91}

The Office of Personnel's Employment Branch is responsible for tracking and administering GPO's benefits programs. As part of the Employment Branch, three individuals in GPO's Benefits Unit manage inquiries and benefits administration for employees. Together, these individuals report directly to the Chief of Employment. GPO offers the same benefits package to its employees as the Federal benefits package for Executive agencies. Several of the primary benefits offered include medical and dental insurance plans, life insurance, and thrift savings and retirement plans. All full-time and part-time GPO employees receive the same benefits, and temporary employees are eligible for the benefits package after 1 year of service.

Employees who wish to enroll in or make changes to their benefits elections complete the necessary paperwork and then forward this information to the Benefits Unit. The Benefits Unit maintains paper-based files documenting benefits elections and activities for every employee. In conjunction with the Payroll section, the Benefits Unit maintains benefits information affecting net compensation (such as medical plan deductions, thrift savings deductions, savings bond program deductions, etc.) on the mainframe employee database. The Benefits Unit can either rely on paper-based employee files or the mainframe employee database in fielding inquiries regarding the status of benefits from GPO personnel.

The area of compensation and benefits at GPO is unique because labor can negotiate pay structure and wage issues concerning union employees with management, while benefits provisions are similar to those offered by the Federal Government to other Executive agencies. Booz Allen acknowledges that several different employee groups (unions, management, Labor/Employee Relations) play a role in negotiating and establishing compensation and benefits policies, and therefore the restructuring of existing programs or the development of new ones is

⁸⁹ Data furnished by the Office of Personnel, U.S. Government Printing Office.

⁹⁰ U.S. Government Printing Office, Subject Classification 640-326, December 30, 1997.

⁹¹ U.S. Government Printing Office, 1997–2002 Wage Agreement, January 19, 1997.

limited. Recognizing these limitations, we developed several findings, together with feasible recommendations from our investigation of GPO's compensation and benefits programs. Booz Allen's findings and recommendations regarding compensation and benefits are presented as follows.

FINDINGS AND RECOMMENDATIONS

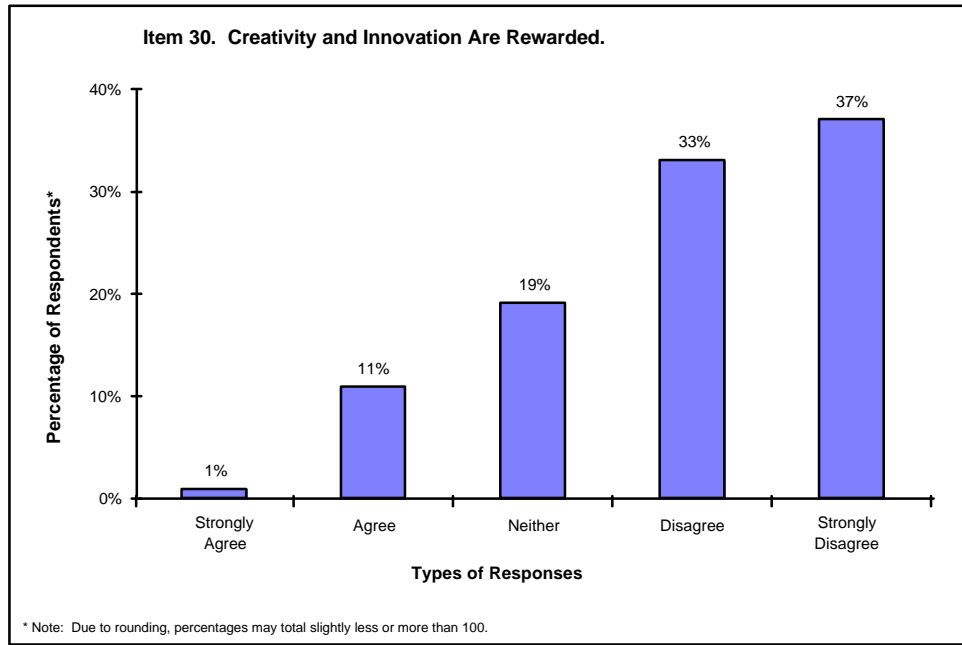
Finding 13. GPO's compensation program consists primarily of base pay and merit increases. No major component considers individual employee performance.

Results of the interviews, focus groups, and review of internal GPO documents revealed that GPO's compensation program did not directly consider the performance of employees. Pay increases for blue- and white-collar employees at GPO largely depend on employee tenure and cost of living adjustments. GPO does not link results from its performance management process to compensation to reward high-performing employees. As a consequence, GPO employees are frustrated because there is no financial motivation or incentive encouraging good performance.

Results of the employee survey further support these findings. Exhibit 5-15 presents the results of one relevant survey item.

As Exhibit 5-15 illustrates, 7 out of 10 employees (70 percent) disagreed or strongly disagreed that GPO rewarded creativity and innovation. This response reflects a lack of emphasis in GPO's compensation program on rewarding individual contributions, or the efforts of people who go "above and beyond" the normal duties of their jobs. The results of a survey item with respect to verbal recognition also reflects this sentiment. About 56 percent of employees disagreed or strongly disagreed that "they receive verbal recognition when they do more than what is expected of them" (Item 31). Although this survey finding specifically addresses verbal recognition, it indicates a larger problem. Specifically, insufficient recognition of employee performance at GPO.

**Exhibit 5-15
Item 30 Results**



Recommendation 13. GPO should consider implementing a pay-for-performance compensation plan with a variable component to reward and recognize employee performance.

To effectively reward and recognize the performance of employees, we recommend that GPO consider introducing a pay-for-performance compensation plan, in addition to the base pay provisions in place. In Booz Allen's experience, best practice organizations are those that have a variable pay component in place for all employees that is linked to the performance management process. A performance-based compensation plan, such as gainsharing, could be applied at GPO using a variable pay component determined through the achievement of performance goals and objectives. The use of gainsharing plans in particular have shown increased productivity in unionized and manufacturing environments.⁹² Gainsharing uses group or plant performance targets as a means for determining employee wages unrelated to base salary. Gainsharing has successfully been used and applied in many different public sector organizations, including Baltimore County

⁹² Glenn Dalton, "Alternative Rewards in Union Settings," *Association for Quality and Participation* (November 1997): 26-31.

in Maryland,⁹³ Nassau County in New York,⁹⁴ the Department of Defense,⁹⁵ and the Federal Transit Administration.⁹⁶

In addition to gainsharing, GPO should consider using alternative pay approaches such as broadbanding, skill-based pay, and competency-based pay. GPO should also consult with OPM for its recommendations regarding the implementation of innovative compensation approaches, especially as they apply to a unionized manufacturing environment. The most critical part of any compensation program GPO implements is that it should provide an outlet or mechanism that rewards employee performance. In soliciting approval for the compensation program from the unions, GPO management should view the variable component in a pay-for-performance plan as an additional part of its overall compensation program, keeping existing base pay and merit increase structures largely in tact. Having such a perspective helps facilitate the negotiation process regarding these issues.

Finding 14. A majority of GPO employees are satisfied with their base pay packages.

Our findings from the focus group and interview sessions with GPO employees indicate a fairly high level of satisfaction with base pay, especially among blue-collar employees. This sentiment was also reflected in conversations with both GPO management and the unions.

In determining the competitiveness of pay for blue-collar employees, Booz Allen reviewed several external resources with comparable, prevailing wage rates in both the public and private sectors. Specifically, we compared GPO wage rates,⁹⁷ wage rates at the Bureau of Engraving and Printing (BEP),⁹⁸ and results from a recent compensation survey report of public and private organizations.⁹⁹ Exhibit 5-16 compares hourly base wages for selected positions from the three sources.

**Exhibit 5-16
Wage Comparison for Selected Positions**

Position	GPO	BEP*	1997 Survey**
Machinist	\$24.76 per hour	\$22.67–\$23.25 per hour	\$20.10 per hour
Bindery worker	\$15.36 to \$16.28 per hour	Not Available	\$15.19 per hour
Bookbinder	\$23.83 per hour	\$22.27–\$22.84 per hour	Not Available

⁹³ James Fox, "Gainsharing Program Lifts Baltimore Employees' Morale," *American City and County*, September 1997, 93.

⁹⁴ Gary Florkowski, "Assessing Public Sector Productivity Incentives: A Review," *Public Productivity Review* (Fall 1987): 53–70.

⁹⁵ Michael Dulworth, "Federal Government Gainsharing Systems in an Environment of Retrenchment," *National Productivity Review* (Spring 1987): 144–152.

⁹⁶ Diana Deadrick, "Employee Incentives in the Public Sector: A National Survey of Urban Mass Transit," *Public Personnel Management* (Summer 1987): 135–143.

⁹⁷ U.S. Government Printing Office, Instruction 640–326, December 30, 1997.

⁹⁸ Bureau of Engraving and Printing Bulletin Number 65–50 (13), 7 March 1996.

⁹⁹ Human Resource Association of the National Capital Area, *1997 Compensation Survey Report, Washington-Baltimore Metropolitan Region*, Washington, DC: July 1997.

Position	GPO	BEP*	1997 Survey**
Offset Pressperson	\$25.09 per hour	\$23.45–\$24.05 per hour	\$15.14 per hour

* 1996-1997 BEP wage rates are shown.

** Annual salary rates are shown in the survey; hourly rates are calculated based on an assumption of 2,080 work hours per year.

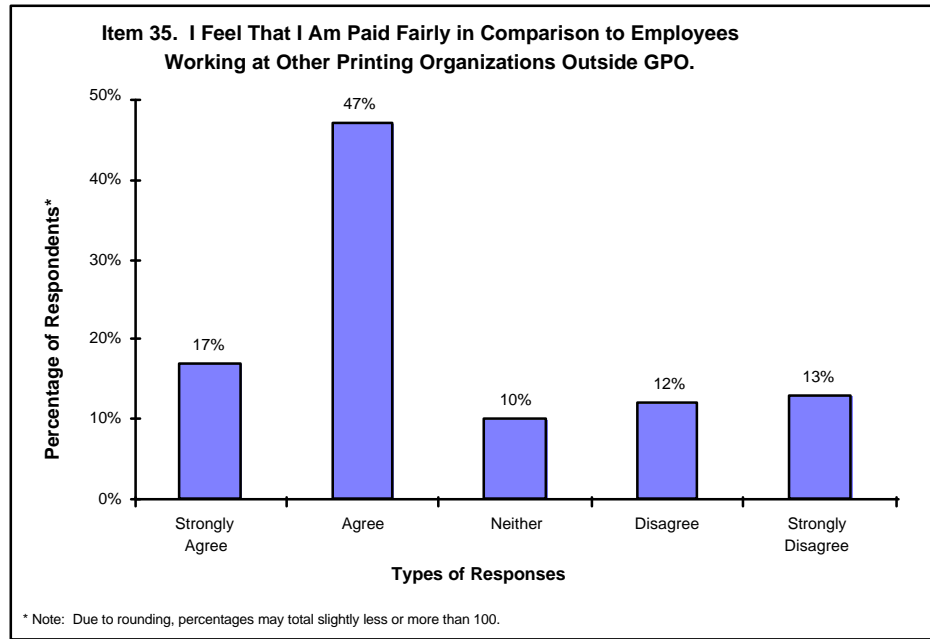
As Exhibit 5-16 illustrates, GPO's wage rates are higher for blue-collar employees than for those in other organizations. Booz Allen acknowledges the difficulty in making comparisons such as these because they do require an understanding of the total compensation package in an organization—one that consists not only of base pay and merit increases, but also benefits. Furthermore, the unique nature of some positions at GPO makes comparisons with external data sources difficult. Nevertheless, the comparisons illustrate the competitiveness of compensation for blue-collar employees. (Booz Allen did not compare the salaries of white-collar employees to other external data sources because these salaries are equivalent to those provided to Federal Executive agencies through the General Schedule.)

Results of the employee survey also document satisfaction with base pay. Regarding external equity, nearly two out of three (64 percent) of employees either agreed or strongly agreed that they were paid fairly in comparison with employees working at other printing organizations outside GPO. Exhibit 5-17 illustrates these results.

The results in Exhibit 5-17 confirm that most employees feel satisfied with their base pay in comparison with other printing organizations. However, when the responses for this item were compared between blue- and white-collar employees, a significant difference was found. Specifically, 80 percent of blue-collar employees agreed or strongly agreed with the item, compared with 50 percent of white-collar employees who agreed or strongly agreed. A similar discrepancy was also found with survey Item 34; whereas 69 percent of blue-collar respondents either agreed or strongly agreed that employees with similar levels of responsibility were paid the same, a smaller percentage (57 percent) of white-collar employees expressed that sentiment.

Despite the positive overall findings regarding base pay, the employee survey results indicate significant differences in the perceptions of blue- and white-collar employees. The differences noted may indicate larger pay inequity concerns between the blue- and white-collar employee populations at GPO.

Exhibit 5-17 Item 35 Results



Recommendation 14. GPO should conduct a formal benchmarking or best practices study regarding the compensation practices of other manufacturing organizations in a unionized environment.

To address any real or perceived inequities between blue- and white-collar employees, GPO should conduct a formal benchmarking or best practices study to determine how other organizations manage differences in pay and equity issues among their workforces. Conducting such a study will provide GPO with exposure to innovative ideas for compensating employees. GPO may wish to limit the scope of its study to competitors, or broaden the scope to include the entire manufacturing industry in general. By reviewing the compensation practices other organizations use to reward blue- and white-collar employees, GPO will gain a greater awareness regarding how other entities handle equity issues. Such insight will provide GPO with opportunities to address any inequities that exist within its workforce. Recent literature supports that the use and application of benchmarking and best practices studies results in positive effects, regardless of the issue being investigated.¹⁰⁰

5.6 PERFORMANCE MANAGEMENT

Effective performance management is a critical component in achieving increased organizational productivity. A recent study by Rutgers University determined that a one standard deviation increase in the use of high-performance work practices reduced turnover by 7 percent

¹⁰⁰ Patricia Keehley, "Can Benchmarking for Best Practices Work for Government?" *Quality Progress* (March 1997): 75-80.

and enhanced profitability by more than \$4,000 per employee.¹⁰¹ The ability to identify and reward high performance, including the ability to recognize and address developmental needs, facilitates optimal use of personnel and improves decision making. In addition, a quality performance management system ensures employees of rewards and recognition for good work and enhances employees' understanding of potential career path and progression opportunities.

The Civil Service Reform Act of 1978 required GPO to institute a formal performance management system. GPO was specifically mentioned in the Act for not possessing a formal system. The Act required GPO to obtain approval for its new system from the Office of Personnel Management (Civil Service Commission). The new performance management system was implemented in 1981 and serves as the foundation for current performance management practices.

Instruction 675.9 outlines GPO's performance management system. The performance management system includes the performance appraisal process and awards directly related to performance ratings. Additionally, GPO Instruction 675.10 outlines the GPO Incentive Awards and Recognition System. These awards are designed to reward superior accomplishments but are not directly tied to the performance ratings.

According to Instruction 675.9, the performance management system is designed to—

- Identify the varying levels of performance of GPO employees
- Encourage, recognize, and reward superior performance
- Assist supervisors in helping employees whose performance requires improvement
- Assist GPO managers by providing them with performance information to be used as a basis for personnel management decisions.

The appraisal process consists of three components. The first component of the appraisal process is to develop the employee performance plan. Supervisors are required to complete a performance plan for each employee they supervise. The plan identifies critical and noncritical elements the given position requires. These elements are generally taken from the position description for each job. Critical elements are duties of such importance that unacceptable performance on any critical element would result in an overall rating of "unacceptable" for the employee. Each element has a corresponding standard that is intended to specify the measurable actions required to receive a rating of "fully satisfactory" on that particular element.

The second component of the appraisal process is to conduct the actual appraisal. During the appraisal, the supervisor rates the employee on performance of each element. The element ratings are based on a 3-point scale with a rating of 1 being unacceptable, 2 being fully satisfactory, and 3 being outstanding. The employee is then given a summary rating for performance based on a

¹⁰¹ Mark Huselid, "The Impact of Human Resource Management Practices on Turnover, Productivity, and Corporate Financial Performance," *Academy of Management Journal* (1995): 635–672.

5-point scale with a rating of 1 being unacceptable, 3 being fully successful, and 5 being outstanding.

The third component of the appraisal process is rewarding and recognizing superior performance and undertaking needed corrective actions for unacceptable performance. According to Instruction 675.10, the results of performance appraisals can be used as a basis for—

- Adjusting basic pay
- Determining performance awards
- Providing training
- Promoting, reassigning, or reducing a grade, removing employees.

The Employment Branch of the Office of Personnel has responsibility for the Performance Management System. This office maintains paper-based performance files of past appraisals for each employee, including an automated database that tracks the overall performance ratings of each employee for the previous 4 years.

Booz Allen's assessment of GPO's performance management function included a review of policies and instructions, a series of interviews with employees and managers, the employee survey, and focus groups. Our review focused on the following three objectives:

- Evaluate performance objectives and standards
- Evaluate the rewards and recognition available for high performance
- Evaluate the ability of the appraisal system to measure performance and offer employees career development and progression opportunities.

FINDINGS AND RECOMMENDATIONS

GPO's Performance Management System is not fulfilling the objectives it was created to achieve. Although a quality performance management system is in place, its potential is not being realized. Inadequate incentives, in both funding and senior management emphasis, have facilitated a deterioration of the system. As a result, the management, identification, and motivation of high performance is suffering. Accurately measuring work performance is difficult in any organization. However, GPO can make a few tangible adjustments to its current practices to improve its ability to manage performance.

Finding 15. There are no clear and measurable performance standards for work areas, departments, or services.

The success of a performance management system relies on developing clear and measurable performance standards not only for employees but also for the various departments and work areas of an organization. Determining the performance level of an employee assumes that the employee is working toward achieving outcomes that benefit that employee's department, and subsequently, the organization. Although performance

objectives and standards are in place for almost all GPO employees, no clear and measurable performance standards exist at the work area and department levels within GPO. The 1993 *GPO 2001 Vision for a New Millennium* report highlighted this need, stating—

Each area of GPO needs to identify, and continuously monitor, the several factors that critically determine their performance. Every organization and function has such critical factors....Only by identifying, measuring, and constantly improving our critical success factors, tangible customer units, and tangible business units in all areas of our organization, will we succeed in our goal of making GPO truly cost-competitive.

Without the foundation of measurable organizational and departmental performance standards, the entire performance management system is less effective. The lack of specific, measurable goals for departments means that supervisors and managers cannot be held accountable for the performance of their work areas. Indeed, the current performance measurement system makes it difficult even to identify those supervisors and managers who are motivating their employees to achieve optimal productivity.

Participants in interviews and focus groups stated that unclear performance standards for work areas and departments affected the priorities of most supervisors and managers. Supervisors and managers are more concerned with costs and control, for which they are accountable, than they are with improved productivity and performance.

Recommendation 15. GPO should clearly define performance objectives and corresponding standards for all work areas and departments/services.

The first step needed to improve GPO's performance management system is to establish clear and measurable performance objectives and standards for all work areas and departments/services. According to best practices, work area and department/service level performance objectives should be aligned with overall agency objectives so that each area understands its role in the mission and success of GPO. Clear and measurable standards are especially important to ensure that supervisors and managers are aware of what is expected of their work areas/departments and are held accountable for the performance of their work units.

Finding 16. Employees are not provided incentives for achieving individual or organizational performance standards.

There are virtually no mechanisms in place to reward and recognize outstanding performance of GPO employees. The lack of an adequate reward and recognition system is a major inhibitor to achieving optimal productivity and performance.

The Incentive Awards and Recognition System, including the awards that are directly related to performance ratings, has not been funded since 1992. The reasons interviewees

cited for the removal of funding included overall financial constraints and concerns about inequitable distribution of awards. The lack of clear and measurable performance standards was also cited as a major contributor to concerns that awards were distributed for reasons other than outstanding performance.

The lack of awards and incentives is a major source of frustration among all employees. Results from the employee survey corroborate what was heard in interviews and focus groups. As referenced in Section 5.4, Compensation and Benefits, 70 percent of employees indicated that creativity and innovation were not rewarded (Item 30), and 56 percent of employees stated that they did not even receive verbal recognition when they did more than what was expected of them (Item 31). Employees and managers stated that the disconnect between performance and rewards/recognition has reduced productivity and negatively affected morale.

The lack of an awards and recognition system has an additional effect beyond reducing individual morale and performance. The lack of incentives for supervisors and managers to achieve performance objectives negatively affects the perception of the usefulness of all personnel functions. Findings from interviews and focus groups reveal that the quality of performance appraisals, the provision of training to employees, the quality of selection decisions, and the willingness to enact the discipline process, all suffer from a failure to reward supervisors and managers for achieving performance standards. Without clear incentives, supervisors are not encouraged to manage the personnel function wisely to improve performance of their work areas. Rather, the current system is one that discourages costs, regardless of the expected benefit, and encourages supervisors to avoid all personnel matters that could cause personal hardship or conflict.

Recommendation 16. GPO should provide incentives to reward and recognize outstanding performance. GPO should reinstitute performance awards and the Incentives and Awards Recognition System.

Employees at all levels must be provided incentives for achieving outstanding performance. Holding supervisors, managers, and employees accountable for their performance requires rewarding and recognizing achievement. Team-based awards should also be implemented to encourage greater communication and organizational productivity.

The Incentives and Awards Recognition System outlined in the GPO instructions should also be reinstated. Similar to performance awards, this program sends a message throughout the agency that efforts that lead to the success of GPO will be rewarded. Additionally, this will result in a greater awareness of outstanding employees and practices that benefit the agency.

The development of clear and measurable performance standards makes determining who is deserving of awards more objective and equitable. Other steps to take to ensure an effective incentive program include—

- Publicize all available awards and criteria to increase the awareness and understanding of the awards program
- Create a cross-organizational panel of judges to determine awards to ensure fairness and equity in the distribution of awards
- Delegate responsibility for the administration, presentation, and tracking of awards to one specific department/service to maintain the importance of the program and the understanding of its effect
- Train managers on the awards program and on how to provide verbal recognition
- Conduct regular meetings, events, and receptions to present and publicize award winners, to provide additional incentives for employees to achieve, and to promote agency, department/service, and area best practices.

Finding 17. The performance appraisal process does not serve its purpose of recognizing high performers, identifying the development needs of employees, and providing career progression opportunities.

The performance appraisal process is not meeting the goals it was designed to achieve. Employees and managers throughout the agency see the performance appraisal process as a wasted opportunity. Employees do not value the process as a tool to measure and improve their performance, and managers do not regard the process as a vital means of identifying high performers and developmental needs. Specifically, more than one out of three (38 percent) employees stated that the performance appraisal process was not helpful to their careers (Item 44), and 58 percent of employees indicated that GPO did not care about their long-term career growth and development (Item 28).

A major concern with the performance appraisal process is that employees view performance ratings as arbitrary and inconsistent. The system's effectiveness is weakened

- Measurable performance standards
- Senior management emphasis on the performance appraisal system
- Awards/incentives tied to performance ratings.

Additionally, results from interviews and focus groups indicate that because the appraisal results are not used as a major component of compensation, award, and training and promotion decisions, employees and managers do not take steps to ensure that all appraisals are fair and comprehensive.

With no rewards or significant implications for achieving different performance ratings, there are concerns of rating inflation (see Exhibit 5-18). Interviewees mentioned that supervisors were more likely to give outstanding ratings because, without any performance awards, supervisors did not have to complete paperwork that justified rating an employee as outstanding. In 1990, when there was funding for performance awards,

43 percent of employees were rated outstanding. In 1997, when there was no funding for performance awards, 62 percent of employees were rated outstanding. With so many employees being rated outstanding, this minimizes the value of considering the performance rating as a valid tool in making personnel-related decisions (e.g., promotions, training).¹⁰² Although concerns about rating inflation have been expressed at Government agencies other than GPO, these concerns are nevertheless significant enough to warrant attention.

Exhibit 5-18
Employee Ratings in Different Performance Levels

	Outstanding	Excellent	Fully Satisfactory	Marginal	Unacceptable	Not Rated
1990	1,888 (43%)	1,755 (40%)	733 (17%)	*17 (0%)	*16 (0%)	*600
1997	1,669 (62%)	738 (28%)	259 (10%)	3 (0%)	4 (0%)	**700

* These numbers are approximate based on GPO 2001 report. This report stated that 33 employees were rated marginal or unacceptable and about 600 employees were not rated.

** This number is an approximation based on data provided by the Office of Personnel.

Another concern with the performance appraisal system is the number of employees who are not receiving annual appraisals. For example, employees in EPD have not had a performance appraisal in more than 5 years. When technology changed the requirements for employees in EPD, no union agreed-upon performance standards were ever accepted. As a result, employees in this area have not been appraised. Employees at GPO who are not appraised automatically receive a rating of 'fully satisfactory,' which has implications for promotions and reductions in force decisions. This problem may be more widespread than our research has uncovered. Although there were only about 300 EPD employees in 1997, at least 700 employees GPO-wide did not receive a rating in the last appraisal cycle. (Some of these people may be new hires who have not been at GPO long enough to be appraised. As of the writing of this report, new performance standards for EPD employees were being implemented.) Because of time constraints and the lack of a sufficient automated system, we were unable to determine the full scope of this situation.

A final factor that inhibits the effectiveness of the performance management system is the lack of overall openings and promotional opportunities at GPO. The lack of promotional openings makes the link between performance and outcomes unclear to employees at all levels. Survey findings reveal that more than one-half (51 percent) of employees are unclear about what is required to be promoted, and 64 percent of employees do not believe that high performers are promoted at GPO.

¹⁰² Data furnished by Office of Personnel, U.S. Government Printing Office, and by U.S. Government Printing Office, *GPO 2001: Human Resources*. Washington, DC: October 1992.

Recommendation 17. GPO should improve the performance appraisal process to make it a better indicator and motivator of high performance.

The performance appraisal process must be strengthened to recognize high performers, identify developmental opportunities, and establish a career development progression.

A major improvement to the GPO appraisal process, and one that is shared by world-class organizations, would be to implement a 360-degree feedback on employee performance. This feedback solicits the input of an employee's supervisors, colleagues, subordinates, suppliers, and customers to evaluate the employee's effectiveness. These systems are designed to achieve comprehensive and objective information on the employee's achievements.

A final, important step is to provide a clear link between the performance rating and future actions regarding awards, compensation, promotion, and training opportunities. It is crucial that employees complete the appraisal process, be rewarded for their achievements, and obtain a clear plan for how they can improve and progress in the organization. Even in organizations that are experiencing downsizing, where promotional openings and funding for training may be limited, it is important to develop alternative opportunities to accommodate outstanding performers and to address developmental needs. Best practice organizations have supervisors work with employees to determine mutually agreed-upon career goals. Consulting OPM and major human resource associations for more information on career ladders and lattices, quality step increases, and other options may be helpful.

5.7 TRAINING AND DEVELOPMENT

In the face of the high attrition rate it could experience over the next several years, GPO must be ready to replenish the intellectual capital it stands to lose. In addition, the changing nature of technology and advent of new ways to work are certain to generate needs for training in specialized skills that new hires may not possess. All these conditions make it imperative that GPO have a training function that can meet future demands.

The primary responsibility for GPO employee training rests with the Training and Career Development Branch, which employs three Employee Development Specialists, one secretary, and a temporary Branch Chief. Currently, employees receive training on an as-needed basis. Employees identify their own training needs, and find relevant courses in a catalog produced by GPO Training and Career Development. For each desired course, an employee must complete an application and obtain approval from his or her supervisor or manager. All training requests must also be approved by the Deputy Public Printer.¹⁰³ Final approval comes from the Training and Career Development Branch, which reviews each application for relevance to the applicant's current job. After an employee has attended training, a record is completed in the REGISTRAR system.

¹⁰³ Per memorandum sent to all executive secretaries on 13 November 1997.

Exhibit 5-19 shows the number of training instances provided to GPO employees in FY 97. Of the 1,807 training instances provided in that year, 822, or 45 percent, were computer related. GPO's computer training laboratories offer hands-on practice with actual computer applications.

Exhibit 5-19
Training Instances in FY 97, by Category¹⁰⁴

Type of Training	Number of Instances (Percentage of Total Training) ¹⁰⁵
Clerical (9 courses available)	170 (09%)
Computer (31 courses available)	822 (45%)
Retirement Seminars	156 (09%)
Chemical Hazards Training	279 (15%)
Courses Given Outside GPO	380 (21%)
TOTAL	1807

In addition to standard course offerings, GPO offers four apprenticeship programs in which approximately 100 GPO employees participate at a time. Individuals must pass qualifying exams to enter these intensive programs. The four programs and their durations, are—

- Engineering—4 years
- Offset Press—4 years
- Bindery—2 years (previously a 4-year program)
- EPD—2 years (previously a 4-year program).

Booz Allen assessed GPO's training practices as part of its audit of the organization's personnel function included a review of policies. We reviewed policies and the course catalog, and conducted interviews, an employee opinion survey, and focus groups. Our review centered around three objectives:

- Evaluate the strategic role of training.
- Evaluate the training policies and procedures to determine the availability of structured career paths, the accountability of managers for employee development, and mandatory training policies.
- Review the training budget specifically focusing on how much is available per employee.

FINDINGS AND RECOMMENDATIONS

¹⁰⁴ Training data provided by Office of Personnel, U.S. Government Printing Office.

¹⁰⁵ Does not equal number of individuals taking courses; one individual may have taken more than one course in a given category.

Finding 18. In general, the provision of training at GPO is reactive rather than strategic.

The presence of a strategic training plan is a primary indicator of an organization's assessment of the importance of training and development to the achievement of organizational goals. Best practices organizations are as likely to have strategic plans for training as they are to have overall strategic plans.¹⁰⁶ In contrast, the majority of training provided to GPO employees is reactive. According to GPO Instruction 625.6A, an employee may receive external training only if the training is related to the employee's current assignment or to his or her programmed long-range development. Indeed, a December 1997 OPM memorandum to Federal Personnel Directors indicates that there should be a relationship between training and an employee's lawfully assigned duties. This memorandum also notes that "Employees may be assigned to training associated with their current duties or anticipated duties related to the mission of the agency. The legal purpose of training continues to be to improve individual and organizational performance and to assist in achieving the agency's mission and performance goals..." It is the future skills training, or training for "anticipated duties," that GPO does not proactively provide. Long-range career development does not typically occur, and employees are not targeted for training based on future needs.

Despite general instructions in GPO 625.6A to conduct a training needs assessment every year, assessments are no longer routinely conducted. The lack of a strategic training needs assessment prevents GPO from providing the training required to meet current and future skill requirements.

Additional indicators of the reactive nature of training at GPO include the following:

- GPO Employee Relations does not conduct preventive training on pervasive problems (e.g., abuse of the leave policy); rather, training is typically conducted in response to organizational/governmental mandates (e.g., violence in the workplace).
- EEO training is not routinely provided to managers.
- Employees are not routinely trained in new technologies until they encounter problems.

Recommendation 18. GPO should reinstitute a strategic training needs assessment with an annual review to identify current competencies of staff, needed competencies, and appropriate training interventions.

GPO's training function should assume a major role in gathering information on GPO-wide employee training needs and in helping line divisions gather information on line-specific training needs. To collect valid data that can drive training design, development, and delivery, it will be necessary to tap multiple sources of information, both internal and external. Internal information sources include top management, employees, and human

¹⁰⁶ George Kimmerling, "Gathering Best Practices," *Training and Development Journal* (September 1993).

resources staff. Information should be gathered externally by benchmarking best practices and studying trends that could affect the achievement of GPO's missions.

The information collected in the needs assessment will allow GPO to identify—

- Current and future (3–5 years out) skill requirements of work
- Competencies of current staff
- Gaps between needed and existing staff competencies
- Appropriate training interventions (e.g., formal courses, on-the-job training, coaching).

To assure the success of training at GPO, representatives of both senior management and the personnel function must participate in developing GPO-wide training strategy and policy that are premised on the results of a strategic training needs assessment. Existing training policies and instructions (e.g., GPO 625.6A) should also be used during development. When complete, the improved training strategy, policy, and instructions (e.g., process for obtaining training) should be disseminated to all employees.

An updated training strategy will allow GPO to maximize effectiveness in the future because employees will be prepared to meet changing work demands and requirements.

Finding 19. Supervisory and management training is not provided on a routine basis, which results in decreased morale and the risk of violation of employee rights.

GPO has not routinely provided general supervisory training, in spite of its inclusion in GPO 625.6A. In fact, no supervisory training was provided from 1993 through 1997. Based on interviews with subject matter experts, we understand that Personnel reinstated its GPO III supervisory training session, with the first class held in January 1998. Although this course provides EEO and employee relations training to selected supervisors, GPO supervisors and managers have not routinely had access to such training. This leaves GPO at risk of violating employee rights.

Inadequate management training not only reduces workforce effectiveness and employee morale, but it also can result in increased employee complaints. In our survey, employees indicated a lack of trust in GPO management; nearly half (49 percent) of those surveyed disagreed or strongly disagreed with the statement: "There is trust between employees and

Recommendation 19. GPO should reinstitute mandatory training for supervisors, managers, and executives, including guidance on Employee Relations and Equal Employment Opportunity issues.

Effective management is necessary for GPO to make optimal use of its human resources. The current lack of supervisory and management training at GPO prevents managers from obtaining the necessary skills to develop their employees. Additionally, the lack of managerial training places the agency at risk of violating employee rights. For these reasons, mandatory supervisory, management, and executive training must be reinstated, and this training must include training on EEO issues and employee relations. EEO training should focus on the issues that currently generate the most complaints (i.e., promotion/non-selection).

The results of the strategic needs assessment should be used to target the specific training needs of GPO supervisors, managers, and executives. Appropriate training interventions should be targeted to these critical groups and should capitalize on efforts within GPO that currently provide training to managers (e.g., orientation provided in the Depository Distribution Division).

Finding 20. The Training and Career Development Branch lacks sufficient financial resources and personnel qualifications to meet GPO's training needs.

One of the best ways to measure an organization's commitment to staff development is to look at the dollars allocated for training and development. Best practices industries report average total annual training expenditures of \$800–\$1,000 per employee.¹⁰⁷ In 1992, OPM reported an average expenditure of \$760 per employee in mid-size agencies (1,500 to 10,000 employees).¹⁰⁸ Using these figures as benchmarks, the funding for training within the Training and Career Development Branch is inadequate to meet the staff development requirements of GPO.

Exhibit 5-20 presents the amount of funding GPO has budgeted for—and actually spent¹⁰⁹ The figures presented for FY 98¹¹⁰ reveal a much lower per-employee amount—\$173—than the averages for either industry or mid-size government agencies. Additionally, while the majority of training dollars allocated from 1991–1998 were set aside for training outside of GPO, these dollars have not been spent.^{111,112}

¹⁰⁷ U.S. Office of Personnel Management, *Human Resource Development in the Federal Service*, (Fiscal Year 1992 [the last year for which data were compiled]).

⁵⁷ Ibid.

⁵⁸ These numbers do not include money allocated to apprenticeship programs.

⁵⁹ This figure was calculated with the total number of GPO employees being approximately 3,500.

⁶⁰ Data furnished by Office of Personnel, U.S. Government Printing Office.

⁶¹ Dollars for outside training are budgeted and spent by line organizations and are not maintained by the Personnel Department.

Exhibit 5-20
GPO's Training Budget from FY 91 to Present¹¹³

Fiscal Year	In-House Training¹¹⁴ Budget (Expenses)	Outside Training Budget (Expenses)	Total Training Budget (Expenses)
1991	\$137,500 (\$163,547)	\$603,700 (\$89,721)	\$741,200 (\$253,268)
1992	\$190,448 (\$204,892)	\$457,684 (\$157,225)	\$648,132 (\$362,113)
1993	\$225,000 (\$101,842)	\$260,101 (\$234,293)	\$485,101 (\$336,135)
1994	\$170,000 (\$121,396)	\$341,050 (\$200,921)	\$511,050 (\$322,317)
1995	\$115,000 (\$103,465)	\$357,430 (\$126,377)	\$472,430 (\$229,842)
1996	\$120,000 (\$178,521)	\$413,575 (\$170,232)	\$533,575 (\$348,753)
1997	\$160,000 (\$236,487)	\$373,025 (\$160,678)	\$533,025 (\$397,165)
1998	\$250,000 (\$50,369 ¹¹⁵)	\$354,150 (\$60,877)	\$604,150 (\$111,246)

In addition to our finding that funding for staff development is below industry and government averages, information from interviews with subject matter experts indicated that the Training and Career Development Branch lacks sufficient staff to handle the GPO's training needs. The Training and Career Development staff has been reduced by 70 percent in the past 4 years (from 10 full-time specialists to 3). Additionally, the current staff lack the expertise and background in instructional design, development, and delivery that they need to provide leadership in integrating staff development into the overall achievement of the missions of GPO. The chief of Training and Career Development position has been vacant for 3 years, and the individual temporarily filling this position has no formal education or experience in training and development.

Recommendation 20. GPO should allocate the resources and personnel that the Training and Career Development Branch must have to play a major role in developing needed skills among GPO's workforce and be positioned to meet the challenges of developing future capabilities.

Financial investments in competing priorities are the most unambiguous measures of their relative importance to an organization. If adequate funds and other resources are not designated for training, staff development cannot be viewed as a priority. To function effectively, GPO's training function should be staffed by training and instructional design experts who play a highly visible role in integrating staff development with the strategic goals of GPO.

Several interventions are necessary to improve the effectiveness of the Training and Career Development Branch. First, GPO should hire a permanent Chief of Training and Career Development who possesses a formal education or experiential background in training. Second, a skills assessment of training personnel should be conducted to

⁶² Training budget and expenses statistics maintained and provided by GPO financial personnel.

⁶³ In-house training includes money paid to contractors providing training to GPO employees.

⁶⁴ Amount spent to date.

determine what competencies exist in-house and whether they are sufficient to meet GPO's training needs. GPO management can then either select competent staff to fill open training positions or use outsourcing opportunities.

Finding 21. Despite a few effective training practices, adequate training is generally unavailable to the majority of GPO employees.

Although a few effective training practices exist at GPO (e.g., apprentice programs, computer labs), the picture that emerges about training across GPO is that it is inconsistent in quality and availability. As demonstrated in Exhibit 5-21, employees who participated in our employee survey had various negative reactions to the training opportunities at GPO.

**Exhibit 5-21
Employee Responses to Selected Training Questions**

Survey Question	Percentage of Respondents Who Disagreed or Strongly Disagreed
18. I am encouraged to build new skills.	46
21. My supervisor actively supports my efforts to learn outside GPO.	52
22. I am provided with training when new tools and technologies are introduced.	46
24. Training is available when I need it.	54
28. GPO cares about my long-term career growth and development.	58
81. Overall, I am satisfied with the training opportunities provided to me at GPO.	45

Employee access to training opportunities at GPO is hindered by the recent requirement that the Deputy Public Printer approve all training requests. Additionally, as shown in Exhibit 5-22, a substantial number of the 85 courses listed in the Training and Career Development Branch's 1997 *GPO Training Catalog* are not currently offered.

There are several reasons for the unavailability of training at GPO. First, although Training and Career Development maintains waiting lists for all courses, courses with insufficient enrollment are not delivered. An aggravating factor is that individuals on a waiting list are not formally notified that the course they want will not be offered.

**Exhibit 5-22
GPO Training Catalog Course Offerings and Actual Course Availability in 1997**

Course Category	Number of Courses Listed	Availability of Courses
Personal Computer Applications	39	Many are currently available. Courses are being revised due to migration to new operating systems.
Management and	9	GPO-2 and GPO-3 are mandatory courses that were not

Course Category	Number of Courses Listed	Availability of Courses
Supervisory		offered from 1993–1997. Currently providing GPO–3 course to approximately 15 supervisors. Other courses not currently offered.
Clerical and Secretarial	16	Many courses not given because of low enrollment.
Craft and Trade	4	Only available to participants in the apprentice programs.
General Skills	9	Many courses not given because of low enrollment. Includes courses given in past with no current agendas or materials.
Retirement Planning	3	Currently available.
Wellness	5	Many currently available; offered by Occupational Health and Environmental Services.

Second, GPO policy states that training must be related to an individual's current job, and this policy can lead to rejections of applications for training that is directly job-related (e.g., cardiopulmonary resuscitation [CPR] training for anyone not working on an emergency squad).

Finally, many of the courses in the catalog actually represent *potential* course offerings rather than existing courses with formal agendas and materials. In addition, courses given in the past (e.g., *Train the Trainer*) are still included in spite of the fact that they have not been offered in several years. For each course category, Exhibit 5-22 indicates the status of course offerings.

Recommendation 21. GPO should increase access to training by updating course offerings and delegating approval authority to managers.

Training opportunities need to be made more available to the majority of GPO employees. As a first step, the course catalog needs to be updated to reflect both the actual courses available and the results of the strategic needs assessment. Any courses included in the catalog should meet specific requirements stated in the GPO training policy (e.g., a course must have objectives and a curriculum).

In addition to course listings, the catalog should offer specific information about the required course sign-up process (e.g., number of enrollments necessary for each course). We also recommend that listings for Craft and Trade courses be eliminated from the catalog because those courses are only offered to members of apprenticeship programs.

Once all changes to the catalog have been made, we recommend that it be republished and distributed to all employees. Finally, Booz·Allen recommends opening up training opportunities for employees by delegating the authority for approving training requests to line managers. Managers should be encouraged to provide access to training for their employees, and consequences for managers who do not adhere to the training policy should be identified.

5.8 LABOR-MANAGEMENT RELATIONS

The presence of a union within an organization presents human resources challenges, and multiple unions within an organization multiply those challenges. It has been argued that unions act as an outside influence with outside representation that organizations must interact with on a daily basis. However, it can also be said that a union is simply an internal force made up of employees within an organization.

An organization's philosophical view of unions can play a fundamental role in the conduct of labor-management relations within that organization. Relations can vary from almost constant conflict to a relationship that is based on cooperation. To a large extent, it is simply expected that labor and management view each other as opponents based on the adversarial roles that are part of a labor-management relationship. Effective labor-management relations respect these inherent differences and strive for a balance in the relationship.

The Labor and Employee Relations organization at GPO consists of three branches: Labor-Management Relations, Employee Relations, and Workers Compensation. Among the branches' responsibilities are the following:

- Labor relations under Title 5, section 7100
- Advising supervisors concerning employee relations issues
- Preparing all disciplinary actions
- Administering agency programs such as the Combined Federal Campaign, the Savings Bond drive, and the Suggestions program.

The Labor and Employee Relations staff consists of a Chief of Labor and Employee Relations, 13 professional staff, and 3 clerical staff. The Chief of Labor and Employee Relations has been with GPO for 22 years and has extensive labor relations experience.

There are 16 unions with 21 bargaining units covering workers at the GPO. Of the 16 unions, 11 are members of the Joint Council of Unions (JCU). The majority of GPO unions have a Master Agreement that covers their common issues. In addition to the Master Agreement, most unions have their own supplemental agreements, which are standard in nature and cover issues specific to their respective unions. At least two of the unions have individual union contracts and do not participate in JCU activities. Exhibit 5-23 shows the number of GPO employees represented by several unions and the number and percentage of employees in those unions who are paying dues.

Exhibit 5-23
Analysis of Bargaining Unit Employees at GPO as of October 7, 1997

Labor Organization	Bargaining Unit	Number of Employees Represented	Number of Dues Paying Members	Percentage Dues Paying Employees
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Labor Organization	Bargaining Unit	Number of Employees Represented	Number of Dues Paying Members	Percentage Dues Paying Employees
FOP Lodge #1	Police, GPO Central Office	42	29	69
AFGE Local 2876	White collar employees in GPO Central Office	995	312	31
Maintenance Local 1937	Painters, GPO Central Office	7	6	86
CTU Local 101	Printers, EDP Journeymen GPO Central Office	292	196	67
GCIU Local 4-B	Bookbinders, Journeymen Bindery Workers	127	82	65
GCIU Local 285-M	Offset Strippers, Photographers	71	63	89
IAM Local 2135	Machinists, Auto Mechanics, Welders	32	28	88
IBEW Local 121	Electricians, Elevator Mechanics, Stationary Engineers, Planners/Schedulers, Telecom. Installers	66	53	80
SMWIU Local 100	Pipefitters, Sheet Metal Workers	22	14	64
UB of C&J	Carpenters	14	11	79
Federal Printing Workers' Union	Printing Plant Workers	782	481	62
Photo Offset Union	Offset Platemaker, Strippers	39	32	82
GCIU Local C-1	Pressmen, Masonry Workers	173	127	73

The JCU has a Chair who is responsible for leading the bargaining committee charged with negotiating the Master Agreement between GPO and all constituent unions. The JCU Chair also presents the unions' response to actions that affect the workforce and represents GPO unions collectively before Congress and the Joint Committee on Printing.

FINDINGS AND RECOMMENDATIONS

The purpose of this aspect of the Booz-Allen audit was to assess the effectiveness of GPO's overall labor-management relations program. During our assessment, we conducted focus groups, structured interviews, and an employee opinion survey, and we reviewed relevant internal policies. We concluded that labor-management problems at GPO relate to a lack of training in the labor-employee relations program, a lack of communication, and an overall reactive stance when faced with employee relations issues. Interviewees from both labor and management interviews and focus group participants expressed frustration with the communication problems within GPO and with the lack of training in the areas of labor and employee relations.

Finding 22. Lack of training in labor relations and employee relations leaves the agency at risk of violating employees' rights under the existing union contracts.

Data obtained from interviews and focus groups with GPO managers, union representatives, and employees revealed that training in labor and employee relations is virtually nonexistent. The primary employee relations training currently being conducted is the policy training for "Zero Tolerance for Violence in the Workplace" and the drug and

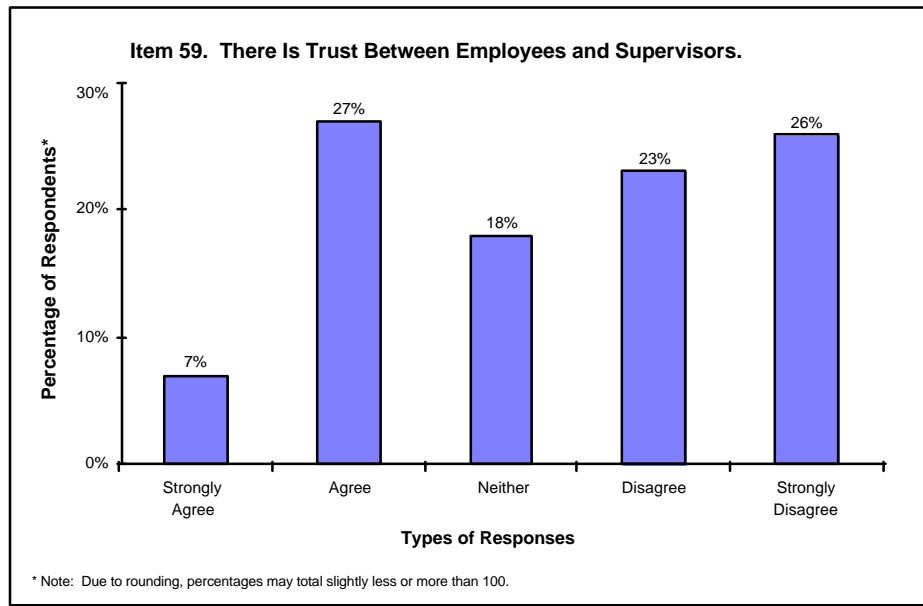
alcohol testing policy. In addition, recently there was no updated supervisory manual for issues pertinent to management's relationship with the unions, and supervisors indicated they were unaware of union employees' rights. (Note that, as of the writing of this report, supervisors attending the re-implemented GPO III course in 1998 received labor and employee relations materials.) Focus group participants told us that they had been encouraged by their supervisors to file grievances because the supervisors were unsure of employees' rights under the existing contracts. In addition, the perception of focus group participants was that the lack of supervisory training in employee relations has led to inconsistent handling of disciplinary actions, despite the employee relations' framework for handling cases in a uniform manner.

Grievance procedures are used when an employee feels that his or her rights under an existing contract have been violated. These procedures are designed so that grievances can be settled close to the time of the incident, but a lack of training in labor relations often leads to grievances proceeding to the third step of the grievance procedure rather than being resolved at the time of incident.

Focus group and survey participants also indicated that there is a general lack of trust between employees and supervisors. This lack of trust is based on the supervisors' lack of knowledge concerning company policies and contractual issues. As shown in Exhibit 5-24, nearly one-half (49 percent) of employees disagreed or strongly disagreed that there is trust between employees and supervisors (Item 59).

In the past, GPO has conducted two very successful courses involving labor-employee relations, but these courses are not being offered at this time. Focus group participants indicated that these two internal training courses (GPO-II and GPO-III) provided detailed information and training to supervisors regarding labor-employee relations issues. Supervisors and managers alike touted the courses' success. Without these courses, new supervisors receive no training at all in the area of labor and employee relations.

Exhibit 5-24
Trust Issues Between Employees and Supervisors



Recommendation 22. GPO should reinstitute the employee relations training for supervisors.

As already noted, focus group participants cited a lack of trust between supervisors and employees stemming from a lack of supervisor knowledge of the policies they must enforce. For this reason, Booz·Allen recommends the reinstatement of routine supervisor training that focuses not only on individual union members' rights, but also on the rights and demands of the unions. If they are to administer existing union contracts fairly on a daily basis, supervisors must clearly understand the provisions of the contracts. Greater supervisor awareness of union issues will increase the level of trust, open communication between management and unions, and decrease the risk of violating individuals' rights under existing union contracts.

To increase levels of trust within their organizations, agencies such as the Internal Revenue Service and the U.S. Patent and Trademark Office are training their supervisors to use alternative resolution techniques (ADR) when dealing with employee relations issues. GPO had the foresight to address ADR techniques in its GPO 2001 report. The report presented a proposal to create a dispute resolution policy based on the provisions of the congressionally supported Administrative Dispute Resolution Act. Although ADR techniques are not appropriate for resolving all types of disputes or conflicts, training based on the existing GPO courses as well as ADR techniques can address the inadequacies uncovered in our study and can potentially decrease the number of grievances filed.

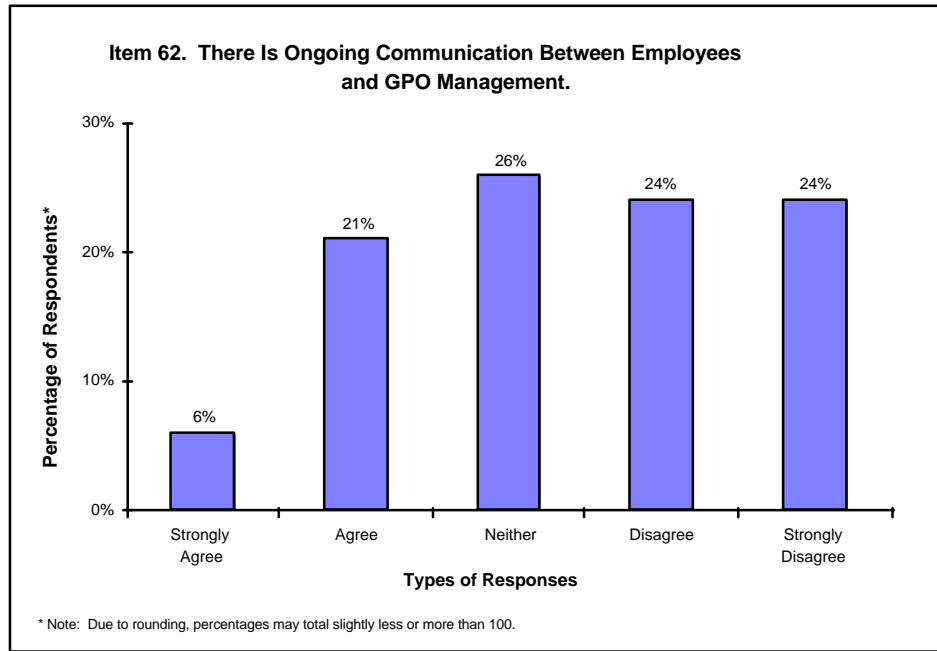
Finding 23. Effective formal communication between labor and management has led to successful outcomes. Little informal communication occurs between labor and management outside that required for negotiation of high-impact issues.

Formal communication between GPO labor and management has been very successful in both past and recent policy negotiations, as demonstrated by the successful negotiation of high-impact policies. Indeed, before GPO makes any change to a published GPO policy or instruction, management sends a copy of the proposal to all unions that may be affected, affording them the opportunity to negotiate the impact and implementation of the changes. However, the success achieved through formal communication may not be achieved with informal communication efforts. Our focus groups and interviews revealed that, although both labor and management believe that the quality of formal communication when negotiating policies is high, labor is less convinced than management that informal communications are adequate. For instance, management indicated that the unions are often invited to attend briefings or meetings that would be of interest to them. Union officials, on the other hand, indicated that these briefings and/or meetings are too infrequent to be considered an avenue of communication with management. (It should be noted that Federal collective bargaining is process oriented by nature and that contractual issues also affect informal communication. To some degree, informal communication is limited because communication is not possible during the course of negotiations. Day-to-day communications must follow the provisions of the union agreements, e.g., managers cannot meet with employees without union representation.)

Employees speaking out in the focus groups and the survey also expressed dissatisfaction with the level of communication between GPO management and employees in general. As shown in Exhibit 5-25, 48 percent of employees surveyed either disagreed or strongly disagreed that there is ongoing communication at GPO between GPO employees and management (Item 62).

Management has recently made some efforts to improve communication. After the negotiations concerning the flex-time policy, labor relations held briefings for more than 1,000 white-collar employees and supervisors regarding the new policy.

Exhibit 5-25
Communication at GPO



Recommendation 23. GPO should develop systematic ways to increase communication between labor and management.

Management and high-ranking union officials appear to have a relationship based on mutual respect and a common belief in the GPO as a valuable institution. They have demonstrated the ability to communicate effectively with each other over many high-impact issues. Issues such as “Zero Tolerance of Violence in the Workplace,” drug and alcohol testing, flex-time, and the reduction in the night-shift differential are policies that heavily affect the workforce at GPO, as they do employees across all Federal agencies. GPO labor and management realized the importance of these issues and negotiated them effectively. However, perhaps because of a general lack of communication within GPO, this information may not be disseminated to the general workforce. To begin to improve and foster effective labor-management relations, Booz-Allen recommends that GPO identify opportunities to inform the workforce of these successful negotiations. More specifically, we recommend the development and distribution of a monthly newsletter that would enable GPO to provide timely information concerning upcoming events and activities. The existing GPO newsletter, the *Typeline*, is distributed too infrequently to provide up-to-date information, and unfortunately, the GPO grapevine serves as the primary means for distributing information.

In addition to a monthly newsletter, we recommend periodic briefings such as the one conducted for the flex-time policy. Briefings provide opportunities for labor and management to present information in a cooperative format.

Finding 24. Labor and Employee Relations takes an overall reactive stance when dealing with disciplinary issues.

Currently, disciplinary issues (e.g., abuse of leave policy) are not regularly tracked or analyzed by department, issue, or action taken. The resulting lack of historical data weakens the position of GPO Labor and Employee Relations in attempting to prevent issues from occurring again. Further compounding the problem is the lack of employee relations training already addressed in this report. New supervisors receive little if any employee relations training except on an ad hoc basis, which can result in inconsistent application of policies and disciplinary actions and possibly in employee rights violations.

Recommendation 24. GPO should adopt a proactive Labor and Employee Relations stance to address repetitive disciplinary issues.

Recently, GPO Labor and Employee Relations instituted changes in the disciplinary process, moving away from a punitive system toward a more corrective system. This is the first step in changing the overall negative perception of employee relations. Currently, repetitive disciplinary issues such as the abuse of leave policy are only addressed in a reactive manner. To begin to address these repetitive issues more proactively, we recommend that GPO update and improve its disciplinary action tracking system to include not only the types of disciplinary actions, but also the frequency of actions and their outcomes. Supervisory training can then be linked to this tracking system to address potential causes and handling of repetitive issues. In addition, management should conduct a review of existing GPO policies to determine possible issues with interpretation and appropriateness. By identifying the problem areas and linking training to these issues, management will adopt a more proactive stance and potentially eliminate many repetitive disciplinary issues.

Organizations can institutionalize their disagreements based on the history of the organization; however, the development or reinstatement of an effective labor-management relationship can reduce these problems.

As a step toward showing how GPO can be more effective in providing printing products/services, Booz-Allen identified the strengths, weaknesses, opportunities, and threats (SWOT) relevant to the personnel function. They are presented in Exhibit 5-26.

**Exhibit 5-26
SWOT Matrix**

Strengths	Weaknesses	Opportunities	Threats
<ul style="list-style-type: none"> • Existence of quality instructions and policies that could be used to support the human resources infrastructure (e.g., awards, incentives). • Existence of previous strategic human resources planning efforts (e.g., GPO 2001 draft strategic plan offers several innovative solutions). • Availability of tools to improve human resources activities (e.g., interview guide and training manual). • Experienced workforce dedicated to GPO's mission. Employees feel part of the team. • Existence of corporate memory and past successes, which can be leveraged to identify solutions to current problems. • History of effective communication and negotiations between labor and management when faced with major issues (e.g., alcohol and drug policy, night-shift differential). • History of effective use of teams. • General satisfaction of employees, particularly blue-collar employees, with their compensation packages. <p>Intranet application for human resources now being tested on a pilot basis.</p>	<ul style="list-style-type: none"> • Failure to implement or inconsistent application of existing instructions, plans, and strategic recommendations. • Failure to communicate formally and informally, both cross-functionally and within departments. • Lack of meetings. • No continual evaluation and updating of human resources practices and policies. • Lack of accountability of managers and employees to achieve clear and measurable performance levels. • No formalized incentives to perform job well. • Awards program discontinued. • No pay for performance. • Lack of integrated strategy for managing human resources. • No plan to replace aging workforce. • No succession plan. • No plan to incorporate new skills required with changing technology. • Lack of importance placed on training. • Insufficient attention/coordination between human resources functional areas to manage the personnel lifecycle (e.g., selection, performance management, training, career development). <ul style="list-style-type: none"> • Lack of proactive approach to resolving 	<ul style="list-style-type: none"> • OPM now allowing for more creative and flexible options (e.g., for compensation and staffing). • Availability of advanced technologies to foster more effective human resources activities. • Availability of information about best practices in human resources. • Increasing support for human resources transition from an administrative function to a strategic business partner. • Evidence supporting the importance of assessing satisfaction of internal and external customers and the opportunity to conduct such an assessment (e.g., via focus groups, surveys). • Potential for outsourcing specific human resources functions (e.g., benefits, payroll, training) to increase effectiveness and reduce costs. 	<ul style="list-style-type: none"> • FTE and budget constraints imposed by Congress. • The Government move toward privatization, which increases the competition for GPO's services. • Other local printing organizations, which may attract employees and draw business away from GPO. • The evolution of printing into a high-technology business, requiring organizations to update skills and equipment rapidly in order to remain effective and efficient. • The move toward electronic dissemination of information, forcing GPO to reconsider its business mission and vision. • Increased awareness of employee rights (e.g., EEO, workers' compensation) increases the likelihood of expensive litigation unless proper training and intervention is conducted.

Strengths	Weaknesses	Opportunities	Threats
	<p>human resources issues, i.e., changes are implemented in reaction to crises.</p> <ul style="list-style-type: none">• Inadequate computer systems available to provide managers with human resources information.• Information needed to evaluate human resources practices (e.g., trends in disciplinary issues, position management activities) not tracked by human resources management.• Corporate culture characterized by inertia and fear of organizational change.		

6. FINANCIAL MANAGEMENT

6.1 BACKGROUND

The following subsections describe the legal authority and history of U.S. Government Printing Office (GPO) financial management.

6.1.1 Legal Authority for U.S. Government Printing Office Financial Management

Section 308 of Title 44 is the basis for the GPO financial organization as it exists today. This section authorizes the Public Printer to appoint a disbursing officer, a deputy disbursing officer, certifying offices, and employees. Because GPO is a legislative agency, it is not mandated by public laws to follow the various acts that have been passed to improve financial management of executive agencies within the Federal Government. However, GPO has made efforts to comply with some of the acts, such as the Chief Financial Officers Act of 1990 and the Government Performance and Results Act of 1993.

6.1.2 Evolution of GPO Financial Management

The financial management history at GPO demonstrates that the agency has had considerable experience as a business-oriented operation. Characteristics of this business orientation are—

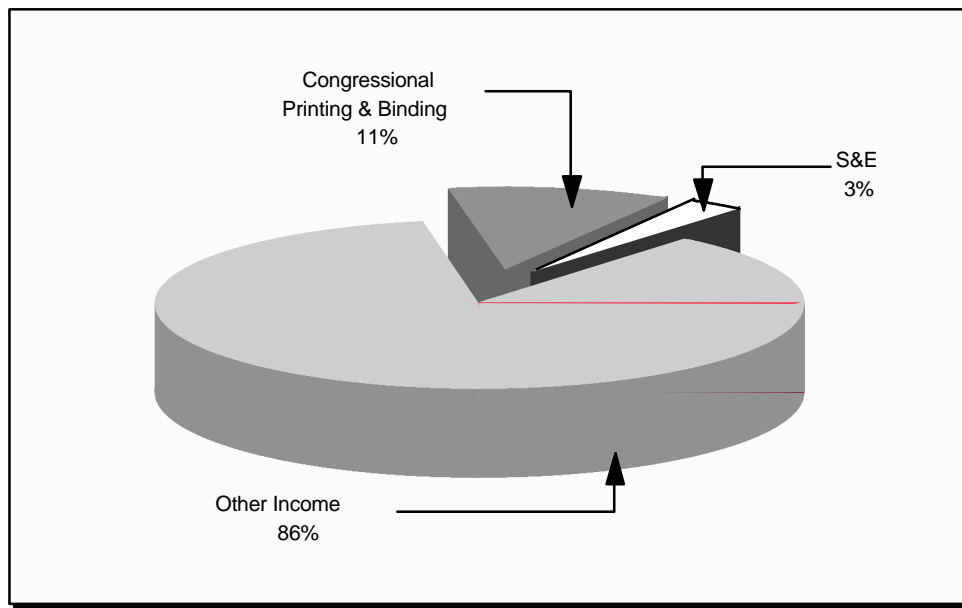
- Funding sources that include a large Revolving Fund
- A comprehensive cost accounting system that collects costs for printing, and
- Accrual-based accounting.

6.1.2.1 Funding Sources. As shown in Exhibit 6-1, GPO receives funding from the following sources:

- The Congressional Printing and Binding Appropriation finances the printing and binding of publications authorized by law for the use by members of Congress, for the printing of congressional stationery, for preparation of the semi-monthly and session indexes of the *Congressional Record*, and for the printing and binding requirements of the Architect of the Capitol. The appropriation for Fiscal Year (FY) 97 was \$81.7 million.
- The Salaries and Expense Appropriation is used by the Superintendent of Documents to fund labor and related expenses for programs, such as the distribution of publications to the depository libraries, cataloging and indexing of government publications, and distribution of certain publications as required by law, e.g., the International Exchange program. The appropriation for FY 97 was \$27 million.
- The Revolving Fund was established on July 1, 1953, as a fund that is available without fiscal year limitations for the operation and maintenance of the Government Printing Office. Revolving Fund accounts finance a continuing cycle of operations with receipts derived from operations. These are Printing and Binding Operations,

which include printing, binding, and distribution services, and Sales of Publications Operations, which include sale and distribution of publications to the public. Congress has added funding to the Revolving Fund since 1953, primarily for land, buildings, and working capital. An example of added funding was \$12.9 million appropriated by Congress during the 1970s for air conditioning equipment. The Revolving Fund is to be reimbursed for the cost of all services and supplies furnished, including other appropriations of the GPO, at rates that include charges for overhead and related expenses, depreciation of plant and building appurtenances (except building structure, land, and equipment), and accrued leave. The Revolving Fund makes up the majority of the sources of funds for GPO. Income from other government agencies and the general public makes up the majority of GPO funding. In FY 97, this income was \$682 million or 86 percent of the total funding.

Exhibit 6-1
FY 97—Sources of Funds



6.1.2.2 Adoption of Cost Accounting. GPO has been using a cost accounting system since 1961. The system is based on the traditional method of collecting costs and allocating costs for a manufacturing operation. These costs are collected to create standard rates for the various products that GPO prints in-house. Each printing production operation is identified by a particular operation and class code. GPO tracks over 2,000 activities making up these operation and class categories. The cost accounting system reports costs by activity, product, organizational unit, appropriation, and vendor.

6.1.2.3 Accrual-Based Accounting. Since 1951, GPO has been using accrual accounting, and GPO financial statements reflect this accounting basis. Under accrual accounting, the cost of the risk assumed is recognized at the time the commitment is made. In the past, most government outlays and receipts have been reported on a cash basis (cash-based accounting) in which receipts

are recorded when received and expenditures are recorded when paid. Cash-based accounting has the advantage of reflecting the cash borrowing needs of the Government. However, decisions can best be made if the Government recognizes the costs of its commitments at the time it makes them. Under the Chief Financial Officers Act of 1990, accrual-based financial statements are required for all executive agencies. GPO has been a leader in providing Congress accrual-based accounting and financial statements.

6.1.2.4 Current Financial Picture. GPO has faced a reduction in its revenues over the past several years. Revenue for FY 97 is \$791.0 million with expenses of \$783.0 million. A portion of the profit in the current year was reduced by a workers' compensation adjustment required by the Department of Labor that, according to GPO, will increase personnel expenses by \$3.6 million. The Department of Labor originally estimated this expense at \$24 million. A final reconciliation must still be made. Exhibit 6-2 summarizes GPO's FY 97 operations.

**Exhibit 6-2
FY 97 GPO Operations***

	In-House	Regional	Procured	Other	Sales	Aggy. Dist.	S&E	Total GPO
Revenue	195.5	2.2	488.1	2.6	70.3	4.9	27.8	791.4
Expenses	186.2	2.8	490.5	2.1	68.4	5.1	27.8	782.9
Income/ Loss	9.3	(0.6)	(2.4)	0.5	1.9	(0.2)	-	8.5

Source: Unaudited 1997 Statements (in Millions)

* Does not include eliminations for intra-office transactions

During FY 97 there were nine in-plant rate increases and a one-time adjustment of prior year revenue totaling \$12 million. GPO revenues exceeded expenses by more than \$8.5 million for FY 97. This excess could be lower depending on the reconciliation of the adjustment for workers' compensation. The relative program volume is presented in Exhibit 6-3. GPO's future financial picture includes slight increases in budget projections (for the 1998/1999 budget of about 2 percent per year).

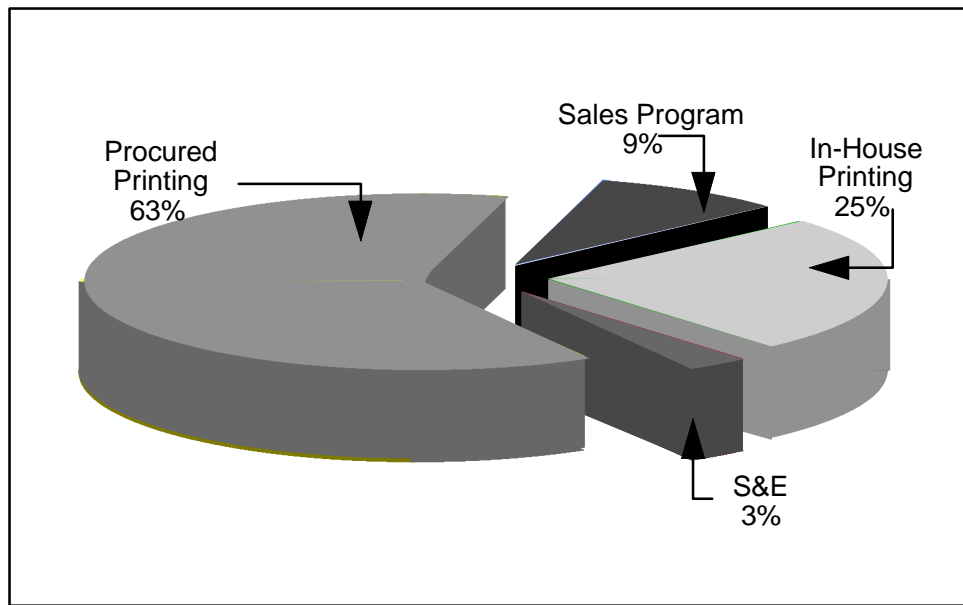
6.1.2.5 Recent Organizational Changes. The GPO financial management organization has had the following three alignments in recent years:

- The 1978 GPO Instruction 105.1B, *Organization and Functions of the Government Printing Office* (March 17, 1978), identifies the Comptroller as providing total financial management for GPO. This included financial operations, rates and production analysis, accounting policies, and budget and financial management

information. The Comptroller reported to the Assistant Public Printer for Management and Administration.

- In 1990 the Assistant Public Printer, Chief Financial Officer (CFO) position was established, with the Office of Financial Management (including those functions formerly reporting to the Comptroller) reporting to the CFO. Later the Office of Planning was added to the CFO's responsibilities.
- In June 1993 the CFO position was discontinued, and the Office of Budget was established, reporting directly to the Public Printer. The rate and pricing development function was included in the Office of Budget.

Exhibit 6-3
FY 97 Program Revenue



6.2 APPROACH

This section describes the approach used to evaluate GPO's financial management systems. Our objective was to evaluate the adequacy and completeness of GPO's Budgeting, Accounting, and Financial Reporting Systems. The evaluation considers the adequacy and completeness in terms of methodology, presentation, clarity, reliability, and ease of interpretation. We assessed GPO's financial operations and systems based on two major criteria:

- **Effectiveness**—This criterion measures whether financial management services deliver the appropriate degree of control, measuring, reporting, and service to meet the objectives of the financial management organization.
- **Efficiency**—This criterion assesses whether the optimum amount of resources (i.e., staff, information systems, and time) is used in delivering the appropriate quantity and quality of financial management services.

We also looked at whether methods and procedures pertaining to the financial management of GPO are adequate, whether they are incorporated in information systems, and whether they support agency requirements. We appraised the effectiveness of information technology in supporting financial management goals and reviewed business processes at daily operating levels, comparing them with best practices in the Government. Additionally, we assessed financial reporting that focused on financial information not included in the controls of the management information system.

We use the term "financial management" as an abbreviated term to refer to Budgeting, Accounting and Financial Reporting Systems.

6.2.1 Financial Audits

As required by Title 44, GPO's financial management is subject to financial audits at least once every three years. Although there is some similarity between a financial audit and a management audit of financial management functions, a management audit differs from a financial audit in the following ways:

- The purpose of a financial audit is to determine whether an organization's financial statements have been prepared in conformity with generally accepted accounting principles. A related purpose is to determine whether the internal accounting controls of an organization are sufficient to meet established objectives of the organization.¹¹⁶
- A management audit of a financial management function examines the performance of processes and systems to provide information that improves accountability and enhances decision making.
- Conclusions derived from this management audit will address the following specific areas:
 - Ease of interpretation of financial reports
 - Usefulness of output data and controls.
 - Responsiveness of financial management to stakeholder and user needs
 - Ability to support GPO pursuit of future opportunities or operational changes.

Several GPO audits have been conducted recently, including—

- Financial Audit, U.S. Government Printing Office's Financial Statements for Fiscal Year 1992 (GAO/AFMD-93-62), conducted by Arthur Andersen LLP. This audit was supplemented by tasking under which Arthur Andersen studied GPO's financial and management systems in great detail. This study was published as a letter to the Chairman, Joint Committee on Printing and to the Comptroller General, dated July 30, 1993.

¹¹⁶ United States General Accounting Office, Financial Audit, U.S. Government Printing Office's Financial Statements for Fiscal Year 1995, GAO/AIMD -96-52, p. 4.

- Financial Audit, U.S. Government Printing Office’s Financial Statements for Fiscal Year 95 (GAO/AIMD-96-52), conducted by Arthur Andersen LLP. This audit also was supplemented by tasking under which Arthur Andersen studied GPO’s financial and management systems in great detail. This study was published as U.S. Government Printing Office, *Comments and Suggestions for Consideration* (January 1996). A survey was conducted of GPO actions taken to comply with *Comments and Suggestions for Consideration*, and findings are listed in Appendix I.

We assumed that because the financial statements audited by Arthur Andersen were presented in accordance with generally accepted accounting principles, the financial data are fair. This study does not attempt to duplicate the financial audit effort conducted by Arthur Andersen.

6.2.2 Methodology

We assessed GPO financial management under three specific areas:

- Staff/Organization, which evaluates the skill levels, organizational alignments, and tenure of personnel performing financial management tasks
- Processes, which evaluates the procedures by which a financial management task is performed
- Systems, which assesses financial information system technologies, functionalities, and operating capabilities supporting the financial management process.

For purposes of this study, GPO financial management functions were segmented in several ways. Budgeting is considered a stand-alone function. The pricing function, which is part of the GPO Office of Budget responsibility, is included in Budgeting. Accounting and Financial Reporting Systems are considered as one function, because the Office of Comptroller is responsible for accounting functions and reporting the results.

Appendix J lists individuals interviewed in the study, and Appendix K lists documents reviewed. Appendix L lists process flows of major functions.

6.2.3 Organization of the Report

The segmentation of GPO financial management functions for analytical purposes has been described above. This section of the report is organized to follow the segmented approach, and is detailed in Exhibit 6-4.

**Exhibit 6-4
Organization of the Report**

Financial Management Function	Analysis of Staff/Organization	Analysis of Processes	Analysis of Systems
Budgeting	Finding 1	Findings 2-6	Finding 7
Accounting & Financial Reporting Systems	Findings 8-9	Findings 10-12	Findings 13-14

FINDINGS AND RECOMMENDATIONS

Staff/Organization—Budgeting

The Budget Office is organized by funding source. Three organizations, each headed by a Supervisory Financial Data Analyst, are responsible for—

- The Revolving Fund, which includes Printing Procurement
- Congressional Printing, which includes in-plant production and establishing rates
- Superintendent of Documents, which has its own appropriation as well as revolving fund activities.

The Director, Office of Budget, reports to the Public Printer.

Finding 1. The Office of Budget Personnel have a high level of subject matter expertise.

Extensive interviews with Office of Budget personnel showed that there is substantial experience and a strong knowledge base of GPO budgeting processes, the accounting processes associated with budgets, and the operations of the line functions. Although a variety of training and experience qualifies personnel for the budgeting function, one indicator that a person possesses expertise in accounting and financial systems is the Certified Public Accountant (CPA) credential. The Office of Budget has two employees with CPAs out of 16 personnel as of September 1997.

Processes—Budgeting

Description of Budgeting Process. GPO's budget cycle includes an appropriated budget and an internal budget for the Revolving Fund. GPO executes appropriated budgets for the Congressional Printing and Binding (CP&B) Appropriation and for the Salaries and Expenses (S&E) Appropriation. For the Revolving Fund, GPO maintains a business type budget.

The budget cycle begins with development of a requested budget, proceeds through the review and approval process, and ends with monitoring actual expenditure performance compared with the budget. Budget formulation includes the following steps:

- The Office of Budget releases a budget call (BUDCALL) to all GPO organization cost code managers. The document provides instructions to the organization cost code managers on how to prepare their budget requests and includes directions on the justification required. The BUDCALL includes a diskette (in DB3 format) of data for each cost code.
- Each cost code manager prepares a 2-year budget based on his/her plans for the upcoming years and historical expenditures. The cost code managers prepare their input using the diskette and return it to the Office of Budget.

- The Office of Budget reviews the budget requests, compares them to actual reports, and presents a recommended budget to the Public Printer. The Office of Budget negotiates with cost code managers concerning any differences between their requested budgets and the recommended budget that is approved by the Public Printer.
- The Office of Budget prepares the *U.S. Government Printing Office Budget Justification*, also called the *Blue Book*. The *Blue Book* includes the request for appropriated funds, a report on budget performance for the prior year, and a year-to-date status of budget performance for the current year. *Blue Book* contents are incorporated into the President's budget request to Congress.
- During the budget hearings (after the President's budget is submitted to Congress), the Public Printer testifies before Congress to justify the GPO budget.

Each fiscal year, GPO receives funds from Congress via the Legislative Branch Appropriation Act. The U.S. Treasury then issues a warrant to GPO for the two appropriated funds, Congressional Printing and Binding, and Salaries and Expenses. The GPO General Ledger and Property Section receives a copy of these warrants and creates entries to the appropriation ledgers. Funds are expended through the Revolving Fund by cost codes, with subsequent billings to the appropriations for expenditures made against the appropriations.

GPO records obligations when work is ordered and expenditures when cash payments are made. At the end of the fiscal year, funds are obligated based on forecasted expenditures for expenses that are in process.

Description of Rate Development Process The Office of Budget performs the rate development process by which prices for the activities required to print jobs are determined. Rates are based on the historical cost of performing the production operations for a print job. The goal of setting rates, stated in Title 44, Section 309, is to break even each year. GPO does, however, include a surcharge of 2 percent or less to fund capital improvements.

Each production operation has been identified by a unique operation and class. Employees report their labor by operation and class through the Production Reporting for Operations Budgeting and Expenditures (PROBE) system. PROBE feeds other accounting systems such as payroll and Work-in-Process (WIP). WIP captures the labor hours reported and the expenses for each operation, and transmits data to the Hour Cost Books of the cost accounting system. The Hour Cost Books also accumulate, by operation and class, other expenses such as production supplies, maintenance, depreciation, section burden, and overhead. They also provide the information (based on standard costs) to the Jacket Billing system for invoicing and send actual costs to the rates evaluation team for comparison and future rate determination.

Section burden, an indirect cost occurring in the Production organization, includes supervisory and clerical labor, sick, annual and holiday leave, military and jury duty leave, internal work orders and spoilage. The cost of section burden is distributed to the operations performed in that section based on the number of direct labor hours reported (see Appendix M).

Overhead is an indirect cost occurring outside the Production organization and includes expenses for administrative support services such as payroll and personnel, buildings expense, departmental and divisional managers, and administrative support. Overhead costs are distributed to revenue-generating activities based on the appropriate criteria of either total revenue, space occupied, or the number of personnel working in that area. This cost is then redistributed to specific operations and classes in the same manner that section burden is distributed (see Appendix N).

Individual rates are developed for keyboarding composition, details to Congress, and certain machine operations. Rates for plates and negatives are developed in the same manner as the individual rates, but the cost of materials is included and charges are based on each individual plate or negative.

The rates are then converted to a scale of prices that is used to determine the job cost to the customer agency and revenue to GPO. These rates are reviewed on an annual basis and also whenever changes occur in the production process. The annual review includes a comparison of existing rates to compiled current costs, and normally rates are changed to reflect reported costs. Rates are also adjusted for changes in the units of production.

Some print jobs are billed based on a negotiated price. These jobs are accepted to fill in idle time and are calculated to recover all the direct labor and materials cost and part of the indirect as well as overhead costs.

Finding 2. Budget formulation is not linked to a formal, comprehensive strategic plan.

The annual operating and capital budgets for many organizations represent the implementation of near-term years of the organization's strategic plan. Budgets allocate the resources deemed necessary to implement the plan. Capital budgets in particular are current spending plans that benefit from strategic direction. There are several reasons for this: choices may have to be made among technology alternatives that commit the organization to a long-term direction; long-lead-time projects may require several years to acquire and install; product decisions may require capabilities that do not exist; and productivity increases that improve cost and competitiveness may have to be addressed.

The GPO strategic planning/budget formulation process differs from the practice described above in the following ways:

- The strategic plan is not current. The most recent published strategic plan for GPO was *GPO Moving Forward in the Electronic Age, A Strategic Outlook*, dated January 1993. No agency-wide strategic plans have been published since that time.
- Goals and objectives have not been adjusted to reflect the substantial changes that GPO has experienced, such as downsizing. A survey of narratives on goals and major objectives in the U.S. Government Printing Office Budget Justification

books for FY 94 through FY 99 does not show significant change in stated goals and objectives commensurate with GPO's downsizing during those years, for example, 18 percent for head count.

- A thorough understanding of the market for GPO products is not clearly stated for budget preparation purposes. An examination of the GPO budget justifications does not show evidence that systematic attempts have been made to assess GPO's customer agency printing market as an attempt to 1) explain a trend of decreasing annual printing workloads, 2) forecast future printing workloads, and 3) provide a basis for considering new products or changes in business practices as a method to replace declining printing revenues.
- The GPO capital budget formulation process does not have a systematic methodology for ranking proposed capital investment projects. This situation may have resulted from the major uncertainties that have faced GPO in recent years. Instead, management attention during the budget formulation process appears to focus on one or two major capital projects more than on a comprehensive set of needs with clearly stated investment objectives.
- GPO's FY 1997 depreciation expense was 1 percent of total expenses. The low depreciation level is a GPO competitive disadvantage to the extent that building costs are not incurred for fully depreciated buildings. It is a disadvantage if GPO is not realizing productivity improvements from strategic capital investments, is incurring comparatively high maintenance costs for old plant and equipment, and is incurring higher operating costs from an obsolete plant layout. The question can be asked whether GPO is under-investing in plant and equipment.

Recommendation 2. GPO should implement a systematic strategic planning process that provides the basis for current-year operating and capital investment budget requests.

The strategic plan would be a comprehensive assessment of GPO's environment, market, technology trends, and other factors that influence the agency. The plan would evaluate the printing versus electronic publishing technologies and customer demand in detail. A systematic strategic planning process would enhance GPO budget formulation in the following ways:

- Assumptions, goals, and objectives would be realistically developed and clearly stated.
- The workload forecasts that support the assumptions and goals would guide the detailed planning and budget justifications of individual organizations.
- GPO would have a basis to move from a budgeting approach that looks at changes to present budgets to a more comprehensive assessment of what resources would be required for the projected workload, whether it be print or electronic.

Finding 3. Functional managers are not systematically held accountable for budget expenditure variances.

Procedures to manage expenditure variances against budget include issuing budget performance reports, profit and loss financial statements, and briefings. In addition, personnel in the Office of Budget call managers with major variances to ask for an explanation and to discuss corrective actions. Although these measures appear adequate, investigation showed the following:

- Budget performance is not adequately communicated. A number of managers interviewed stated that they do not receive any budget performance reports. The question can be asked whether there is sufficient accountability if managers with expenditure authority are not informed of performance compared to budget allocations.
- Accountability would be enhanced with a more systematized process. Inquiries by Office of Budget staff to managers with expenditure variances appear to be an adequate process that produces data, but their inquiries are not a disciplined process whereby the spending manager must formally respond with explanations for major variances.

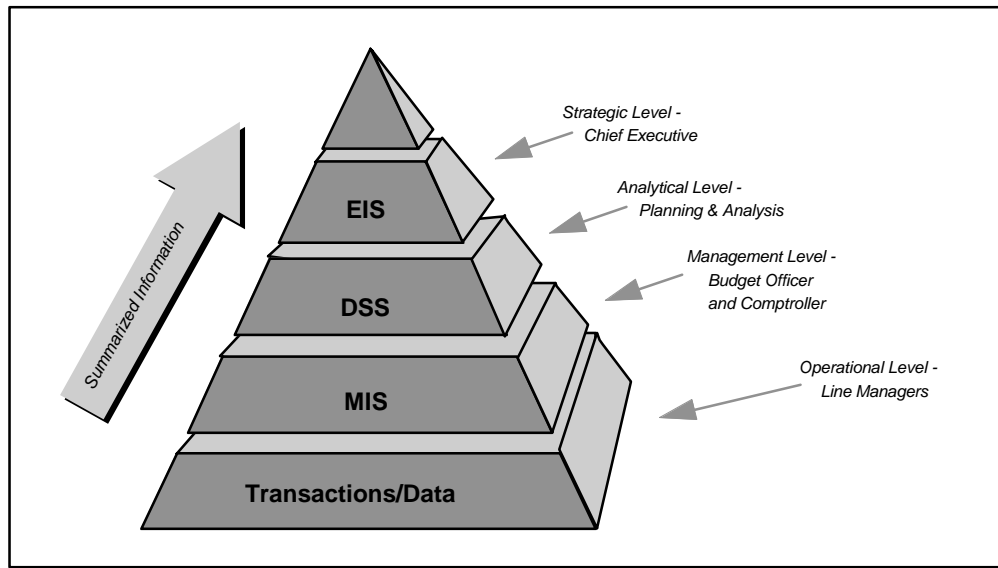
Recommendation 3. GPO should implement an executive information system that provides disciplined reporting and variance analysis response accountability.

An Executive Information System (EIS) will generate useful management reports directly from the mainframe and from pipeline data. The EIS is designed to create information and knowledge from transaction-level systems. Most EIS systems use variations of a multidimensional cube that extracts data from a relational database. This organizational construct allows users to gain insight into the meaning contained in databases by asking for the data in a particular orientation, such as time, geography, budget versus actuals, or other criteria. An EIS features the following capabilities:

- Finding relevant information in a mass of data
- Sharing meaningful information in real time
- Increasing process efficiency by presetting calculations to develop reports instantly
- Providing an overview, zooming to what is needed, and filtering out what is not needed
- Providing formalized mechanisms to disseminate reports and to require responses.

Exhibit 6-5 illustrates levels of information produced by transactions, management information systems (MIS), Decision Support Systems (DSS), and the EIS, along with users of the systems by organizational level. The exhibit shows how the data are processed and become summarized strategic information at top levels of the organization.

**Exhibit 6-5
Data/Information Systems and Users**



Finding 4. Substantial resources are expended to produce, update, and disseminate overly complex data.

Several financial processes require GPO to produce, track, update, and report extremely precise data. The cost of producing this data may exceed the benefits of its precision in terms of the effective management action that is likely to result. The data production and processing consume personnel resources, information system resources, and schedule time. Examples of overly-complex data-keeping include the tracking and reporting of expenditures against the annual Congressional Printing and Binding (CP&B) appropriation, and tracking costs and developing rates for some 2,000 in-plant printing activities.

For example, Exhibit 6-6 illustrates tracking and reporting of expenditures against the annual CP&B appropriation. The gray cells represent expenditures of current year money (i.e., expenditures against an appropriation during the year that the appropriation was made).

Exhibit 6-6
Example of Overly-Complex Data-Keeping

	FY 93	FY 94	FY 95	FY 96	FY 97	Total Expenditure	Appropriation	Expended (Percentage)
FY 93	\$ 58,924	\$ 12,413	\$ 1,002	\$ 1,056	\$ 1,605	\$ 75,000	\$ 89,591	83.7%
FY 94		\$ 60,998	\$ 12,195	\$ 2,434	\$ 8,223	\$ 83,850	\$ 88,404	94.8%
FY 95			\$ 56,780	\$ 15,703	\$ 3,118	\$ 75,601	\$ 89,724	84.3%
FY 96				\$ 60,548	\$ 11,893	\$ 72,441	\$ 83,770	86.5%
FY 97					\$ 49,839	\$ 49,839	\$ 81,669	61.0%

FY 93	65.8%	13.9%	1.1%	1.2%	1.8%	83.7%
FY 94		69.0%	13.8%	2.8%	9.3%	94.8%
FY 95			63.3%	17.5%	3.5%	84.3%
FY 96				72.3%	14.2%	86.5%
FY 97					61.0%	61.0%

Expenditures against the appropriation take place over multiple years. Highlights of the process are the following:

- The CP&B appropriation funds in-plant printing to record congressional activities that take place during the year of the appropriation. However, printing of congressional activities continues for several years after the year when the activities take place. The costs of this subsequent-year printing are funded by the original appropriation.
- GPO follows an established procedure to obligate the unused annual appropriation at the end of the fiscal year so that funds can be carried over to fund the subsequent-year printing.
- GPO tracks expenditures against the original appropriation for a period of 5 years after the year of appropriation and reports these against the appropriation.

When subsequent-year printing must be done and the primary funding procedure described above is not applicable, GPO has an alternative fall-back procedure to fund the printing costs. Public Law 104-197 (appropriation language for the FY 98 CP&B appropriation) allows use of the annual appropriation to fund costs to print congressional activities from prior years. This fall-back procedure is used in two circumstances:

- If subsequent-year printing is completed and the final cost is calculated, but there is insufficient funding from the original appropriation to fund the print job costs

- If subsequent-year printing takes place after the 5-year funding carryover period outlined above has elapsed.

When either of these two circumstances occurs, Public Law 104-197 allows GPO to tap into the nearest year in which carried-over obligated funding is available. The procedures followed by GPO are in compliance with the applicable laws and regulations. These regulations were established because of the inability of GPO to forecast when printing for congressional activity would take place, and what the ultimate costs would be. This study found GPO personnel to be very knowledgeable about the applicable appropriation regulations.

The existence of two procedures to accomplish the same objective (i.e., paying for congressional printing costs) raises several concerns, however—

- The primary procedure is a disciplined funds tracking process that maintains the integrity of the appropriation and the expenditures against it. Status is tracked and reported.
- The fall-back procedure does not impose the fiscal year discipline that was so laboriously complied with in the primary procedure.

The existence of the two procedures suggests that substantial effort and reporting take place with results that may not warrant the resources required. The outcome is a foregone conclusion: GPO is allowed to match available funding to the costs of subsequent-year printing of congressional activities, and the procedures are designed to produce that outcome. It should also be noted, however, that nowhere in the procedures is there incentive for GPO to increase the efficiency of its congressional printing operations to decrease the costs for which Congress provides funding.

Another example of overly-complex data-keeping is GPO's tracking of actual expenditures and updating rates and prices for approximately 2,000 different printing activities. Many of these activities are infrequently used and consume resources out of proportion to the benefit of precise data.

Recommendation 4. GPO should evaluate costs and benefits of data precision relative to actions that can be taken.

The procedures for GPO to apply carry-over funding to subsequent-year printing for congressional activities are required by law. Any changes to these procedures would require changing the appropriation laws. If consideration is given to changing laws, several options would simplify the multiyear funding and tracking process:

- An annual appropriation for Congressional Printing and Binding to be used in the fiscal year of appropriation

- An annual Salaries and Expenses appropriation that funds in-plant salaries and operating costs to print the fiscal year's projected workload
- Conversion of the CP&B appropriation to the Revolving Fund, with charges to Congress for each print job based on established prices.

GPO should consider establishing a limit on the time period during which printing can be done for a given year's congressional activities. This action would decrease the number of years for which tracking and reporting must take place.

With regard to tracking costs and developing rates for in-plant activities, GPO should—

- Conduct an 80/20 (Pareto) analysis to reduce pricing the number of activities to an optimal level.

Finding 5. Prices for in-plant printing reflect 'as-is' costs rather than 'should-be' rates.

GPO's rate development process has been described in the Office of Budget processes. Rate development is the process by which prices for congressional and agency in-plant printing are established. Charging the established prices for print jobs is the means by which GPO receives reimbursement for its expenditures. The rate development process uses actual costs for printing operations to update the standards used to price print jobs. Prices, therefore, reflect the realized costs of doing the work ('as-is' costs), and the techniques, organization, and skill levels of employees whose costs were collected. Prices do not reflect work measurement standards or 'best practices' standards ('should be' costs). This process of using actual expenditures (costs) to update standards and to develop prices has the following characteristics:

- Shop-floor practices that may be inefficient become institutionalized when their actual costs are used to set prices.
- Prices based on actual costs do not present challenges that force managers to set performance standards from their personnel and to monitor and provide feedback to employees.
- Prices based on actual costs do not present challenges for managers or employees to increase productivity.

Recommendation 5. GPO should evaluate data used for standard price calculations and incorporate periodic work measurement studies.

GPO should use the following quantified systematic methods to develop activity standards for in-plant printing:

- Develop a plan for periodic time and motion studies of in-plant production activities that meet criteria

- Consider statistical analysis techniques and best practice benchmarking for additional standards
- Develop a plan for which activities are appropriate to target for cost levels
- Update standards based on analyses and incorporate in price calculations.

Finding 6. The basis for allocating labor and other costs for organizations that charge to more than one funding source cannot be substantiated.

Superintendent of Documents personnel can perform activities funded by either the Depository Library Distribution Program appropriation or by the Revolving Fund (for publication sales activities). The different funding sources are referred to as programs. Depending on the type of activity performed, the different programs are charged the costs incurred by these organizations. The basis for determining which program is appropriate to be charged for an organization's costs is the following:

- The manager estimates the time that his or her personnel spend on an activity or program based on observation and knowledge. These estimates are developed as part of the budget formulation process.
- After the budget is established, there is no quantified ongoing monitoring process of how staff time is actually spent by program.
- Tracking employee time charges to a program was formerly done by the PROBE time reporting system. The accuracy of PROBE was considered suspect by Superintendent of Documents personnel, however, and its use was discontinued, with the current estimating procedure replacing it.

Recommendation 6. GPO should evaluate more quantifiable processes to measure actual costs that will produce more accurate and auditable results.

Methods could include manual methods, such as timecard entries made by employees of programs they worked on during each day, as well as automated systems, such as a PROBE replacement system. The breakout of actual labor charges should be the basis for periodic updates of the program allocation in the cost accounting system. Periodic audits should be considered to ensure compliance with the time reporting procedures.

Systems—Budgeting

Finding 7. Numerous unintegrated spreadsheets and databases are required to produce budget documents and reports.

An evaluation of Office of Budget processes showed the following systems characteristics:

- Budget formulation and reporting currently use McCormack and Dodge mainframe software, FoxPro, and Dbase 3+, Lotus spreadsheets, and Excel spreadsheets, with some output uploaded to the mainframe.

- Budget reports are distributed as hard copies.
- The multiple systems do not have the capability to produce ad hoc analytical reports beyond special sorts and printouts.

Recommendation 7. GPO should implement an integrated online accounting and financial reporting system.

This recommendation is discussed in further detail as a Systems recommendation in the Accounting and Financial Reporting Systems section, because Office of Budget systems deal with such accounting systems as the general ledger. Implementation of an integrated system will incorporate budgeting functions and will replace the multiple systems presently in use.

Staff/Organization—Accounting and Financial Reporting Systems

The Office of Comptroller is organized along business lines. Organizations include the Plant Accounting Division, which is responsible for the Production Department in-plant printing and electronic publishing activities; the Procurement Accounting Division, responsible for Printing Procurement activities; and the General Accounting Division, which handles other reporting and accounting functions.

Finding 8. Office of Comptroller personnel have a high level of subject matter expertise.

In common with personnel in the Office of Budget (see Finding 1), interviews with Office of Comptroller personnel showed that there is a substantial amount of experience and a strong knowledge base of accounting and financial systems. Qualifications of personnel include six CPA designations and several college degrees in accounting, among the 131 personnel as of September 30, 1997. Other personnel have printing crafts backgrounds that give them comprehensive knowledge of the in-plant activities and information systems.

Finding 9. Separate budget and comptroller organizations hinder effective communication.

The Office of Budget and the Office of Comptroller each report separately to the Public Printer. The evolution of this organization away from reporting to the CFO and to separate direct reporting to the Public Printer was discussed above. This study raises several concerns:

- The two organizations are not connected on line and cannot share information easily.
- There are instances of communication shortfalls. One case in particular is the different interpretations of a key term by personnel in different organizations. These different interpretations are caused in part by separate organizations and lack of on-line connection.

- Strategic planning (for budget formulation) and work measurement (for developing prices) are two functions that have a major impact on Office of Budget and Office of Comptroller effectiveness but are not under the direct control of Budget or Comptroller. Findings of shortfalls in these two functions were discussed earlier.

Recommendation 9. GPO should create a Director of Finance position to provide unitary accountability for the spectrum of planning, financial management, and pricing functions.

- A Director of Finance (DoF) would decrease the number of managers reporting directly to the Public Printer.
- Both the Budget and Comptroller functions would be consolidated under one person.
- The strategic planning function and the work measurement function would report to the DoF.
- The DoF position would provide unitary accountability for the spectrum of financial management, ranging from planning, to price setting, to reporting financial results.

Processes—Accounting and Financial Reporting Systems

Finding 10. The integrity of data captured by the time reporting system for in-plant production is subject to compromise by system obsolescence and by the adjustment input process.

PROBE performs the following functions for GPO: time and attendance tracking for approximately 2,000 employees; print job tracking by activity for in-plant production; and machine hour tracking for in-plant production. Data entered in PROBE become the basis for rate and price development, and for calculating prices for individual print jobs. An evaluation of PROBE operations shows that a large number of corrections to PROBE are made daily. This large volume of corrections has several implications for GPO financial management:

- A parallel time reporting process has evolved to overcome PROBE shortcomings and to compensate for inadequate shop floor data.
- A large-scale correction process to an information system presents opportunities for data to be compromised.

These corrections, taken together, constitute a parallel time reporting system to the automated data collection by PROBE. Characteristics of the corrections process include the following:

- There were 282,357 corrections against 4,730,569 total PROBE data entries in FY 97. Six percent of PROBE entries were changed.
- Some corrections are made because of PROBE breakdowns. The PROBE vendor, NCR, no longer supports either the hardware or software, so GPO must provide the expertise to keep the system running.
- Some corrections are made to compensate for the fact that PROBE is taken off-line from 9:00 a.m. to 9:05 a.m. each working day for batch processing and is unavailable for data entry during that time.
- PROBE does not contain key edit features or other mechanisms that would minimize keypunch data entry errors.
- PROBE data entry, as well as the parallel process of correcting PROBE, are shown by the manual *Daily Time and Attendance Report*. The Report is completed by work-unit supervisors and is compared with PROBE outputs to verify the accuracy of PROBE entries. When discrepancies occur, PROBE is changed in accordance with the *Daily Time and Attendance Report*.
- Corrections to PROBE are made to a FoxPro database that interfaces with PROBE.

Exhibit 6-7 presents a table of PROBE correction processes shows the types of corrections made, numbers of corrections in FY 97, and authorization and control processes. Further details on types of changes and reasons for changes are provided in Appendix O.

**Exhibit 6-7
PROBE Correction Processes**

Type of Correction	Actual Corrections in FY 97	Person Entering Changes Into PROBE	Authorization to Make Changes	Audit Trail/Elements of Control
Current period labor hour correction (within 24 hours of the day reported) (1)	173,325	Plant Reporting, paper form input to FoxPro	Work-Unit Supervisor	<ul style="list-style-type: none"> • PROBE Daily Alert Report • Supervisor's employee number attached on all changes • Data input clerk employee numbers attached to changes • Summary report generated by Plant Reporting and given to supervisor
Time and Attendance (adjustments for periods older than 24 hours) (2)	44,000	Payroll clerk inputs into on-line system	Work-Unit Supervisor	<ul style="list-style-type: none"> • Daily Time and Attendance Report (GPO Form 2267) • List of Absentees and Overtime Report • PROBE Daily Alert Report
Job tracking correction (3)	58,344	Supervisor, through an on-line system, for plate-making changes only. All others from Plant Reporting, paper form input to FoxPro	Work-Unit Supervisor	<ul style="list-style-type: none"> • PROBE Daily Alert Report • Supervisor's employee number is attached to all changes and documentation • Summary report generated by Plant Reporting and given to supervisor

Type of Correction	Actual Corrections in FY 97	Person Entering Changes Into PROBE	Authorization to Make Changes	Audit Trail/Elements of Control
Machine hour correction (4)	6,688	Plant Reporting, paper form input to FoxPro	Work-Unit Supervisor	<ul style="list-style-type: none"> • PROBE Daily Alert Report • Supervisor's employee number attached to all changes • Data input clerk employee numbers attached to changes • Summary report generated by Plant Reporting and given to supervisor

- (1) Corrections to adjust for system inflexibility and also for employee card swiping errors.
(2) Corrections made based on subsequent employee/supervisor/payroll validation of data.
(3) Corrections to adjust for erroneous input of product codes, quantity amounts, and jacket numbers in the plate-making process.
(4) Corrections to adjust for erroneous recording of machine performance (incorrect quantities produced on a machine, incorrect recording of jacket numbers, operation and class codes on a machine).

PROBE was implemented in 1976 using second-generation COBOL language. PROBE has been the subject of 5 years of planning effort. A system is presently under consideration that uses Intermec readers and entry devices, barcoded documents to avoid keypunch entries, and an NT network. One item that has been a concern for the planning group is that off-the-shelf systems do not have machine hour transactions capabilities.

Recommendation 10. GPO should replace the PROBE system with focused systems that address time and attendance tracking, print job activity tracking, and machine usage.

- An evaluation should be made of barriers that have prevented past planning efforts from being acted upon, and the planning effort should be restructured accordingly.
- Factors contributing to the need for PROBE corrections should be considered, including lack of accurate data on the shop floor when personnel make machine hour entries.
- The complexity factors of including three types of reporting (time and attendance, job activity tracking, and machine hour tracking) in one system should be considered, especially when evaluating off-the-shelf software packages.

Finding 11. Some inaccuracies in billing to customers have been documented.

GPO customer agencies occasionally challenge the bills they receive for print jobs. These challenges are sometimes used as the basis for customer agencies delaying payment to GPO, which contributes to the large accounts receivable total that GPO reported (\$57.3 million at the end of FY 97). To test billing accuracy, this study sampled a number of print job jackets (i.e., the documentation of a print job authorization, specifications, production activities, and costs). One test case in particular showed the following:

- The backup page to the customer's bill listed production activities and calculated charges to the customer. This backup page did not have adequate explanation for

the entries and calculations that could be understood by personnel in a customer agency.

- The backup page contained an error in the factors of production data that list activities to print the job. The error understated the time for plate making.
- The backup page contained an error in manual calculations that multiplied the number of pages printed by the established prices for riders (i.e., copies of a print job for another agency that are not charged setup costs). Manual calculations on this test case bill were apparently used because a recent price change methodology had not been developed by the billing system.

Recommendation 11. GPO should strengthen internal controls and implement a quality control program for billing.

- Evaluate causes of billing errors. Include an examination of shortcomings in the PROBE job tracking process discussed above. Other factors that contribute to billing errors, such as delays in making programming changes to information systems after price changes take effect, should also be considered.
- An assessment of billing processes and controls should consider proposals that have been made to establish a price list for both in-house and contracted print jobs. This recommendation was made in U.S. Government Printing Office *Comments and Suggestions for Consideration* (Arthur Andersen LLP, January 1996). A number of areas of benefit were listed in the report. For in-plant production in particular, development of a price list would reduce the amount of system requirements (i.e., programming changes, system run time, and Comptroller personnel time) involved in producing a customer bill.
- The results of the evaluation should be converted into a prioritized list of steps that increase the effectiveness of internal controls and can be readily implemented. One of the outcomes will be that GPO billing quality control will be transferred from customer agencies, where the process now is performed by default, to GPO, at the time the bill is produced.
- GPO should develop a plan for periodic post-audit sampling of the billing documents.

Finding 12. Cost allocation methodologies are based on traditional measures.

Traditional methodologies for allocating costs include square footage assigned to a function, full-time equivalent positions, and other easily quantified indicators. Changes in the operations of an organization over the years can render these cost allocation measures inequitable for the following reasons:

- Changes in technology can decrease the need for personnel, square footage, utilities, and maintenance. Cost allocation measures based on traditional methodologies may become distorted by these changes.

- Congressional printing done primarily during the night shift incurs additional labor costs for night premium pay and may incur higher utility, security, and other costs that are driven by night-time operations.
- The decline in in-plant workload needs to be evaluated in conjunction with other indicators.

Recommendation 12. GPO should revise cost allocation methodologies to more closely reflect present-day operating conditions.

- Evaluate activities and identify drivers of in-house costs.
- Consider an activity-based cost study to more precisely identify costs with activities.
- Evaluate best practices to aid in more accurately identifying cost drivers and the costs associated with the drivers.

Systems—Accounting and Financial Reporting Systems

Finding 13. Numerous unintegrated spreadsheets and databases are required to produce financial statements and reports.

An evaluation of Comptroller processes shows the following:

- The proliferation of systems, spreadsheets, and databases drives additional steps in accounting processes.
- Financial report production uses mainframe software (McCormack and Dodge), FoxPro database, and Lotus spreadsheets.
- The multiple systems do not have the capability to produce ad hoc financial reports beyond special sorts and printouts.
- Multiple spreadsheets require additional steps to re-key and to reconcile data.
- The inefficiency of multiple systems contributes to the time required after the month end to complete financial statements. The process of disseminating financial results and communicating an urgency for action can be rendered less effective if financial statements are not current.
- Some software is outdated, incurring risk if knowledgeable employees retire and personnel replacing the employees do not have the required expertise. An example of this is Rbase, which is used for tracking billing reports.

Recommendation 13. GPO should implement an integrated on-line accounting and financial reporting system.

GPO is currently planning to convert the general ledger from the mainframe-based McCormack and Dodge software to an Oracle database software. The conversion is driven by Year 2000 needs, among others. We recommend the following:

- GPO should expand the Oracle conversion to include all applicable accounting functionalities, not just the general ledger.
- As an alternative, if an integrated system is not implemented, a front-end system that replaces current spreadsheets and databases should be implemented.
- GPO should implement an executive information system (see Recommendation 3).
- As part of the system implementation, processes and workflows should be reviewed and simplified.

Finding 14. Some financial systems are not adequately documented.

Information systems, like the processes that the systems report, tend to change over time. The changes that systems undergo range from adding or deleting one of the reports produced to programming changes that adjust the way data are processed. If the system documentation shows no changes have been made for a number of years, it could indicate either that no changes have been made to the system during that time, or that system changes have been made but were not documented. The Office of Information Resource Management (OIRM) produces the PREDICT 3.1.4 report, which lists an inventory of systems and the dates that the systems were last modified. A survey of several PREDICT reports shows the following:

- The September 9, 1997, PREDICT report shows a that a number of financial systems had not been updated for a several years. Appendix P shows selected systems and the dates when the systems were last modified.
- A more recent copy of the PREDICT report, dated March 4, 1998, shows that OIRM has made recent efforts to update system documentation for modifications that have been made. These updated entries are also shown for selected systems in Appendix P.
- A large number of systems had not been reviewed or updated since 1993.
- It is conceivable that changes to both systems and processes are continually taking place. System documentation that does not list any modification activity for a number of years may not be capturing changes that have been made.
- Incomplete system documentation incurs risk for the Office of Comptroller if key personnel who are knowledgeable about a system retire and are replaced by personnel who know less about the system and must depend on obsolete system documentation. The Office of Comptroller currently has 23 personnel eligible for retirement out of 131 personnel as of September 1997.

Recommendation 14. GPO should complete the documentation of financial systems and update documentation where appropriate.

GPO is facing the need for large-scale modernization of its financial systems. Finding 13 discussed the planned conversion of the general ledger to Oracle and the existence of supplemental spreadsheets and databases that are required to perform the financial functions. A necessary first step is to ensure that system documentation accurately reflects the systems as they currently exist. In addition, the current practice of inventorying and documenting the supplemental spreadsheets and databases should continue to ensure that all required resources are considered when system replacement planning occurs.

Finding 15. GPO's business-oriented financial systems make substantial contributions to managing product line operations.

GPO's business-oriented financial systems were discussed in Section 6.1.2. These include the Revolving Fund, the cost accounting system, and accrual-based accounting. These financial management systems are the basis for practices that significantly contribute to managing GPO's product line operations. For example, the Procurement Accounting Division, which authorizes payments to printing contractors for Procured Printing Services, has made the following contributions:

- Consistent timely payment of contractors for services rendered. This practice benefits GPO because substantial amounts of prompt payment discounts are realized, which are reported by GPO as cost reductions.
- Printing contractors occasionally request GPO to accelerate payment, so that the contractors can make their payrolls or meet other obligations. GPO makes all efforts to honor these requests. The resulting accelerated payments are prorated against the contract terms, based on the Treasury rate, and GPO takes additional discount. Printing contractors know that GPO will readily work with them to meet their needs.

This responsiveness of a GPO financial organization to printing contractors makes a substantial contribution to GPO's ability to maintain a high-quality supplier base of printing contractors and to realize the benefits of quality work, timely delivery, and increased price competitiveness.

We found that there is a high level of expertise within the Office of Budget and Office of Comptroller and that personnel have a thorough knowledge of the legal and operating environment. GPO has a business-oriented accounting system that supports the business-oriented nature of printing jobs and electronic publishing. Comprehensive, detailed data are available for a wide variety of activities. Financial statements and backup data produced by the reporting systems are relatively easy to use, although a knowledge of accounting is necessary to thoroughly understand the reports.

However, we also found that many of the systems are obsolete and in need of replacement and that management controls would be more effective with system upgrade or replacement. Our overall finding is that the financial management personnel, processes, and systems as they are today can be used to support the management initiatives that GPO needs to undertake to become more effective and efficient. However, a parallel effort should be made, though the pursuit of agency initiatives, to upgrade the financial management systems and processes in order to enhance GPO management's effectiveness.

Exhibits 6-8 and 6-9, respectively, summarize the strengths, weaknesses, opportunities, and threats (SWOT) of GPO's current budgeting and reporting environments.

**Exhibit 6-8
SWOT Matrix for the Budgeting Environment**

Budget Area	Strengths	Weaknesses	Opportunities	Threats
Organizational Structure	<ul style="list-style-type: none"> Aligned by funding source (Revolving Fund, Salaries and Expense, Congressional Printing & Binding) High level of subject matter expertise in personnel 	<ul style="list-style-type: none"> Strategic planning capability not included in Budget organization No CFO to provide unitary accountability for all finance functions Shortfalls in communication across offices 	<ul style="list-style-type: none"> Depth of experience currently available to support major changes in agency operations 	
Adequacy of Methods and Procedures	<ul style="list-style-type: none"> Timeliness 	<ul style="list-style-type: none"> Budget performance accountability process not systematized Systems driving processes instead of vice-versa Cost allocation to funding source not substantiated Tracking and maintaining very detailed data on operations consumes substantial staff and system resources 		
Effectiveness of Technology Support Systems		<ul style="list-style-type: none"> No on-line input capability Limited analytical ability in system outputs Limited ability to disseminate strategic information 		
Effectiveness of Business Processes	<ul style="list-style-type: none"> Expenditure approval controls—dollar thresholds 	<ul style="list-style-type: none"> In-plant printing prices reflect as-is actual costs 		
Data Architecture and Financial Reporting	<ul style="list-style-type: none"> dBase 3+ software Customized fields for data entry Text field for justification 	<ul style="list-style-type: none"> Outdated technology Shortage of skilled DB3 personnel 		

Exhibit 6-9
SWOT Matrix for the Accounting and Financial Reporting Environment

Comptroller Area	Strengths	Weaknesses	Opportunities	Threats
Organizational Structure	<ul style="list-style-type: none"> • Aligned by product lines (In-Plant, Procurement, and General Accounting) • High level of subject matter expertise in personnel 	<ul style="list-style-type: none"> • No CFO to provide unitary accountability for all finance functions • Shortfalls in communication across offices • Inadequate succession planning 	<ul style="list-style-type: none"> • Depth of experience currently available to support major changes in agency operations 	<ul style="list-style-type: none"> • Potential large-scale retirement of necessary talent with minimal time available to groom replacements
Adequacy of Methods and Procedures	<ul style="list-style-type: none"> • Timeliness • Comprehensive data collection and calculation capabilities that can support new operating procedures and processes 	<ul style="list-style-type: none"> • Absence of documentation in certain sections • Systems driving processes instead of vice-versa • Proliferation of spreadsheets and databases • Compromises to data captured by time reporting system • Cost allocation methodologies need updating 	<ul style="list-style-type: none"> • Revolving Fund flexibility and cost accounting system available to support major changes in agency operations 	
Effectiveness of Technology Support Systems	<ul style="list-style-type: none"> • Provides adequate data 	<ul style="list-style-type: none"> • Too many systems/interfaces • Non-uniform platforms require various types of training and experience • Limited analytical ability • Limited ability to disseminate strategic information 	<ul style="list-style-type: none"> • Upgrade to client server—standardization with other agencies 	
Effectiveness of Business Processes	<ul style="list-style-type: none"> • Pay promptly, taking advantage of discounts • Prompt payment is a major contribution to supplier base management 	<ul style="list-style-type: none"> • Limited flow charts of procedures • Shortfalls in quality control for production of customer bills 	<ul style="list-style-type: none"> • Negotiations under way for greater use of OPAC to decrease accounts receivable 	
Data Architecture and Financial Reporting	<ul style="list-style-type: none"> • Detailed transaction-level data available 	<ul style="list-style-type: none"> • McCormack and Dodge software (1979) is old • Limited decision support systems • Some system documentation needs updating 		

7. INFORMATION TECHNOLOGY

7.1 BACKGROUND

Information technology (I/T) plays an increasingly important role in supporting the U.S. Government Printing Office's (GPO) core missions. In the past, GPO used I/T primarily in a mission support role to automate internal administrative and business management functions. Today, I/T directly supports core mission functions, including in-plant production, printing procurement, and document sales and dissemination. New technologies, including computer-to-plate printing technologies, electronic publishing and document management, and Internet and World Wide Web technologies, have revolutionized the printing industry, creating new opportunities but also threatening old business practices. GPO faces a constant challenge to stay abreast of new information technologies to capitalize on opportunities, improve customer service, and remain competitive.

Given the importance of I/T to GPO's future, we have developed a separate section to address I/T issues. The remainder of this section summarizes GPO's I/T operations and current environment, and presents the findings and recommendations derived from our analysis.

7.2 CURRENT GPO I/T OPERATIONS ENVIRONMENT

GPO's current I/T environment is characterized by a distinct split between past and future operations. The Office of Information Resource Management (OIRM) maintains GPO's legacy business management systems including—

- Large mainframe processing complex
- Large inventory of non-integrated COBOL-based applications
- Older Banyan Vines local area networks (LAN).

The Production Department (PD) operates most of the newer I/T resources at GPO, including—

- *GPO Access* and related Internet and Web services
- Electronic photocomposition and computer-to-plate technologies
- Minicomputers and applications dedicated to the in-plant printing process
- Telecommunications services including newer Windows NT LANs and wide area networks.

Other departmental I/T operations are also important to GPO's missions. These include the Superintendent of Documents Integrated Processing System (IPS), which provides a state-of-the-art client/server system supporting document sales and distribution. Especially important to agency customers are the Printing Procurement Department's electronic publishing services.

GPO has approximately 240 staff dedicated to these I/T functions, with the majority located in OIRM and PD. Total I/T spending in Fiscal Year 1997 was approximately \$40 million, or approximately 5 percent of GPO's total budget.

The Booz-Allen team's I/T analysis concentrated on seven key issues, comparing GPO operations to best practices in government and industry:

- I/T organization
- Legacy system modernization and Year 2000 compliance
- I/T management processes
- Information management capabilities
- Electronic document management capabilities
- I/T workforce issues
- Information security.

FINDINGS AND RECOMMENDATIONS

To assist GPO in becoming more efficient and effective in information technology operations, we have developed eight major findings with accompanying recommendations.

Finding 1. GPO has successfully implemented new I/T capabilities in many parts of the organization.

GPO has implemented a number of new I/T systems and support functions throughout the organization:

- *GPO Access*, one of the Federal Government's largest and most active Web sites, has been highly successful in making government information easily available to the public.
- The Superintendent of Documents IPS will provide a state-of-the-art client/server system for managing the document sales operation. The acquisition approach and technology selected for IPS are consistent with industry best practices.
- The *CBDNet* project demonstrated GPO's ability to leverage distinct I/T capabilities from several departments, develop an innovative technical approach, and win a competition with commercial bidders.
- The Printing Procurement Department's Digital Information Technology Support (DITS) group provides state-of-the-art electronic publishing advice and technical support to GPO's agency customers.
- PD is installing a new state-of-the-art fiber optic LAN and is leading GPO's migration to the industry-standard Windows NT LAN operating system.
- PD's use of computer-to-plate technology is representative of best practices in the printing industry.

Recommendation 1. GPO needs to leverage its I/T strengths as it prepares for the future.

GPO's success in implementing modern technologies in certain departments and operations needs to be expanded throughout GPO; technology focus groups should be established to help share new technology information and expertise across departmental boundaries. In addition, GPO should accelerate the phase-out of obsolete legacy systems to make way for the modern technologies needed to compete in the future. Finally, GPO should develop an I/T Strategic Plan to identify the specific technologies, priorities, and time frames for GPO-wide implementation. Implementing the other recommendations presented in this section will also help speed the phase-out of obsolete technologies and I/T business practices, and accelerate the spread of new capabilities.

Finding 2. GPO's I/T organization is highly decentralized with limited centralized management leadership, coordination, or oversight.

GPO has two major I/T organizations, OIRM and PD, and minor I/T operations in the Superintendent of Documents and Printing Procurement Department. Responsibility for management coordination among all these departmental operations falls on the Public Printer and Deputy Public Printer, who have too many other responsibilities and lack the technical expertise to effectively coordinate I/T planning and operations. The split between OIRM and PD is particularly harmful because these major I/T operations compete for resources and do not always work together for the common good of GPO. The lack of an I/T Strategic Plan further complicates the efforts of separate departments to work together to achieve common goals and objectives.

The lack of central oversight and coordination creates isolated stovepipe operations and inhibits effective I/T service delivery in some areas. Poor communications undermines effective planning, coordination, and technical integration. For example, no process or forum exists for departmental I/T managers to coordinate requirements and operational issues. Planning is done informally and separately by each department, with little or no cross-department coordination. Departmental plans are approved by the Public Printer in conjunction with the annual budgeting process, or with individual requests. In the absence of a GPO-wide technical architecture, each department purchases the hardware and system software best suited for its departmental requirements with little concern for GPO-wide implications. This diversity of hardware and software platforms tends to increase maintenance and support costs and requires GPO staff to maintain a wider set of technical skills. There is also some duplication of effort; for example, PD is installing new Windows NT LANs while OIRM continues to operate Banyan Vines LANs. The Public Printer created a special task force to coordinate LAN operations when it became clear that the departments were unable to coordinate these efforts on their own.

The lack of centralized I/T planning and coordination inhibits effective use of I/T resources and impedes progress on critical GPO-wide I/T challenges, such as legacy modernization and Year 2000 compliance. Without the direct intervention of the Public Printer, it is difficult to temporarily re-deploy I/T staff resources between departments to

address urgent requirements. Furthermore, the current management environment and culture do not encourage or support collaboration between departments. When centralized coordination is required on a key issue such as Year 2000 compliance or LAN integration, the Public Printer must establish a new process and assign new responsibilities to ensure the necessary cooperation.

This organizational situation seriously undermines the effectiveness of GPO's overall I/T operation and is not consistent with industry or Government best practices. The basic structural flaw must be corrected before other aspects of the I/T operation can be fully successful.

Recommendation 2. GPO should strengthen the centralized component of its I/T organization by following government and commercial best practices.

GPO should implement a number of organizational changes to strengthen the centralized component of its I/T functions and operations. First, GPO should appoint a Director of Information Technology (DIT), who reports to the Public Printer and is responsible for all GPO I/T operations including—

- Directing, overseeing, and coordinating all departmental I/T operations
- Developing an I/T strategic plan
- Prioritizing requirements and balancing I/T resources among departments
- Providing guidance and coordination on tactical planning and budget formulation
- Establishing and enforcing I/T performance measures
- Establishing and enforcing a GPO-wide technical architecture.

We recommend the new DIT be selected from candidates outside GPO and be viewed as a change agent to help GPO develop and institutionalize new I/T management practices. The DIT is a *business management* position; technical I/T skills are secondary. Qualified candidates should have a proven track record establishing successful organizations and new business processes.

Second, GPO should establish an I/T Advisory Panel composed of I/T specialists from each major business unit. This panel would—

- Report to and be chaired by the DIT
- Respond to tasking and issues raised by the proposed Executive Steering Committee
- Provide technical expertise, analyses, and recommendations on issues of strategy, requirements, plans, and resource allocation
- Establish standing and ad hoc subcommittees, as needed, to address specific issues (e.g., Year 2000 compliance, electronic publishing, information security)

- Establish new I/T management policies and procedures.

The I/T Advisory Panel should meet at least quarterly; subcommittees may need to meet more frequently.

Finding 3. GPO faces substantial business risks due to Year 2000 issues relating to its mission-critical legacy systems.

Most of GPO's mission-critical business systems are functionally and technically obsolete, with extensive Year 2000 compliance problems. Many of the mainframe applications were developed more than 25 years ago and their designs are based on 80-column punched card formats. These applications, not surprisingly, have been patched and expanded over the years, resulting in vast amounts of spaghetti code. Although source code exists for virtually all applications, up-to-date documentation is minimal. Many of the original software developers still work at GPO, but many are near retirement.

Although GPO is pursuing a number of projects to improve or replace some legacy system components, a comprehensive, integrated strategy for modernizing the entire legacy system environment is lacking. Examples of such projects include the following:

- The IPS will be implemented soon to replace the legacy applications supporting the Superintendent of Documents.
- Financial system modernization plans have been limited to replacing the General Ledger; plans for replacing the other financial applications have not been fully addressed.
- Options for replacing the PROBE cost accounting system are being investigated, but a detailed plan has not yet been developed.
- OIRM is developing a Windows-based interface to existing mainframe applications, but this is little more than a band-aid for these obsolete applications.
- OIRM is also developing server-based applications for the Printing Procurement Department and relational database tables in Oracle for Payroll and Personnel data, to provide more convenient access to legacy data until systems can be modernized.

Year 2000 requirements have put many modernization efforts on hold, as resources are redirected to this time-critical challenge. Although GPO has done a great deal of work toward addressing its Year 2000 requirements, it is at least a year behind the Office of Management and Budget's (OMB) recommended timeline, and its approach is not fully responsive to General Accounting Office (GAO) and OMB guidelines. A Year 2000 project manager and departmental coordinators were designated in December 1997; the Year 2000 project manager has a secretary and three full-time staff. GPO has published a *Year 2000 Program Guide* (GPO Instruction 705.26) effective March 16, 1998. This guide establishes October 1999 as the target completion date for all GPO mission-critical systems. GPO also plans to develop contingency plans for all mission-critical systems not completely renovated by March 1999.

GPO has identified 33 mission-critical information systems being renovated and is tracking the renovation status for each system; the current status estimate is approximately 50 percent complete over all. GPO recently appointed another staff member to address I/T infrastructure, non-I/T systems (e.g., facilities, embedded technology), and external trading partners. The assessment of all mission-critical systems is scheduled for completion in July 1998—well beyond the recommended time frame for completing system assessments. In addition, because GPO's Year 2000 cost estimates are being updated in conjunction with their inventory and assessment activities, a good estimate of total cost will not be available until the inventory and assessment are completed.

GPO is using the "windowing" approach for fixing date fields in its legacy applications, which is consistent with recommended industry practice. However, testing and validation requirements have not been thoroughly addressed. For example, GPO is not currently planning to use independent verification and validation (IV&V), as recommended by GAO and best practices. In addition, GPO has not begun to develop contingency/continuity of operations plans to mitigate risks of Year 2000 failures.

GPO management acknowledges some of the limitations in their Year 2000 plans but firmly believes all their mission-critical systems will be fixed on time.

Recommendation 3. GPO needs to apply a more rigorous project management approach to its Year 2000 efforts.

GPO should follow the GAO and OMB guidelines for Year 2000 project management. To do this, additional resources and technical expertise are needed to support the Year 2000 project manager and departmental assessment and renovation efforts. Mission-critical I/T infrastructure and non-I/T systems must be added to the Year 2000 inventory and tracked along with the information systems. To avoid Year 2000 conflicts, external trading partners should be identified, contacted, and tracked.

GPO should plan on IV&V testing for all mission-critical systems and, given the risk inherent in GPO's Year 2000 situation, should develop contingency plans for those systems, following GAO's guidelines for contingency planning. After completing its Year 2000 efforts, GPO will need to develop a comprehensive modernization plan for replacing its legacy systems. Although this effort will require a substantial capital investment, over time it will allow GPO to reduce I/T staffing and operations costs.

Finding 4. GPO lacks consistent I/T management processes.

We evaluated GPO's overall I/T management effectiveness by looking at five key I/T management processes:

- Planning, including strategic and tactical
- New technology evaluation and architecture management
- Project management and control

- System development methodology
- Performance measures.

In general, GPO's I/T management processes are informal and ad hoc, with little written guidance for key processes. A "crisis management" mentality prevails, with departmental I/T managers doing whatever is necessary to keep up with urgent day-to-day requirements. Planning for the future tends to be limited in such an environment. I/T management processes also tend to differ across the organization, a predictable result of the organizational issue described above. It is very difficult for senior management to effectively direct and control the overall I/T operation in these circumstances.

I/T planning is done at the departmental level with little centralized coordination. GPO has not developed an I/T Strategic Plan, so departmental planning efforts suffer from lack of common direction and management guidance. With no corporate focus on long-term planning, departments tend to focus only on their current-year requirements. Capital and tactical I/T planning is limited to the budget formulation process. Again, departmental capital and tactical plans are reconciled at the Public Printer level, with virtually no horizontal coordination in the process. Finally, other than the documentation accompanying the budget process, we found virtually no written I/T plans.

New technology evaluation and technical architecture planning is also done at the departmental level with little centralized coordination or control. Each department selects and evaluates new technologies on its own, with little cross-department coordination. This results in duplicative evaluation efforts and potential selection of incompatible technologies. There is no published technical architecture and no department responsible for managing the GPO-wide technical architecture. Lacking architectural guidance, each department selects and purchases the hardware and system software best suited for its departmental requirements with little concern for GPO-wide implications. The diversity of hardware and software platforms tends to increase maintenance and support costs and requires GPO staff to maintain a wider set of technical skills. This situation is contrary to best practices and is a common problem in many I/T organizations.

I/T project planning, management, and control processes are mostly informal and differ among departments. There are no GPO-wide guidelines or standards for project planning, management, and control, and departmental I/T managers generally do not develop or use written project plans to manage their major projects. Review procedures for tracking actual performance against a plan are generally lacking; oversight review of major projects is completely lacking, except perhaps by the Public Printer. Departmental managers are generally not held accountable for project performance. Several examples were given of major projects that were delayed or behind schedule for several years and substantially over budget—without corrective actions being taken.

System development methodologies are mostly informal and differ among departments. No evidence was found of a GPO-wide system development methodology, or even departmental-level methodologies. Key development processes (e.g., requirements

management, configuration management, quality assurance) are not consistent across GPO and do not generally measure up to best practices. Finally, I/T performance measures have not been developed. This situation is consistent with an organization struggling to keep up with day-to-day operations and unable to focus on process improvement.

Recommendation 4. GPO should reengineer key I/T management processes, drawing on government and commercial best practices.

GPO should follow the spirit and intent of the Information Technology Management Reform Act (ITMRA) in redesigning its I/T management processes. An integrated planning process should be implemented with the following features:

- An I/T strategic plan directly linked to GPO's mission strategic plan should be developed and updated annually.
- An I/T capital planning and investment control process linked to the mission strategic planning and budgeting processes should be developed.
- An architectural planning process should be developed to guide technical integration and new technology planning.

Standard I/T project management procedures and controls should be established and enforced across all departments. I/T managers should be required to develop plans for all major initiatives and be held accountable for performance against the plan. A standard system development methodology should be adopted and followed throughout GPO. A software process improvement program should be initiated to help move GPO to a more mature and predictable software development capability. I/T Performance Measures should be established and included in the I/T Strategic Plan. Departmental managers should be held accountable for performance measures under their control.

These efforts should be directed by a new DIT, with support from the I/T Advisory Panel and oversight from the GPO Executive Steering Committee. For these new initiatives to be successful, the current GPO management culture will need to change.

Finding 5. Information management capabilities are inhibited by GPO legacy systems.

Information management addresses the capability to effectively manage the organization based on information provided about actual operations. It addresses both the ability of the systems to provide useful information and the ability and inclination of managers to use the information to improve performance. GPO legacy systems do not generally provide the type of management information needed by department heads and supervisors to effectively plan, execute, and manage their operations. Typical problems include the following:

- Massive amounts of financial and cost accounting data are available, but useful summary information, trend analysis, and cause/effect comparisons are generally not available

- Information is often provided one or more months after the fact; real-time information is not available.
- Some information is plagued by inaccuracies and inconsistency; for example, some managers do not have confidence in PROBE data. Different reports often give conflicting information about the same operation.
- Management information is generally available only in large printed reports, with little ability for managers to summarize, analyze, or otherwise use the information for planning and management purposes.

Causes of this situation include the following:

- Many of GPO's management systems were designed and implemented years ago as stand-alone applications and were not designed to provide integrated management information. These systems have been patched over the years to provide some integration but have resulted mostly in highly complex 'spaghetti code' that still does not provide good management information.
- The software technologies used by the legacy systems make it difficult to integrate them and provide meaningful management information. GPO needs to transition its legacy systems to a relational database management system (RDBMS) environment to provide the foundation and flexibility to produce useful management information.

Departments and individual managers have developed their own management information tools to compensate for the lack of corporate management information. These localized tools lack consistency and integration among departments, require additional effort to re-key and process information, and further entrench the non-integrated, stovepipe operations characteristic of GPO. Because of these limitations, the GPO management culture does not rely heavily on management information for planning, execution, or oversight.

Recommendation 5. GPO needs to improve information management capabilities in its next-generation systems.

To improve management information capabilities, GPO needs to do two things:

- Replace its legacy systems with new systems capable of providing high-quality management information
- Change its culture to view information as a corporate asset and essential management tool.

To ensure its next-generation systems provide the necessary capabilities, GPO should do the following:

- Develop an enterprise information architecture to provide the management information blueprint for future systems. An information architecture describes the general types of information used throughout the organization, how they are created and used through the business process, and the key relationships between different types of information (e.g., production, financial, sales).
- Develop a corporate data model, based on the information architecture, that establishes standard data definitions and business rules for all data entities. The data model is important for enforcing standards, eliminating redundancy, and facilitating information sharing.
- GPO should establish an organization and process to develop the information architecture and data model for the whole organization. The previously recommended I/T organizational reforms need to be implemented before this step can be accomplished.

Concurrent with developing the information architecture and data model, GPO should begin evaluating and selecting the new technologies and tools needed to facilitate improved information management. The following technologies and tools should be evaluated and incorporated into the strategic plan and technical architecture:

- A Corporate “Data Warehouse.” A data warehouse will provide a single integrated repository of all GPO data. All systems and applications would be developed against this integrated repository.
- Relational Database Technology. RDBMS’s provide the core technology for data storage and retrieval, and facilitate information sharing and transfer between different systems and applications. GPO should select a standard RDBMS product and develop all systems around that standard.
- Ad Hoc Query, Reporting, and Analysis Tools. These tools are used by managers to create their own management information. With an effective corporate database design, developing reports and distributing information can be virtually eliminated as authorized users and managers can easily get the information they need without the intervention of programmers.
- Intranet Technology. This capability provides significant opportunities for making information resources easily available to GPO users and managers. These technologies also facilitate information sharing and collaboration among users and managers—a capability that is badly needed at GPO.

Finding 6. GPO’s continued reliance on XYWrite software for electronic document management frustrates many congressional users, but the solution to this problem does not lie solely with GPO.

Electronic document management is a key strategic capability for GPO’s continued efforts to better integrate the publishing process across the Legislative branch, the entire Federal Government, and private industry. Electronic document management includes the

processes and technologies supporting full electronic processing of documents throughout their life cycle, including transfer and transmission of documents between creators, producers, and users. The document life cycle may include numerous activities such as creating, editing, printing, transferring, posting to Web sites, and/or storing on CD-ROMs.

GPO uses a software package called XYWrite to provide ASCII file inputs to its electronic typesetting software. Some congressional users submit electronic documents to GPO in XYWrite format; others use standard word processing tools such as Word Perfect or Word. GPO staff convert word processing files to ASCII and then use XYWrite to insert formatting and other production controls into the documents. Congressional customers have several concerns about using XYWrite software:

- XYWrite is a very old DOS-based product and many congressional users would rather use their Windows-based word processing packages, but feel compelled to continue using XYWrite to support GPO's production process and not delay time-critical jobs.
- Once documents are transferred to XYWrite and formatting is added by users or GPO, the documents cannot be transferred back to word processor formats. For word processor users, this means document editing must be done manually once the document is in XYWrite format.
- Document reuse is also complicated for non-XYWrite users. Congressional users who want to post documents on their own Web sites must wait for GPO to convert the XYWrite file to a compatible HTML format, because their existing word processing files may not contain the final edits and formatting for the final document. "Simple" editing processes are also complicated. For example, if a user wants to begin with an existing document and make changes to create a new document, he/she does not have an electronic copy of the final version, which is now in XYWrite format. The user must re-key the edits made to the original XYWrite file in his/her word processor, or simply start from scratch.
- Overall, the dependence of GPO on XYWrite software limits the benefits of electronic document management and increases the cost and cycle times for many document production tasks.

The long-term solution to this problem will be the adoption of Standard Generalized Markup Language (SGML) standards and tools, but progress on this initiative has been slow throughout the legislative branch. SGML is currently being used in some GPO applications, but the detailed standards needed to facilitate transparent management throughout the life cycle of congressional documents are still being developed. This is a complex and time-consuming process. GPO participates in the congressional SGML working group but cannot control the outcome. Congress needs to agree on a detailed set of SGML tagging standards and SGML editing tools to realize the benefits of full electronic document management. Until such standards are agreed upon, it is difficult for GPO to implement new electronic document management systems or processes.

Recommendation 6. GPO should continue working closely with congressional SGML and electronic document management initiatives while beginning to develop its own SGML capabilities.

Electronic document management is a key strategic capability for GPO, both now and in the future. GPO should place appropriate emphasis on this capability, both in its corporate and I/T strategic plans.

GPO should consider ways to increase its leadership in the congressional SGML working group and new document management systems initiatives. For example, assigning more staff, more senior management personnel, and/or more SGML technical expertise to the process might help GPO both drive the process and show commitment to its key congressional customers. Both the House and Senate have made major investments in new electronic document management systems and have extensive resources devoted to these efforts. GPO may need to dedicate more resources to this effort to play a more important role in the process.

GPO should begin developing its internal capabilities by implementing an SGML prototype. GPO would realize numerous benefits from such a project, including the following:

- Gain valuable experience with the technology and tools
- Begin training GPO staff on SGML tools and standards
- Improve their coordination with the SGML working group and congressional SGML projects
- Demonstrate commitment and progress to Congress.

GPO should continue to work with its congressional customers to find short-term work-arounds to the problems created by XYWrite incompatibility with their word processing tools.

Finding 7. GPO faces many challenges in maintaining modern technical skills in its I/T workforce.

The labor market for skilled I/T staff is significantly out of balance today, especially in markets such as the Washington, DC, metropolitan area. The demand for I/T staff significantly exceeds the available supply, especially in newer technology areas. This tends to increase competition for scarce I/T skills, driving salaries up. GPO faces the same challenge all organizations face in attracting and retaining a skilled I/T workforce, however, GPO's challenges may be more difficult for the following reasons:

- A large portion of GPO's I/T workforce is dedicated to maintaining obsolete legacy systems. GPO has also been slow to implement new technologies in some areas, particularly in OIRM. I/T staff with modern technical skills may see limited

long-term career opportunities in such an organization and are able to find many exciting career opportunities with other employers.

- GPO's job classification structure and pay scales are inconsistent with the labor market for modern I/T technical skills. Many I/T staff are working in printing specialist and other non-I/T job classifications. Highly skilled I/T staff are leaving GPO for large salary increases in the private sector.
- Internal training and career development opportunities for I/T staff are currently limited at GPO. Industry studies have shown new technology training to be a major incentive for I/T staff.

Skilled I/T staff are in great demand and can command high salaries, challenging assignments, and career development incentives. In this environment, GPO is unable to compete effectively for modern I/T management and technical skills.

Recommendation 7. GPO should plan on outsourcing a significant portion of its I/T operations to ensure a more reliable supply of modern technical skills.

I/T outsourcing is feasible for several reasons:

- I/T is not one of GPO's core competencies.
- I/T outsourcing is increasing both in the Federal and commercial market.
- There is a robust and competitive industry to handle the work.

In this context however, certain I/T functions should be retained and staffed within GPO, including—

- Director of Information Technology
- Representatives on the I/T Advisory Panel from each department
- An I/T planning and resource management function
- I/T functions integral to core production processes, e.g., computer-to-plate printing
- Project managers for each major contract and/or outsourced project
- Information security manager.

On the other hand, virtually all other technical activities can be successfully outsourced, including system and network operations, software development and maintenance, user and technical support, new technology evaluation, and documentation and training.

GPO should expect improved I/T performance and, over the long term, reduced costs from outsourcing. However, outsourcing will not correct other I/T management and process problems; the reforms recommended earlier in this section are still needed. Over the next year, GPO should conduct a detailed assessment of which activities could be outsourced, the performance and workload requirements for each function, and the

relative cost/benefits associated with each. GPO will need outside expertise to conduct this detailed study. In the near term, GPO should select several qualified contractors to provide supplemental technical support while the broader outsourcing plan is developed. GPO should use the General Services Administration (GSA) Schedule program to reduce procurement lead time for these contracted services. Potential areas for immediate contractor support may include—

- Year 2000 project management and technical support
- Network engineering, implementation, and operations support
- SGML prototyping and technical support
- Management analysis and planning, e.g., strategic planning, outsourcing analysis, architecture development, and business process redesign.

Finding 8. GPO's information systems security program has been undermined by staff reductions and budget cuts.

The majority of GPO's I/T systems handle sensitive unclassified information. Some GPO operations handle classified documents and have special security requirements, e.g., printing Passports. Currently, GPO I/T systems do not handle classified information. GPO's Office of Administrative Support (OAS) is responsible for the overall security program, including protective services (i.e., police), physical and document security, and information systems security. The office of Telecommunications and Automated Information Systems Security (TAISS) is responsible for systems security. TAISS is currently staffed by a single individual. GPO Instruction 825.7C, *Information Security Program Regulations*, outlines GPO's policies regarding information security. This regulation was last updated in May 1989. GPO Instruction 825.16B, *TAISS Program*, outlines the policies governing automated information systems security. This regulation was last updated in August 1994.

In the past, the TAISS had a staff of six to support the implementation of system security policies and procedures. With continued GPO downsizing, this staff has been eliminated and replaced by departmental TAI system security representatives. Each GPO department is required to designate one or more individuals to supervise and coordinate system security requirements within the department, and to coordinate with the TAISS program office. The distribution of TAI system security responsibilities to the departments has not been completely successful. Some departments have not formally appointed a TAI system security representative or informed the TAISS program office, and the status of some departmental designees is unclear. Training for departmental system security representatives has also been lacking due to budget cuts and lack of staff at the TAISS program office to conduct adequate training. As a result, the integrity of the TAI system security organizational structure has been undermined.

Communication between the TAISS office and departmental security representatives are generally limited. Other than reporting security violations, there is no regular communication between these groups, nor any regularly scheduled meetings. There is also little communication vertically between senior GPO management, the OAS director, and the TAISS office regarding security issues. This general lack of communication is consistent with the overall GPO organizational structure and management culture.

The TAISS office has a procedure for collecting reports of potential system security violations and issues. Most of these reports are from the CA Top Secret program used on the mainframe, and have been routine, e.g., users trying to log in to the mainframe with the wrong user I.D. or password. There have been no reported serious security issues in the recent past. No evidence was found of serious technical security weaknesses within any particular system or department; however, our analysis focused on management of the information systems security function, not on individual system security.

Information systems security documentation, as required by the Computer Security Act of 1987 and GPO instructions, is lacking in many areas, partially as a result of staff reductions and budget cuts. The TAISS program office and departments have neglected some of their documentation responsibilities in pursuit of other priorities. For example—

- Current system security plans have been developed for some of the smaller offices and systems. The system security plan for the OIRM mainframe was last updated in 1990. System security plans for many of the systems in the Production Department have either not been developed or not submitted to the TAISS office.
- Risk assessments of major GPO systems have not been conducted because of resource constraints.
- A contingency plan was developed for the OIRM mainframe but has not been recently upgraded. That plan called for using the Senate mainframe as a backup processing site, but changes to the Senate's mainframe configuration has rendered that plan obsolete, and OIRM has not revised its contingency plan. Contingency plans have not been developed for other mission-critical GPO systems.

Security training and awareness programs have been virtually eliminated because of budget cuts. In the past the TAISS office conducted regular security training and awareness sessions for GPO staff, and produced poster handouts, and flyers. These efforts have been discontinued.

The information systems security issues identified in Arthur Andersen's 1995 audit of GPO's consolidated financial statements have been largely addressed, but documentation of the changes and corrections is limited.

In summary, GPO's information systems security function has been hurt by years of staff reductions and budget cuts. The current state of the function presents a substantial risk to GPO, given the increasing importance of I/T to GPO's current and future operations. A

revitalized I/T security function will be an important part of GPO's I/T modernization efforts.

Recommendation 8. GPO needs to strengthen its information systems security program.

The Telecommunications and Automated Information Systems Security (TAISS) office needs additional resources to maintain the central aspects of the information systems security function, and I/T departments need to designate sufficient staff resources to perform the departmental functions required. A standing information security subcommittee, chaired by the TAISS and reporting to the I/T Advisory Panel, should be established to develop information systems security policies and procedures, and provide technical input. A comprehensive risk assessment should be conducted for all mission-critical I/T systems. System security plans and contingency plans should be developed and updated annually for each major I/T system. The security training and awareness program should be re-instituted. All departmental TAI system security representatives should receive basic information systems security training, with periodic refresher training as required. Other security awareness and communications tactics should be explored, such as a regular security newsletter.

To determine how GPO can be more competitive in information technology operations, we examined the strengths, weaknesses, opportunities, and threats (SWOT) to a competitive strategy.

**Exhibit 7-1
SWOT Matrix**

Information Technology Issues	Strengths	Weaknesses	Opportunities	Threats
Organization	<ul style="list-style-type: none"> • Successful I/T operations in several departments 	<ul style="list-style-type: none"> • No central I/T management direction or oversight • Stovepipe departmental I/T operations • Poor communications between departments • Lack of technical integration • Inefficient use of resources • Poor I/T performance in some areas 	<ul style="list-style-type: none"> • Significantly improve I/T performance 	<ul style="list-style-type: none"> • Inability to harness I/T capabilities to improve GPO performance • Lack of central direction and control impedes progress in other I/T initiatives

Information Technology Issues	Strengths	Weaknesses	Opportunities	Threats
Legacy System Environment and Year 2000 Compliance	<ul style="list-style-type: none"> • Computer-to-plate technology • GPO Access • Integrated Processing System • DITS • CBDNet • New fiber optic LAN • NT LAN migration 	<ul style="list-style-type: none"> • Obsolete mission-critical business systems • No legacy modernization strategy • Major Year 2000 risks 	<ul style="list-style-type: none"> • Use Year 2000 urgency to shake up I/T management, change culture 	<ul style="list-style-type: none"> • Inability to continue business operations because of Year 2000 problems
I/T Management Processes	<ul style="list-style-type: none"> • Ability of some individual managers to implement successful I/T projects with limited resources and lack of corporate support 	<ul style="list-style-type: none"> • No I/T strategic plan or planning process • No I/T capital planning process • Informal, ad hoc departmental I/T planning • No technical architecture • Inconsistent/ ineffective project management controls • No I/T performance measures • No standard system development methodology • No standard process for new technology evaluation and implementation 	<ul style="list-style-type: none"> • Improve I/T performance and resource utilization by implementing best practices for I/T management • Adhere to the spirit and intent of ITMRA 	<ul style="list-style-type: none"> • Inability to harness I/T capabilities to improve GPO performance • Successful I/T operations undermined by poor management practices
Information Management	<ul style="list-style-type: none"> • Vast amounts of financial data available 	<ul style="list-style-type: none"> • Legacy systems do not provide useful management information • Available information often compromised by inaccuracies and inconsistency • Management culture does not use information for planning, execution, and oversight • No corporate initiative to address the problem 	<ul style="list-style-type: none"> • Develop enterprise information architecture and corporate data model to guide future system development efforts • Implement new technologies and tools to facilitate information management 	<ul style="list-style-type: none"> • Inability to harness I/T capabilities to improve GPO performance • Continuation of non-integrated, stovepipe departmental I/T operations

Information Technology Issues	Strengths	Weaknesses	Opportunities	Threats
Electronic Document Management	<ul style="list-style-type: none"> • Electronic publishing capabilities in Printing Procurement and Superintendent of Documents • Computer-to-plate technology • Computer typesetting systems 	<ul style="list-style-type: none"> • Obsolete XYWrite software not compatible with congressional customer document management tools • Slow development of congressional SGML standards initiatives 	<ul style="list-style-type: none"> • Improve support for congressional customers • Reduce costs and cycle times • Take leadership role in evolving SGML initiatives 	<ul style="list-style-type: none"> • Inability to support most important customers • Inability to stay on leading edge of document management technologies
I/T Workforce	<ul style="list-style-type: none"> • Highly skilled I/T staff in some departments 	<ul style="list-style-type: none"> • Many I/T staff lack modern I/T skills • Job classification scheme not applicable to I/T jobs • Salary scales not competitive with market salaries for I/T skills • Professional development opportunities limited for I/T staff • Difficult to attract and retain leading edge I/T skills 	<ul style="list-style-type: none"> • Improve I/T operations and competitiveness by outsourcing much of the I/T function 	<ul style="list-style-type: none"> • Inability to attract and retain the necessary skills to run an effective I/T operation
Information Security	<ul style="list-style-type: none"> • Effective technical security measures exist on many systems (e.g., GPO Access, NT LANs) • No major security violations have been noted recently • Current security plans exist for some smaller systems • Effective information systems security policies 	<ul style="list-style-type: none"> • Staff and budget cuts have undermined the information systems security program • Systems security staff in some departments not formally designated or adequately trained • Security plans for mainframe out of date, not developed for some systems • Contingency plans for mainframe out of date, not developed for other systems • Risk assessments have not been conducted • Security training and awareness program was cut back due to budget cuts 	<ul style="list-style-type: none"> • Ensure protection of information resources and continuity of operations 	<ul style="list-style-type: none"> • Unauthorized disclosure of sensitive information • Destruction of assets through malicious or inadvertent actions • Inability to restore operations after system failure or disaster

Appendix A

Documents Reviewed

Title	Date
1994 Customer Service Survey Report	5/95
1995 Achievements at the Defense Printing Service	
1995 Customer Service Survey Report	6/96
1996 Customer Service Survey Report	4/97
1996–2000 Wage Agreement U.S. Government Printing Office and International Association of Machinists Franklin Lodge 2135	12/18/96
1997–2000 Wage Agreement U.S. Government Printing Office and AFGE-Printing Crafts Joint Council	12/9/96
1997–2002 Wage Agreement U.S. Government Printing Office and Joint Bargaining Committee	2/6/97
1998 Salaries for Certain Government Printing Office Employees	12/30/97
A Guide to the Federal Service Labor-Management Relations Statute	1989
A Reformed Federal Printing Law Soon? Don't Hold Your Breath	
Achieving a Drug-Free Workplace Employee's Guide	2/92
Achieving a Drug-Free Workplace Supervisor's/Employee's Guides	
Actual and Chargeable Hours Report FY 1989–FY 1997	
Agency Administrative Grievance System	4/24/85
Agency Procedural Handbook for the Procurement of Commercial Printing Services with the GPO	
Agency's Strategic Plans Under GPR: Key Questions to Facilitate Congressional Review	
AIHR Jacket Listings Dated	8/7/97
An Evaluation Needs To Be Performed To Ensure That the Automated BID List System Is an Effective and Efficient System	12/92
Annotated Copy-Master Labor-Management Agreement between Joint Council of Unions, GPO and the U.S. Government Printing Office	4/25/88
Audit GPO's Negotiated /Diverted Program	11/95
Audit of Baker-Webster Printing Company Claim, Purchase Order 89229, Jacket 354-839	5/18/94
Audit of Brois Lithographing Company Settlement Proposal on Purchase Order G8260, Jacket Number 545-835	9/10/97
Audit of EPCo. Associates, Claim on Program D306-S, Purchase Order 90758, Jacket Number 282-416	8/25/94
Audit of Freedom Graphic Systems, Inc., Claim for Termination of Purchase Order 89953, Jacket Number 360-792	9/15/94
Audit of Graphicdata, Inc's Equitable Adjustment Proposal for Term Contract Program D306-S	4/95
Audit of I.P.I. Graphics for Jacket Number 403-050	9/30/97
Audit of Professional Printing of Kansas, Inc. Settlement Proposal on Purchase Order 72688, Jacket Number 416-192	9/30/97
Audit of the Atlanta Regional Printing Procurement Office	11/94
Audit of the Beasley's Printing Center's Termination Settlement Proposal for GPO Term Contract Program 5591-S	3/29/96
Audit of the Charleston Satellite Printing Procurement Office	11/94
Audit of the Equitable Adjustment Claim Submitted by KPT, Inc., on Purchase Order 95663, Program D409-S, Jacket 302-040	4/11/95
Audit of the Equitable Adjustment Proposal of Fry Communications, Inc. (Purchase Order Number 70573)	2/20/97
Audit of the George Marr Company Claim for Termination of Convenience of Purchase Order H-1775, Jacket Number 752-953	6/2/94
Audit of the Lawndale Press, Inc.'s Termination Settlement Proposal for Purchase Order 97544, Jacket 375-242	9/15/95
Audit of the Standard Register Company—Jacket Nos. 752-131 and 752-132 - Termination for Convenience of the Government	1/31/97
Audit Report Logs FY 90–FY 98	
Audit Report on Central Office Issues Involving Pueblo's Public Documents Distribution Center	9/27/96
Audit Report on Improving Internal Controls Over the Handling of Cash at the Pueblo Bookstore	9/27/96
Audit Report on Improving Internal Controls over the Handling of Cash at the Denver Bookstore	9/27/96
Audit Report on Pueblo's Public Documents Distribution Center's (PUDDC) Financial Management Controls	9/27/96
Audit Report on Central Office Issues on Bookstore Operations	10/22/96

Title	Date
Audit Report on GPO's Impreset Funds	3/96
Audit Report on GPO's Warehouse Space	8/23/96
Audit Report on Strengthening Controls Over the Billing of Reimbursable Postal Permit Mailings	6/4/97
Auditors Questions to Bookstore Managers	
Bargaining Unit Listing	10/7/97
Best Practices Article: "Competitive Edges"	
Best Practices Article: "Partnering for Profit"	
Best Practices Article: "Production Salaries: Post Moderate Gains"	
Best Practices Article: "Value of an Ink Goes Well Beyond Price"	
Best Practices Article: "What is Strategy?"	
Biennial Report to Congress on the Status of GPO Access	
Bookstore Telephone Numbers	
Budgeting, Accounting, and Financial Reporting Systems (Team 5) Weekly Status Reports	
Chapter 12 Occupational Health and Environmental Services	8/20/93
Chapter 13 Office of Labor and Employee Relations (Draft)	
Chapter 6 Office of Personnel	12/15/94
Chapter 9 Office of Equal Employment Opportunity (Draft)	
Comparison of DoD and GPO Prices for Printing and Duplicating Work	2/95
Corrective Actions	7/27/79
Correspondence	
Cost System Diagram	
Creating a Government That Works Better and Costs Less (NPR)	
Customer Satisfaction Survey Analysis	
Customer Service Survey Findings	3/94
Defense Automated Printing Service "Can Do Right Now"	
Delegation of Authority in Personnel Actions for Supervisors	9/20/79
Delegation of Authority of Personnel Actions	4/20/81
Delivery Order	
Departmental Account Representative Division Monthly Reports	
Disciplinary Actions Form	
Discussion Draft	5/29/97
Document & Data Request List	
Documentation of Settlement Negotiations Need Improvement	12/20/93
Documentation of Settlement Negotiations Need Improvement	
Employee Conduct	2/23/73
Employee Information Package	
Employee Suggestion Form	
Engineering Service Internet Printout	
Enhancing Customer Service Skills	
Establishing An Overtime Rate for Quality Control Inspections	11/9/94
Financial Audit: GPO Financial Statement FY 1995	4/96
Financial Audit: GPO Financial Statements FY 1992	5/93
Financial Operations Overview	
Financial Package FY 1997	12/29/97
Financial Package/Total GPO Operations Summary FY 1997	8/97
Financial Statements for GPO FY 1997	
Focus Group for Congressional Printing	
Focus Group for Congressional Printing Protocol	
Follow-up Review of the General Procurement Division	8/27/93
FY 97 Training Data	

Title	Date
GAO/GPO Proposal and Oral	
General - Government Printing Office Alcohol Free Workplace Program	4/14/93
General - Government Printing Office Alcohol-Free Workplace Program	5/19/94
General - Government Printing Office Smoking Policy	3/28/96
General Procurement Division Needs to Comply with Written Policy Memoranda	8/27/93
General Stores Section Needs to Implement Controls Over the Storing and Issuing of Materials and Supplies	5/11/93
Government Auditing Standards	1994
Government Printing Office Drug-Free Workplace Program	2/15/90
Government Printing: Comparison of DoD and GPO Prices for Printing and Duplicating Work	2/17/95
GPO Active and Completed Items List	11/28/97
GPO Budget Formulation Worksheet FY 1998 and 1999	
GPO Budget Justification FY 1999	
GPO Budget Process Worksheet	
GPO Capital Requirements for FY 1998 & FY 1999	
GPO Client Billing Survey	
GPO Conference Report (Appropriation Report) from Congress	
GPO Cumulative Analysis of Congressional Jacket Billings Period Ending 10/31/97	
GPO Detailed Budget Estimates by Account Number and Cost Code	
GPO Federal Merit Promotion Program	
GPO Financial Accounting Manual	
GPO Financial Briefing for Oct./Nov. FY 1998	1/20/98
GPO Floor Plans	
GPO Full Time Equivalent Employment (Workmonths)	
GPO Leg Appendix Par 1J. 177-702 Leg. 024	
GPO Memorandum: Budget Call, FY 1998/1999	5/16/97
GPO Monopoly-Like Status Contributes to Inefficiency and Ineffectiveness	
GPO Moving Forward in the Electronic Age	
GPO Networks	
GPO Office of Budget All Inclusive Hourly Jacket Rate Listing	
GPO Office of Financial Management Summary Aged Listing of Accounts Receivable by Agency Code	
GPO Office of Financial Management Cost Balance File Listing	11/1/97
GPO Office of Financial Management Summary Aged Listing of Accounts Receivable by Budget Authorization Code	
GPO Office of the Inspector General Customer Satisfaction Survey	11/94
GPO Organization Demographics Summary Report	
GPO Organizational Chart	
GPO Organizational Demographics Summary Report	1/2/98
GPO Paper Inventory Description Catalog	
GPO Performance Management System	12/1/86
GPO Personnel Section	
GPO Printing Procurement Points of Contact	
GPO Production Services Internet Printout	
GPO Scale of Prices and Production Time	
GPO Schedule of Operations and Classes of Work Dated FY 1995-1998	
GPO Series Summary Report by Organization	
GPO Series Summary Report by Organization	1/2/98
GPO Telephone Directory	
GPO/2001 Vision for a New Millennium	
Grievance Form	4/24/85
Improvements are Needed in the Acquisition of Microcomputer Systems	7/23/93
Information on September 1996 Major Inventory Reduction	9/97
Information Systems Skills Inventory	

Title	Date
Institute for Federal Printing & Electronic Publishing	
Integrated Processing System (IPS) Order Management Training	
Improved Performance & Service Book 1	
Interagency Council on Printing and Publications Services	
Internal Controls and Compliance with Laws, Regulations and Procedures Addressed in Audit Report No. 93-02	2/26/93
Internal Controls Governing the Official Reception and Representation Fund Need Improvement	8/9/93
Internet and Electronic Dial-Up Bulletin Boards	6/97
Interviews Guide for Conducting Selection Interviews	10/97
Interviews	
Labor and Employee Relations Service	
Labor-Management Agreement between AFGE Printing Crafts Joint Council and the United States Government Printing Office	5/19/83
Labor-Management Agreement between American Federation of Government Employees Local 3392, AFL-CIO and the United States Government Printing Office	5/27/94
Labor-Management Agreement between American Federation of Government Employees Local 1248, AFL-CIO and the United States Government Printing Office	1/6/96
Labor-Management Agreement between Brotherhood of Painters and Allied Trades Civil Service GPO Local No. 1632 and United States Government Printing Office	4/9/91
Labor-Management Agreement between Fraternal Order of Police Lodge 1 and the United States Government Printing Office	11/20/97
Labor-Management Agreement between International Association of Machinists Franklin Lodge No. 2135 and the United States Government Printing Office	12/18/72
Labor-Management Agreement between Joint Council of Unions, GPO and the United States Government Printing Office	4/25/88
Labor-Management Agreement between the International Brotherhood of Electrical Workers Local Union No. 121 Electrical Branch, Elevator Branch, Planners and Schedulers, and Power Branch and United States Government Printing Office	8/20/90
Labor-Management Agreement between Washington Printing and Graphic Communications Union, Local 1 Masonry Mechanics and the United States Government Printing Office	2/9/83
Labor-Management Relations Zero Violence in the Workplace	7/30/96
Laurel O&F Manual	
Laurel Operation Detailed Budget Estimates	
Laurel Operations Delivery Process	
Laurel Operations Organization Chart	
Laurel Operations Warehouse Storage Capacity	
Leg Appendix Part 1 J. 177-702 Leg. 024 Government Printing Office	
Legal and Regulatory Framework Is Outdated for New Technological Environment	
Legislation	
Letter to the JCP	4/22/94
Letter to the JCP	5/1/95
Letter to the JCP	5/30/96
Letter to the JCP	8/12/94
Library of Congress Workplan Technology Supplement	1/18/96
Management Audit of the Government Printing Office In-Process Project Review	1/30/98
Management Audit of the Government Printing Office In-Process Review	3/5/98
Management Audit of the Government Printing Office Project Review	3/18/98
Management Audit of the Government Printing Office Project Review	3/20/98
Management Audit of the Government Printing Office Workplan	12/19/97
Management Audit of the GPO Workplan	12/19/97
Managing for Results: Analytic Challenges in Measuring Performance	
Managing for Results: Critical Issues for Improving Federal Agencies' Strategic Plans	
Managing for Results: Enhancing the Usefulness of GPRA Consultations Between the Executive Branch and Congress	
Managing for Results: The Statutory Framework for Improving Federal Management & Effectiveness	6/24/97
Manugistics Posts Record Revenues for Seventh Consecutive Quarter Internet Printout	

Title	Date
Materials Management Service Internet Printout	
Memorandum of Understanding between Columbia Typographical Union No. 101 (AFL-CIO) and the United States Government Printing Office	12/18/7 2
Memorandum to Francis Posniewski and Raymond Tatro	11/5/91
Memorandum to the Deputy Public Printer: Firm Prices	12/3/97
Memorandum to the Deputy Public Printer: Firm Prices	12/30/9 7
Memorandum to the Deputy Public Printer: Firm Prices Dated	12/16/9 7
National Association of Printers and Lithographers Internet Printouts	
National Technical Information Service Strategic View 1998–2003	
Need for Reimbursement of Funds Expended from the Official Reception and Representation Fund	2/26/93
New Hearings Billing Procedure	
New Leadership and New Directions for the Government Printing Office	
Office of Information Resource Management Expense Budget Review Worksheet for FY 92–FY 97	
Office of Inspector General's Report on Improving Operations at the Atlanta Bookstore	9/30/94
OIG Report on GSA Was Fully Billed for All Printing Jobs Examined	3/31/94
Operation Cost Record FY 1997	
Order Management Training	
Outstanding Contractor Invoices for Printing	3/31/95
Prepared State Before the Committee on Rules and Administration, U.S. Senate on Various Government Printing Proposals	2/3/94
Prepared Statement Before the Committee on Rules and Administration, U.S. Senate on Public Access to Government Information in the 21st Century	7/24/96
Prepared Statement Before the Joint Committee on Printing on Oversight of the Government Printing Office	
Prepared Statement Before the Joint Committee on Printing on Oversight of the Government Printing Office	3/13/97
Prepared Statement Before the Subcommittee on Government Management Information, and Technology Committee on Government Reform and Oversight House of Representatives on GPO's Role in Federal Information Dissemination	
Prepared Statement Before the Subcommittee on Government Management Information, and Technology Committee on Government Reform and Oversight House of Representatives on GPO's Role in Federal Info. Dissemination	5/97
Prepared Statement Before the Subcommittee on Legislative Appropriations Committee on Appropriations House of Representatives on Appropriations Estimates for Fiscal Year 1998	
Prepared Statement Before the Subcommittee on Legislative Appropriations Committee on Appropriations House of Representatives on Appropriations Estimates for Fiscal Year 1999	
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Printing and Binding Jacket (sample work jacket)	
Printing Shops Internet Printouts	
Printing, Publishing & Electronic Media	
Procedures for Reconciling the Accounts Receivable Government Subsidiary Records to the General Ledger	
Procurement Authority, Policies, and Responsibilities	7/11/97
Production Department Internet Printout	
Proposal Presentation	
Proposed Revisions to Title 44	
Quality Control and Technical Department	
Recruitment and Selection—Various Vacancy Announcements	
Regional Report	12/31/9 7
Report on Grumman InfoConversions' Extension Settlement and Partial Termination Settlement and Proposals for Program 901-S	12/22/9 4
Report on Review of GPO Cafeteria Subsidies	1/6/93
Report on the Commercial Procurement of DOD Printing Could Result in Substantial Cost Savings	5/25/93
Report on the Government Printing Office Workers' Compensation Program (Revised)	8/95
Report: GPO-Monopoly-Like Status Contributes to Inefficiency and Ineffectiveness	9/90
Report: Managing for Results—Critical Issues for Improving Federal Agencies' Strategic Plans Dated	9/97

Title	Date
Reporting Labor Costs on Inspections Performed	11/4/94
Results of the Office of Inspector General Survey of Customer Satisfaction in the Executive Branch	8/95
Review of BNT Printing & Publishing Company, Incorporated's Settlement Proposal for Equitable Adjustment on Purchase Order F7750, Jacket Number 735-291	9/10/96
Review of Grumman InfoConversion's Settlement Proposal for Equitable Adjustment on Program 901-S, PO 99001, JN 283-062	9/30/93
Review of Holmes & Shaw, Inc.'s Claim for Termination of Purchase Order M2968, Program 2887-S	1/31/96
Review of News Printing Company Inc.'s Claim on Purchase Order 87828, Jacket Number 315-038	7/16/93
Review of News Printing Company, Inc.'s Claim on Purchase Order 87828, Jacket Number 315-032	7/16/93
Review of Supplemental Agreement Proposal of American Bank Note Co. on Purchase Order 96959, Jacket 366-326	2/14/96
Review of Termination Proposal of Sioux Falls Shopping News/Western Web Printing on Purchase Order 97478, Jacket 375-192	3/21/95
Review of Termination Proposal of Sioux Falls Shopping News/Western Web Printing on Purchase Order 97434, Jacket 375-225	3/22/95
Review of the Termination Settlement Proposals by Circuit Services Products, Inc., for Purchase Order H2105, Program 1565-S	5/28/97
Review of the Termination Settlement Proposals by the Standard Register Company, Inc., for Purchase Order Number 57640, 43836 and 46084	5/12/97
Revision to Annotated Master Contract	9/21/89
Safeguarding Coin-Operated Copier Funds in GPO's Central Office Bid Room	2/1/96
Safety - Drug and Alcohol Testing for Employees Required to Possess a Commercial Driver's License	1/26/96
Software in Use Forms	
Standards of Conduct for Government Printing Office Officers and Employees	6/10/88
Statement of Work	
Statement of Work for an Integrated Processing System	12/2/94
Status Report on Open Recommendations and Suggestions in Arthur Anderson's Report	
Steps Need to be Taken to Improve the Self-Serve Store	5/11/93
Steps Needed to be Taken to Improve the Processing of Health Insurance Premiums	1/93
Stores Division Needs MMPCS II Reprogrammed on the Acceptance of Back Orders Placed	11/3/92
Strengthening Cash Management Controls at the GPO Cafeteria	5/18/94
Study to Identify Measures Necessary for a Successful Transition to a More Electronic Federal Depository Library Program	
Subject Classification Chart	1/31/92
Superintendent of Documents Charts	
Supplemental Labor-Management Agreement between Graphic Communications International Union Local Union 4B and the United States Government Printing Office	9/27/90
Supplemental Labor-Management Agreement between Graphic Communications International Union Local 285M, AFL-CIO and the United States Government Printing Office	7/2/97
Supplemental Labor-Management Agreement between Washington Federal Printing Workers' Union Local 713-S, Graphic Communications International Union, AFL-CIO and the United States Government Printing Office	11/7/96
Supplemental Labor-Management Agreement between Washington Government Photo Offset Union No. 538-C of the Graphic Communications International Union and the U.S. Government Printing Office	2/9/90
Supplemental Labor-Management Agreement between Washington Printing and Graphic Communications Union No. 10C Graphic Communications International Union AFL-CIO and the United States Government Printing Office	5/23/90
Survey of GPO's Workers' Compensation Program	9/9/94
The Library of Congress Workplan	1/26/96
Title 44—Public Printing and Documents Pub. L. 90-620	10/22/6 8,1997
Title 5 of the U.S. Code and GPO (Draft)	7/27/95
To Strengthen the GPO Paper Procurement Program	3/94
Total Printing Procurement Revenue Internet Printout	
Training and Career Development	12/15/9 2
Training and Career Development Branch	5/97
Training Evaluation Reports	
U.S. Army: Printing and Publications Economic Analysis	6/11/97

Title	Date
U.S. Army: Proponent Survey	8/96
U.S. Government Printing Office's Financial Statements for Fiscal Year 1992	5/93
U.S. Government Printing Office's Financial Statements for Fiscal Year 1995	4/96
U.S. Government Printing Office: Comments and Suggestions for Consideration	
U.S. GPO Internet Printout	
U.S. GPO Superintendent of Documents Order Division Order/Inquiry Manual	8/95
Unbilled Labor Costs on Inspections Performed	9/30/94
Unbilled Travel Costs on Inspections Performed	9/30/94
Using the Automated Worklog as a Management Tool GPO-Wide	11/9/94
Various Vacancy Announcements	
Written Procedures Need To Be Developed to Improve the Central Receiving Unit	5/11/93

Appendix B

Information Sources for Section 2

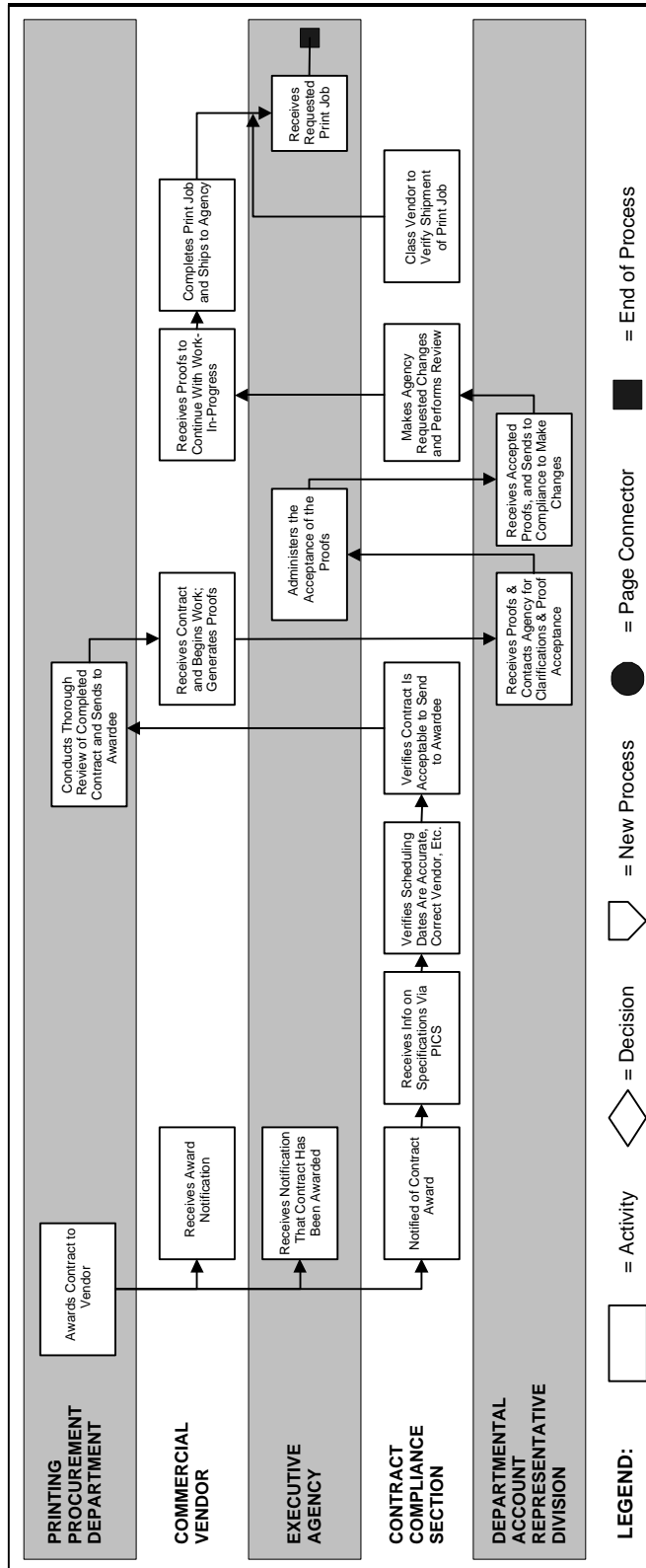
The Booz·Allen team, in addition to researching a multitude of documents and reports concerning GPO's mission and goals, policies, operational procedures, work flow processes, and workload metrics, interviewed the employees in the following areas.

Title/Function
Library Division
Rates and Investigation Branch
Depository Distribution
Superintendent of Documents
Chief, Advertising & Promotion Branch
Associate Director, Institute for Federal Printing and Electronic Publishing
Congressional Printing Management Division
Customer Service
Office of Electronic Information Dissemination (EIDS)
Los Angeles Bookstore
Chief, Inventory Staff, Laurel Operations
Assistant Director, Office of Electronic Information Dissemination (EIDS)
Dallas Bookstore
Detroit Bookstore
Publications Media Specialist, Institute for Federal Printing and Electronic Publishing
Director, Materials Management Service
Chief, Program Section A, Term Contracts Division, Printing Procurement Department
Promotion, Advertising and Outreach
Chief, Bibliographic Systems Branch
Seattle Bookstore
Chief, Documents Section
Atlanta Bookstore
Document Systems, OIRM
Chief, Documents Technical Support Group
Chief, Sales Management Division
Chief, Documents Control Branch
Director, Institute for Federal Printing and Electronic Publishing
Acting Chief, Shipping, Receiving, Baling & Transportation Operation Section, Stores Division, Materials Management Service
Management Analyst, Operations Branch, Documents Technical Support Group
Chief, Order Division
Chief, Field Operations Division
Laurel Operations Coordinator
Director, Documents Sales Service
Springbelt Warehouse Operations

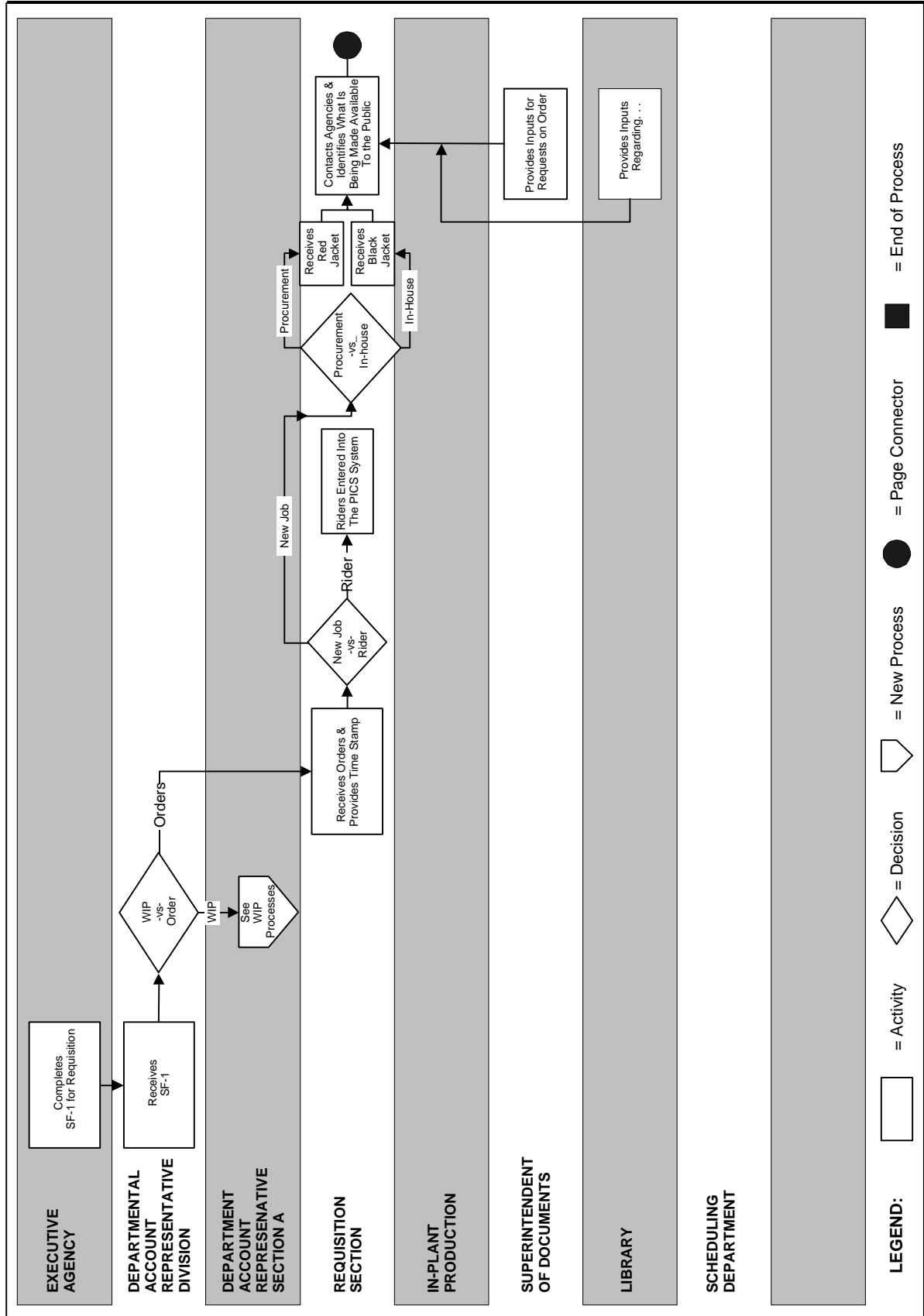
Appendix C

Flow Charts

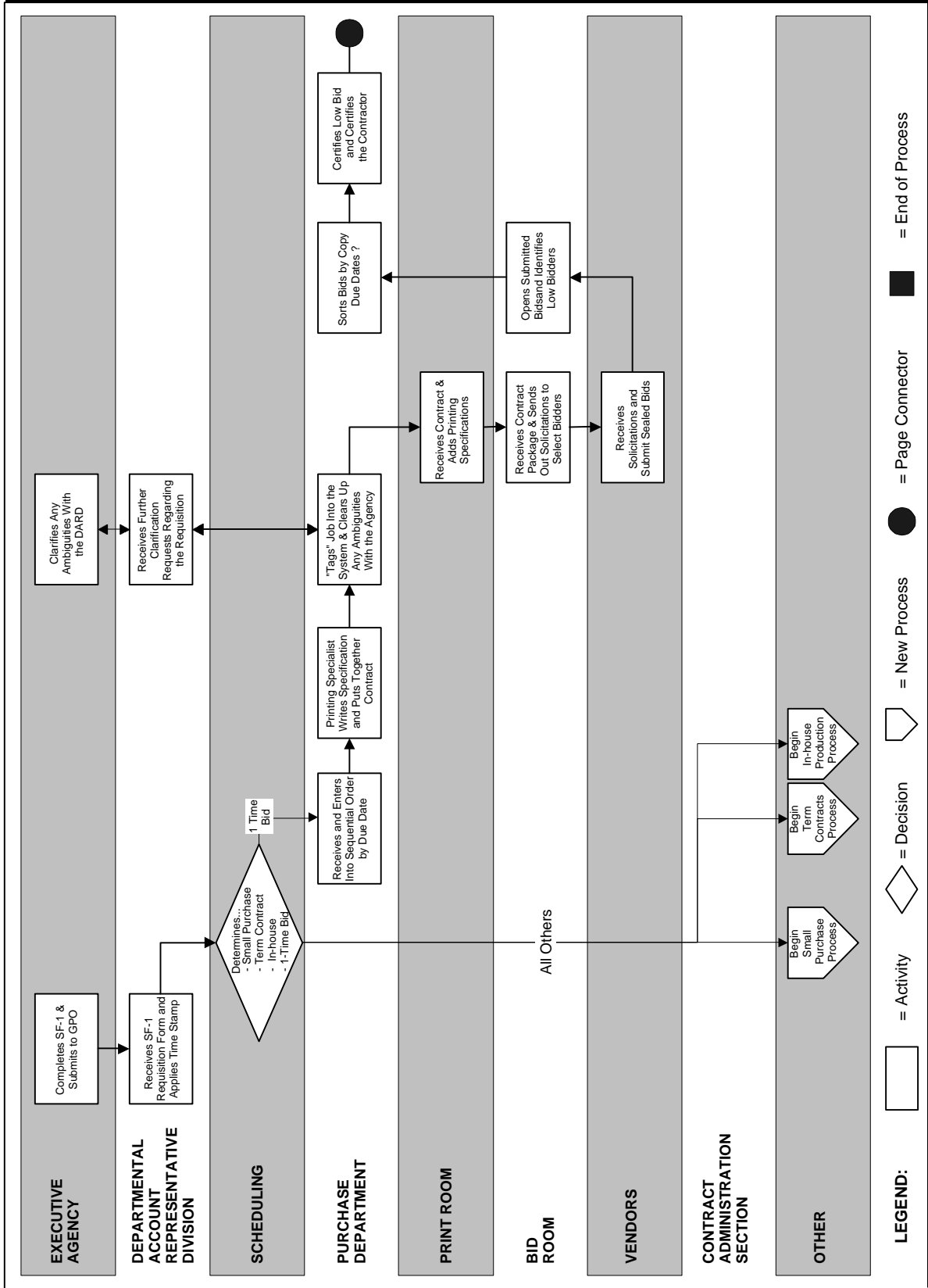
Printing Procurement Department—Contract Compliance Process



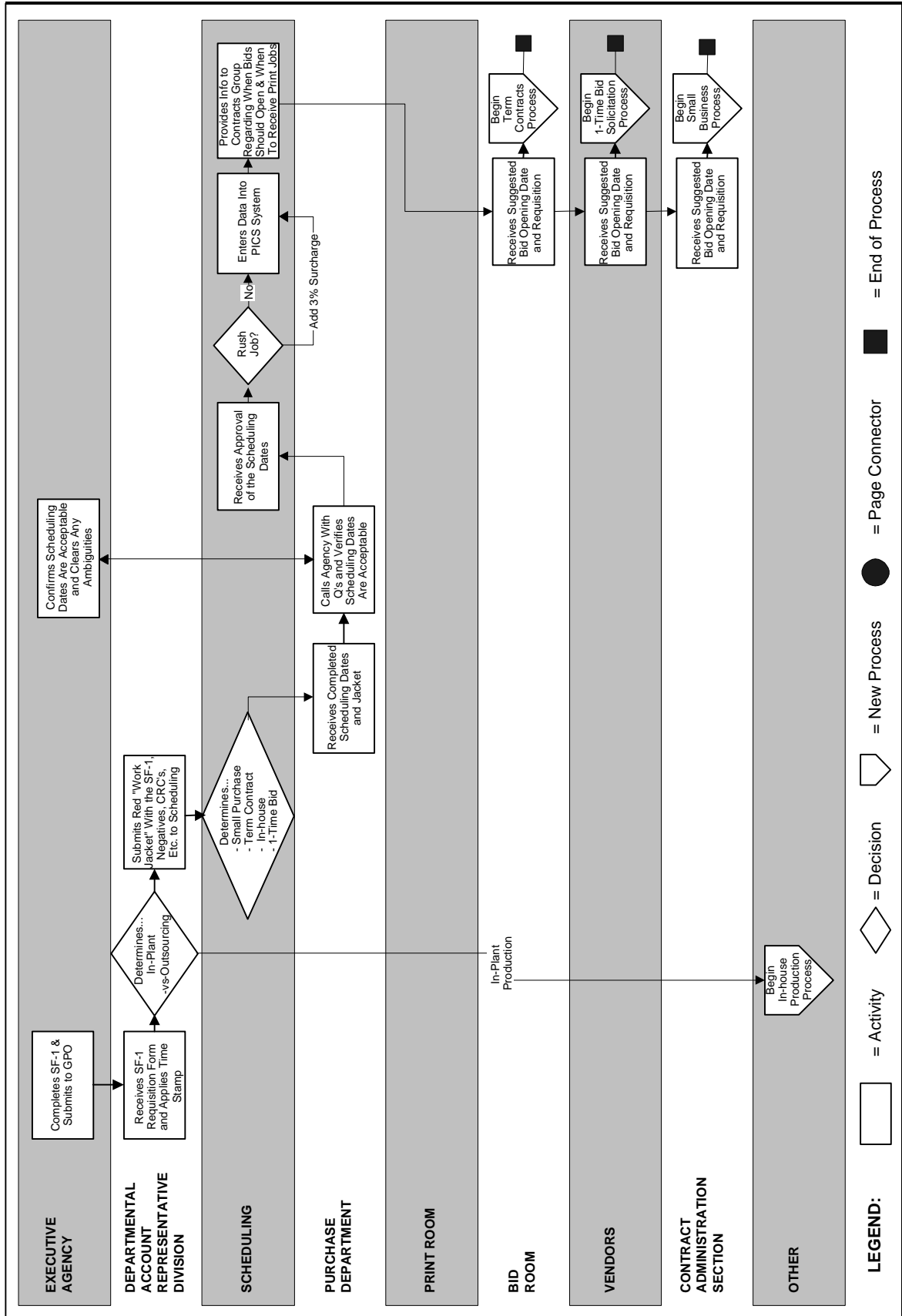
Printing Procurement Department—Requisition Department Process



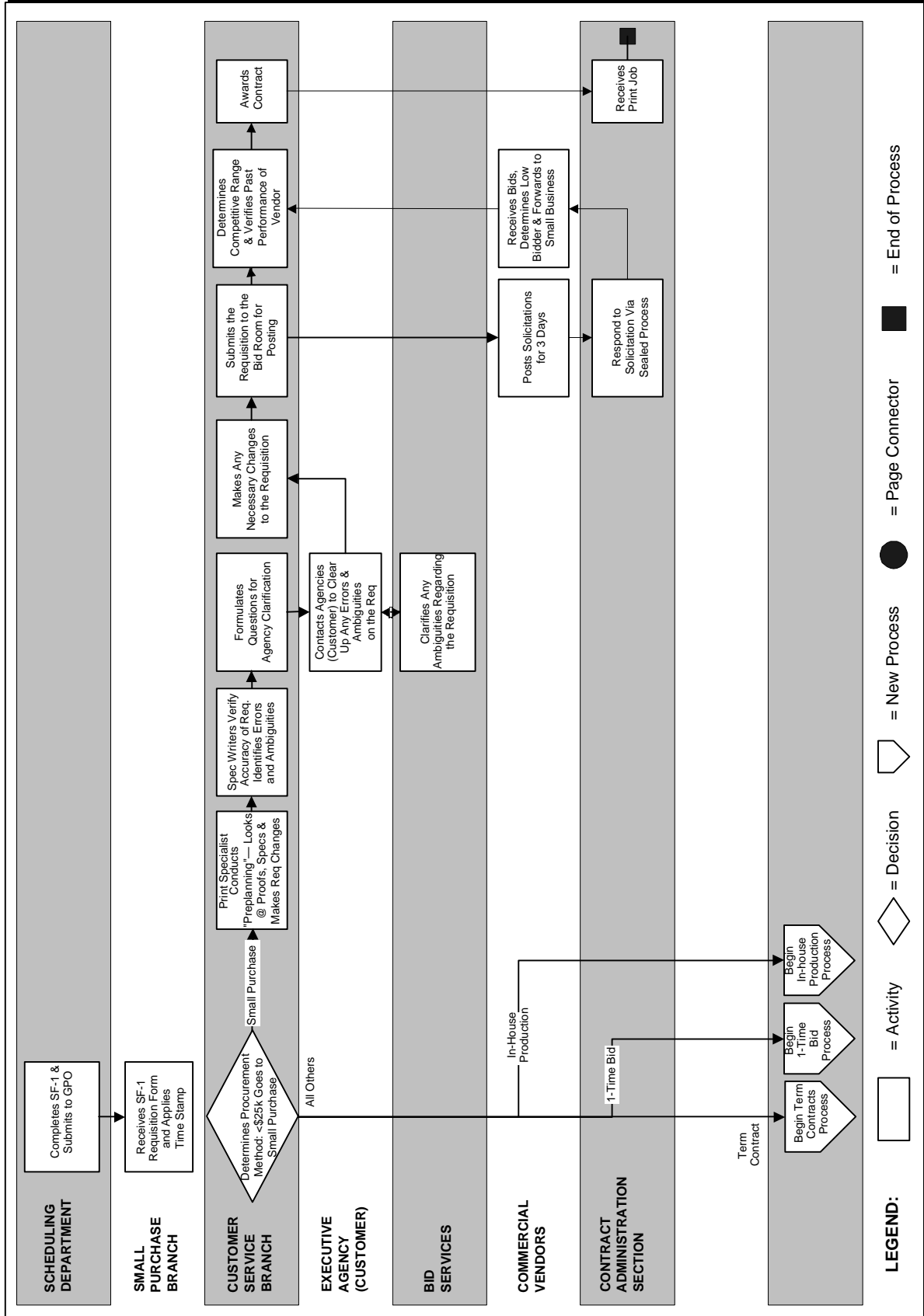
Printing Procurement Process—Purchase Department Process



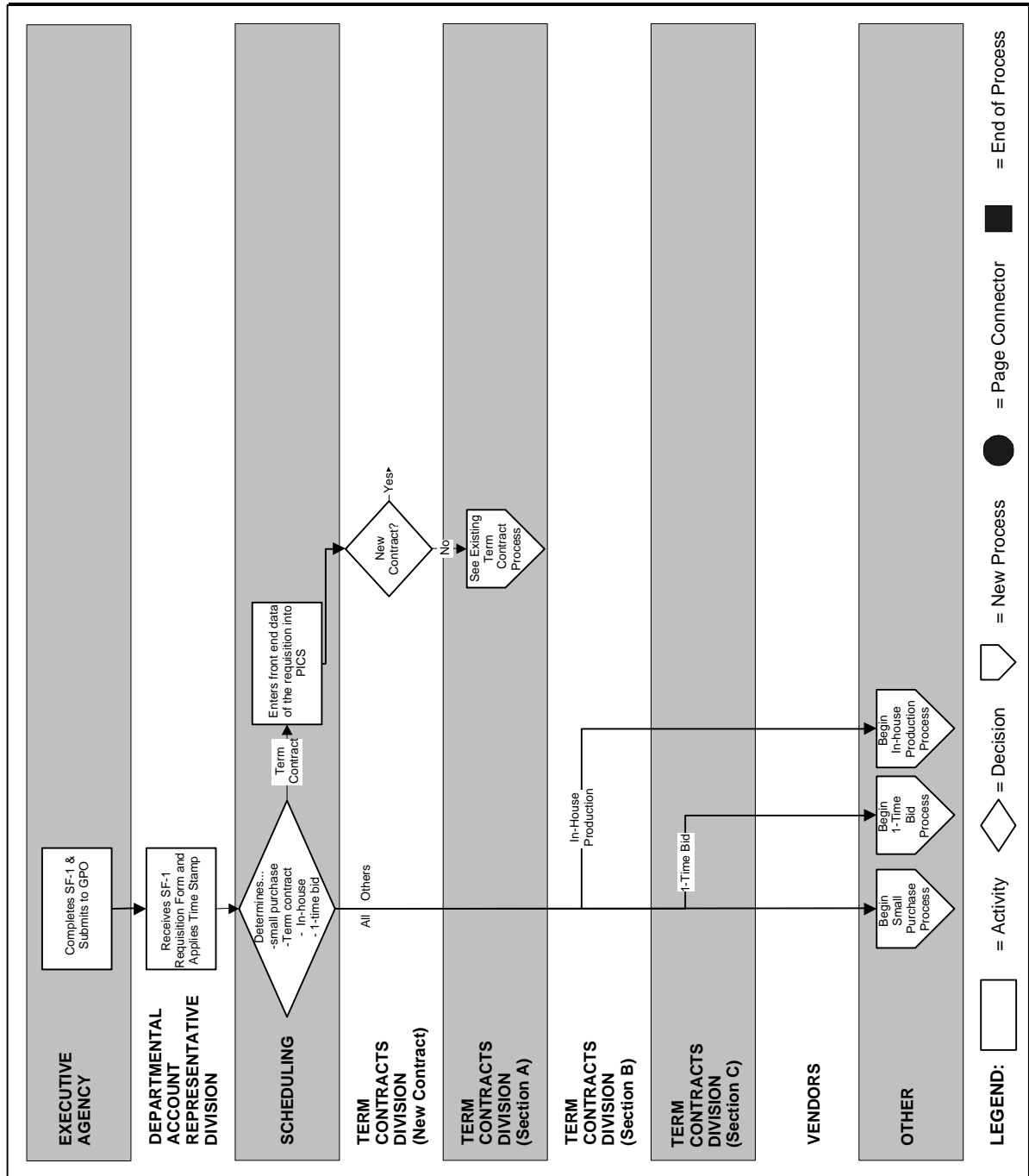
Printing Procurement Department—Scheduling Department Process



Printing Procurement Department—Small Purchasing Department Process



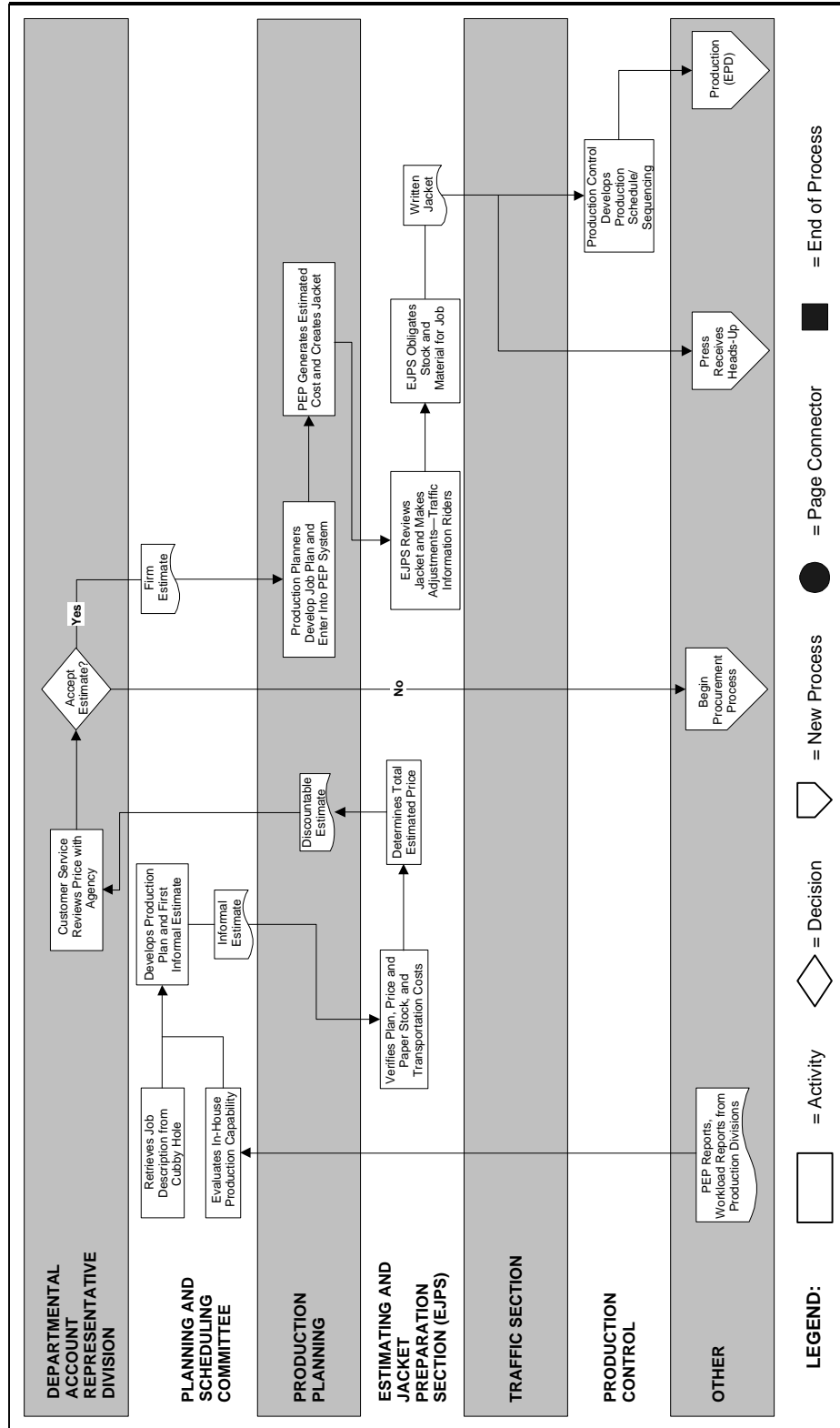
Printing Procurement Department—Term Contracts Division Process



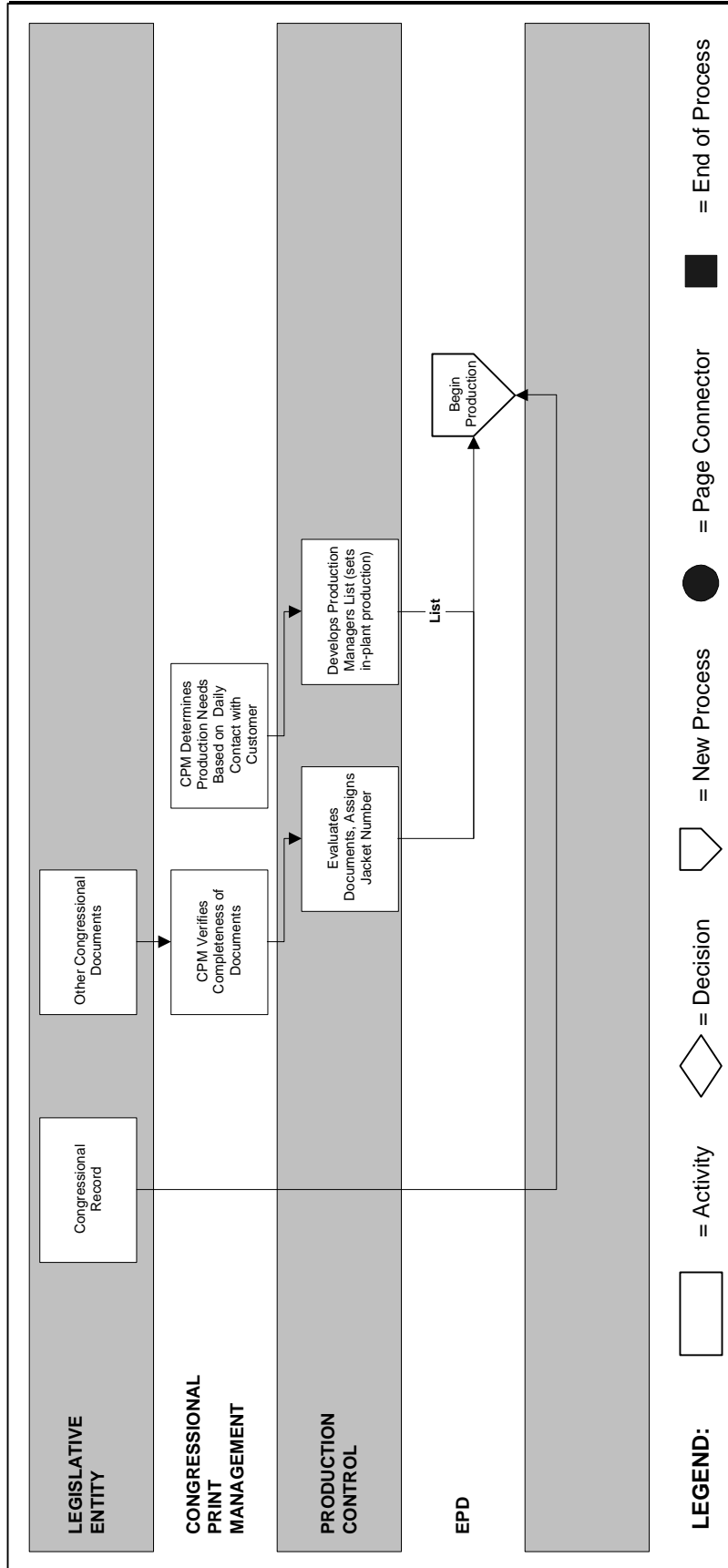
Appendix D

Flow Charts

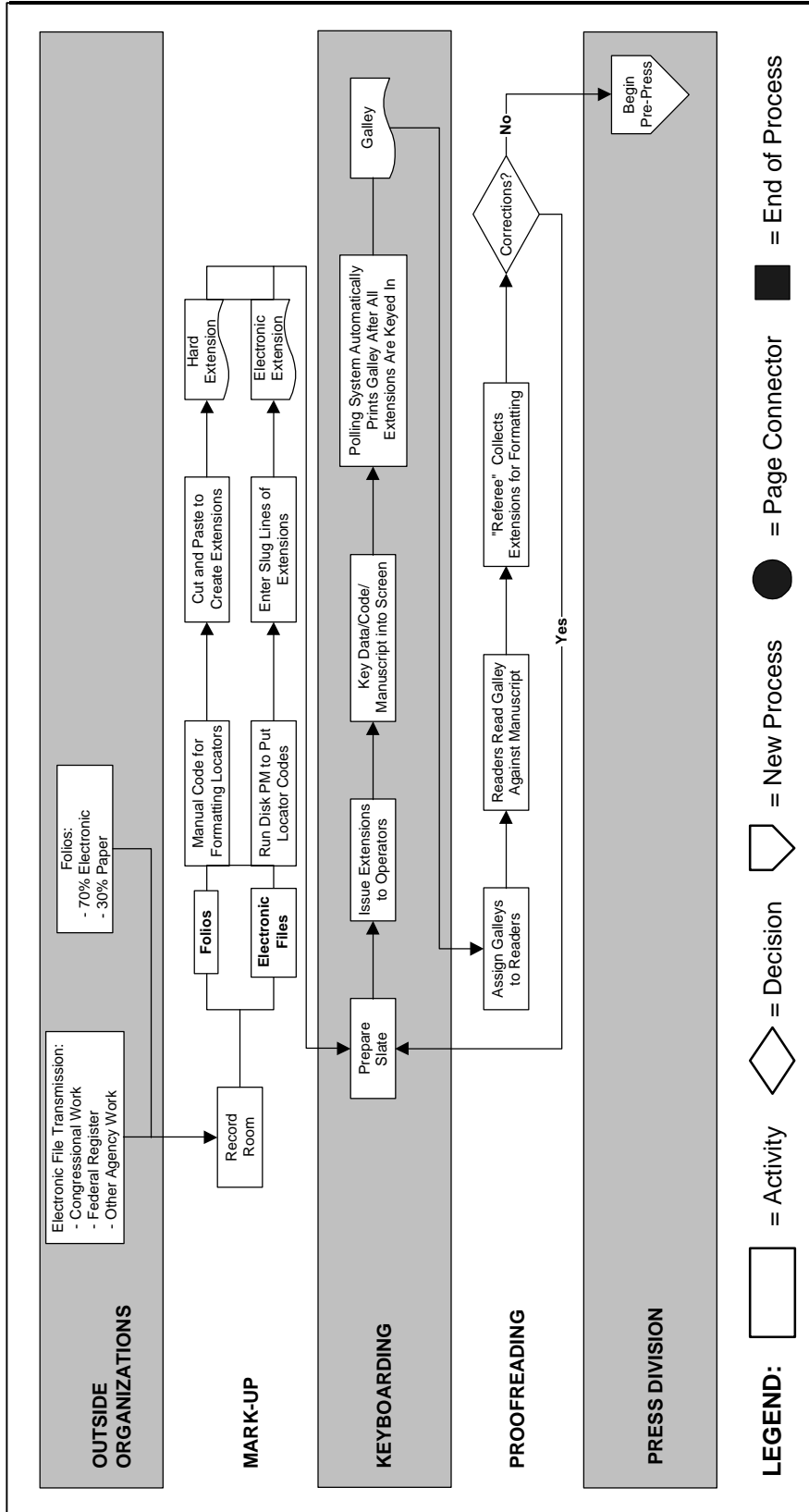
Production Planning Department (PPD)—Planning and Scheduling Process



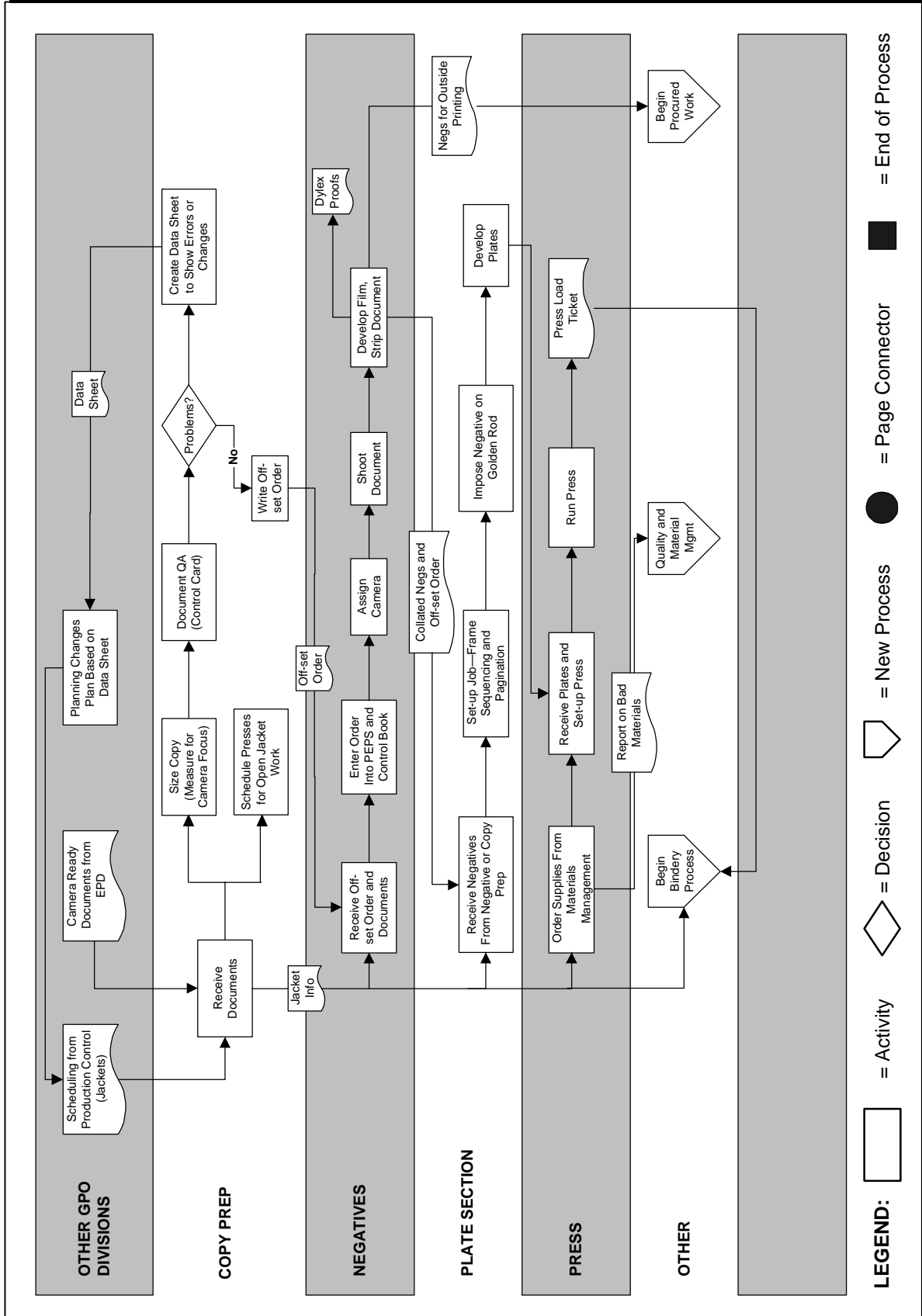
Congressional Print Management (CPM)—Planning and Scheduling Process



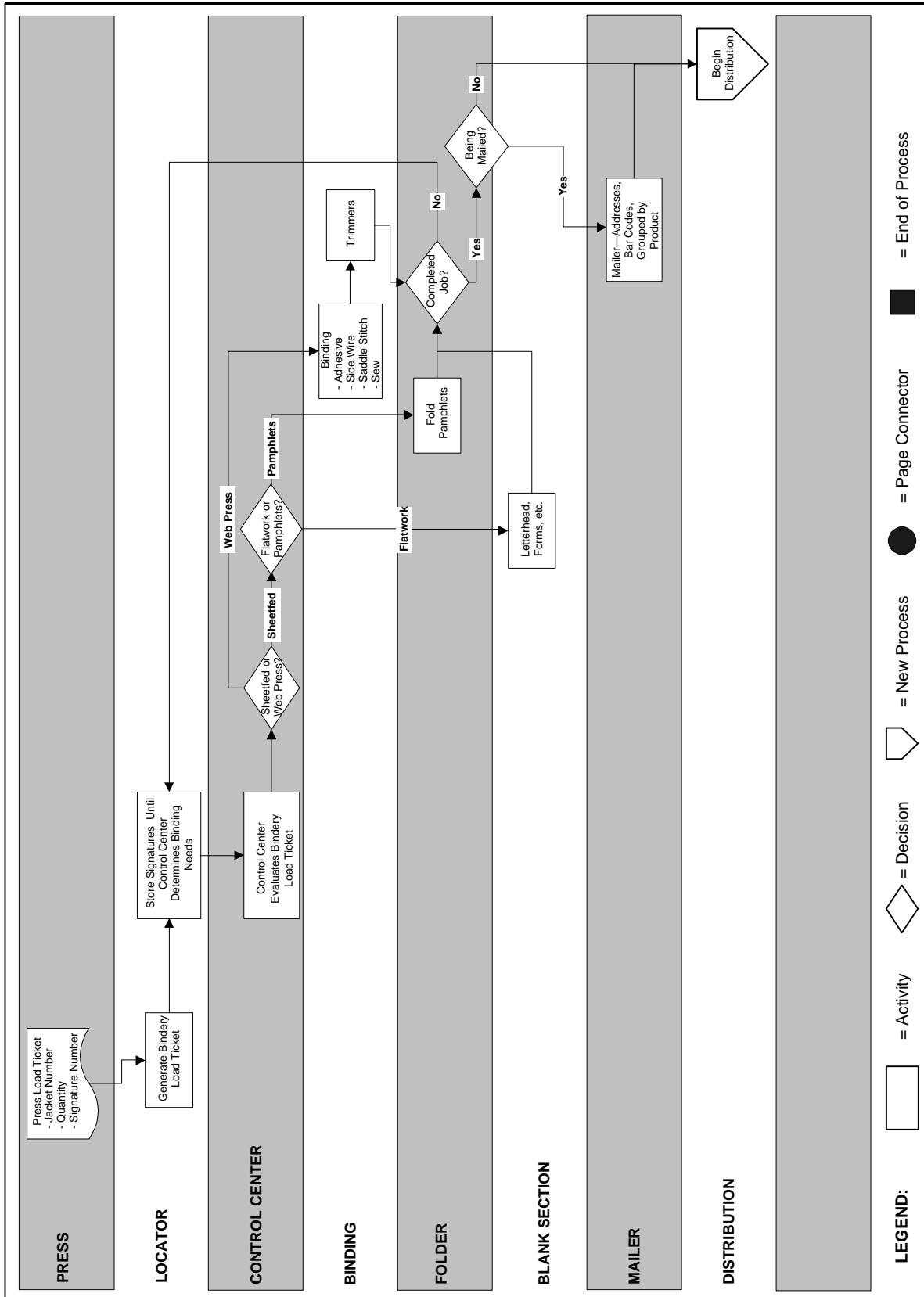
Electronic Photocomposition Division (EPD)—Production Process



Press Division—Production Process



Bindery Division—Production Process



Appendix E

In-Plant Production

General Interview Format and Approach

1/9/98 version

Department/Functional Area:

Interviewee(s):

Interviewer(s):

Date:

Step 1: Complete SWOT Matrix with interviewees. For each column, facilitate the discussion to get information on COST, QUALITY, SERVICE, INNOVATION, TECHNOLOGY from a functional perspective. For the last row(s), gather process and organizationally-focused information, e.g., their impression of SWOTs at the agency level and SWOTs for production process improvement relative to inputs, relationships, required changes, etc. from other functional areas.

Step 2: After completing Step 1, rank SWOT items within each column.

Goal: Overall understanding of the functional area, its role in production, linkages to other functional areas, and important issues for detailed questioning.

<u>Strengths</u> (Include GPO success stories)	<u>Weaknesses</u> (Include legislative/regulatory constraints, controls, and mandates)	<u>Opportunities</u> (Include how success stories should be/have been developed and grown)	<u>Threats</u>

Step 3: For each Number 1-ranked SWOT item, complete the Root Cause and Restraining/Driving Forces Diagram. Complete for lower ranked items as time allows. For example:

SWOT Item	Root Cause (Why has this condition come about?)	Restraining and Driving Forces (What supports and threatens the condition?)
Major Strength: We have an accurate understanding of the time per page to type the CFR. [†]	Installed a per-page software calculation application on CFR workstations.	<u>Restraining Forces (Threatens)</u> <ul style="list-style-type: none"> • Employees don't like it. • It can be overridden if you know how. <u>Driving Forces (Supports)</u> <ul style="list-style-type: none"> • Employees would better accept it if they knew it didn't threaten their jobs. • We can correct the bug that allows it to be overridden.
Major Weakness:		
Major Opportunity:		
Major Threat:		

Step 4: Complete Detailed Functional Analysis Finding Sheet. (To be used with all functions including Pre-Press and Electronic and Paper and Ink subprocesses)

<p>Requirements</p> <p>Customer-defined, or other specification: ĩ ĩ</p> <p>JCP, or other legislative/regulatory: ĩ ĩ</p> <p>Business rules (Best practice, functional definition, and process focus): (These should be completed by BoozAllen & Hamilton staff prior to interview)</p>
<p>Questions (See ĩFunctional Area Questions Pageĩ)</p>
<p>Findings</p> <p>ĩ ĩ</p>

Functional Area Questions Page

General Questions:

1. What role do you have in the in-plant production process (Electronic and paper and ink)?
2. When/how frequently are you involved?
3. How are you involved?
4. How do you know when you are successfully assisting/supporting in-plant production to achieve its mission?
5. How do you know when corrective action needs to be taken in your area, and how do you take it?
6. What tasks/factors within your area do you have the most control over? The least?
7. What other departments do you work with most frequently and why?
8. How could your role and/or relationships with other departments or functions be changed to cause improvements in in-plant production in the following areas:
 - Cost (Efficiency, measurement, and control)
 - Quality (As defined by satisfying customer requirements through process control)
 - Service (To the customer, including product delivery and support)
 - Innovation (Items that would distinguish you in the customer's view)
 - Technology (Use and application)
9. What changes to policies, procedures, practices, and information should be made to support the above improvements?

10. Comment on opportunities to apply the following key words/phrases to your role in the in-plant production process:

CONSOLIDATION

ELIMINATION

EXPANSION

NEW SKILLS DEVELOPMENT

DECENTRALIZATION

CENTRALIZATION

SIMPLIFICATION

AUTOMATATION

PERFORMANCE MEASUREMENT AND PROCESS CONTROL

REDUCTION IN MANAGEMENT LAYERS AND/OR IMPROVEMENTS IN ORGANIZATION RELATIONSHIPS/COMMUNICATION OR USE OF INFORMATION

REALLOCATION OF RESOURCES TO BETTER MEET CUSTOMER NEEDS

Functional-specific Questions (See **Production Thought Starters Handout**):

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.

Activity-Based Management Sheet

Basic Production Cost Equation (Cost Drivers and Revenue)
Direct Costs + Indirect Costs = Revenue + Appropriations
Contributors to Cost:
• Organizations involved (Activity-based)
• Labor categories involved

•Level of effort and FTEs employed
•Other resources allocated (Equipment and indirects)
•Cost by Product
•Cost by Process (Recommended improvements based on process analysis)

Key Employees Interviewed

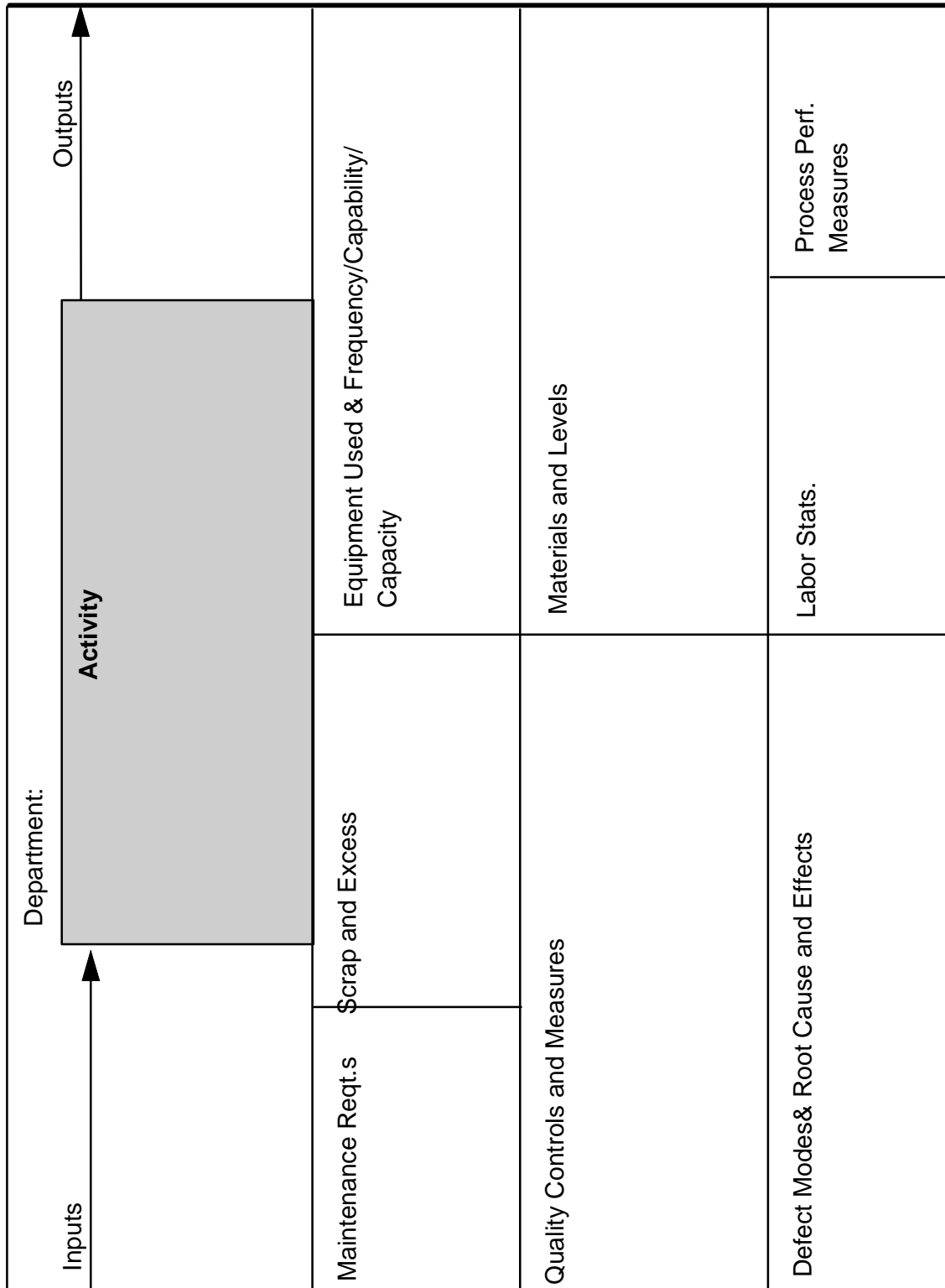
Interviews were conducted with key employees who affect production operations including—

Title/Function
Production Manager
Superintendent, Production Planning Division
Production Planning and Scheduling Committee, Production Planning Division
Chief, Paper and Materials Control Section, Production Planning Division
Chief, Estimating and Jacket Preparation Section, Production Planning Division
Superintendent, Electronic Photocomposition Division
Assistant Superintendent, Electronic Photocomposition Division
Superintendent, Press Division
Foreperson, Plate Section, Press Division
Foreperson, Offset Press Section, Press Division
Foreperson, Copy Preparation Section, Press Division
Foreperson, Negative Section, Press Division
Negative Section, Press Division
Assistant Foreperson, Copy Preparation Section, Press Division
Superintendent, Binding Division
Chief, Electronic Systems Division
Manager, Graphic Systems Division, Graphic Systems Development Division
Chief, Production Information Section, Graphic Systems Development Division
Director, Customer Service
Superintendent, DARD, Customer Service
Assistant Superintendent, DARD, Customer Service
Superintendent, CPMD, Customer Service
Assistant Superintendent, CPMD, Customer Service
Acting Chief, Requisition Section, Customer Service
Director, Materials Management Service
Management Analyst, Materials Management Service
Chief, Stores Division, Materials Management Service
Assistant Chief, Stores Division, Materials Management Service
Supply Systems Analyst, Stores Division, Materials Management Service
Chief, Springbelt Warehouse Section, Materials Management Service
Chief, General Stores, Materials Management Service
Chief, Paper & Specialized Procurement Division, Materials Management Service
Chief, General Procurement Division, Materials Management Service
Inventory Team Supervisor, Materials Management Service
Acting Manager, Quality Control and Technical Department
Chief, Graphic Supplies Division, Quality Control and Technical Department
Chief, Chemical and Environmental Division, Quality Control and Technical Department
Chief, Quality Systems Division, Quality Control and Technical Department
Chief, Paper and Physical Testing Division, Quality Control and Technical Department
Chief, Plant Billing Section, Office of Comptroller
Payroll, Office of Comptroller
Superintendent, Western Division, Regional Operations Office
Director, Office of Information Resources Management
Chief, Facilities Division, Engineering Service

Appendix F

Plant Process Walkdown

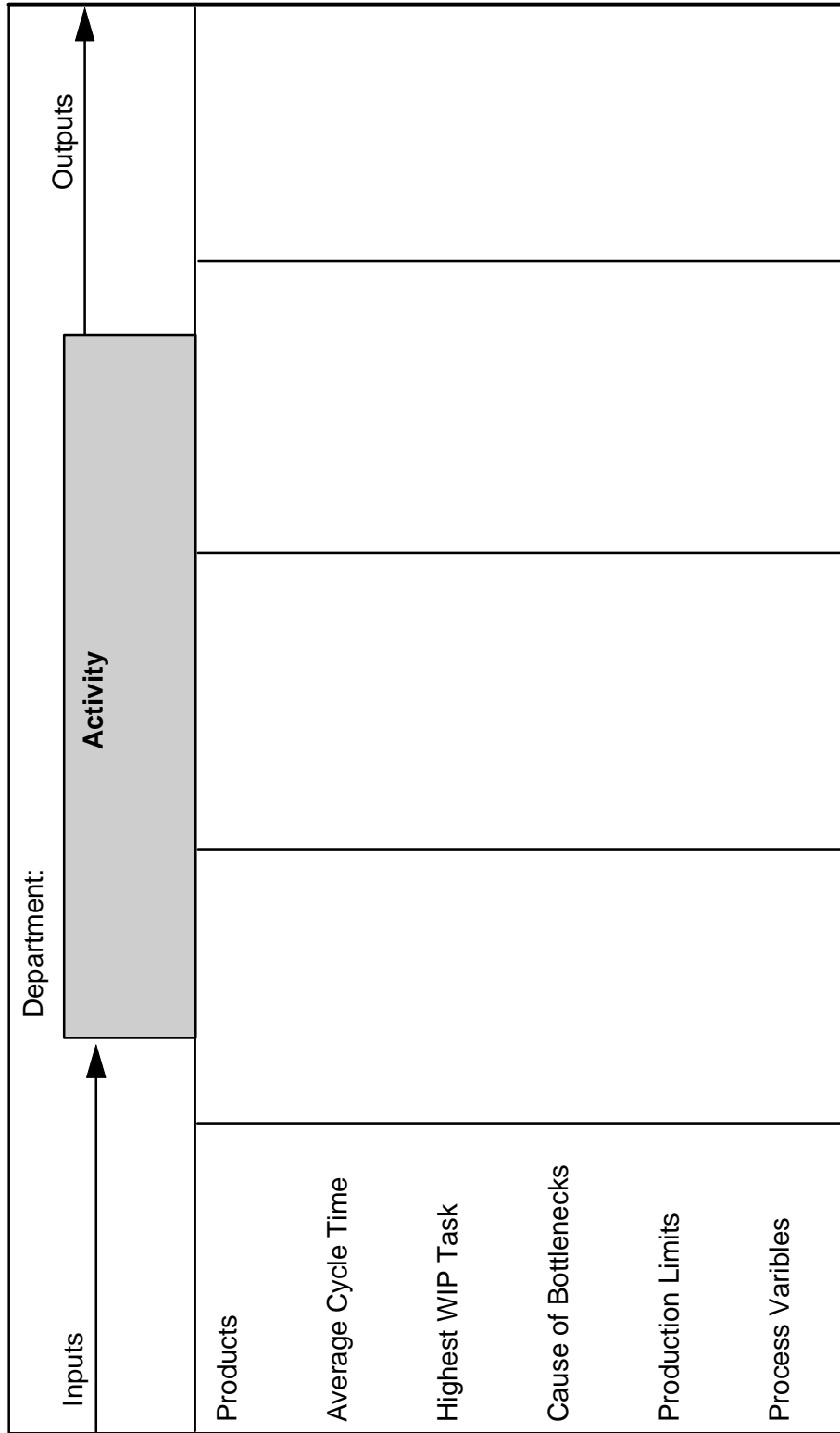
Plant Process Walkdown (Page 1)



Plant Process Walkdown (Page 2)

<p>Information Inputs</p> <p style="text-align: center;">↑</p>	<p>Department:</p> <div style="border: 1px solid black; background-color: #cccccc; padding: 10px; text-align: center; margin: 5px 0;"> <p>Activity</p> </div>	<p>Information Outputs</p> <p style="text-align: center;">↑</p>
<p>Uses of Information Inputs</p>	<p>Uses of Information Outputs</p>	
<p>Information Systems Used</p>	<p>Planned System/Information Improvements</p>	
<p>Feedback Processes</p>	<p>Other:</p>	

Plant Process Walkdown (Page 3)



Appendix G

In-Plant Production Information List

1. Product List (Print and Electronic)—DRAFT
2. Practices for Transmission of Publication Data from the Congress to GPO
3. Implementation of Standard Generalized Markup Language (SGML) and other Standards
4. Federal Register, Congressional Record and Other Congressional Products
5. Breakdown of Federal Register Issues (1995–1996)
6. Breakdown of Congressional Record Issues (1995–1996)
7. Breakdown of Pages of Other Congressional Products (1995–1996)
8. Workflow between House/Senate and GPO
9. Overview of GPO Access Online Services
10. GPO Initiatives that may relate to the U.S. Senate's Legislative Information System
11. List of Equipment: Major Machinery
12. Facilities Layout
13. DARD Telephone Book.
14. "Agency Billing Totals" Report
15. "Account Representative Sections"—listing of agencies and Account Representative team assignments
16. Circular Letter No. 421: Fiscal Year 1998 Open
17. Circular Letters: No. 425: The Constitution, No. 423: Congressional Directory, No. 419: U.S. Code, 1994 Edition, Sup. II, No. 417: The Budget, No. 416: U.S. Code (CD-ROM), No. 415: Congressional Pictorial Directory, No. 414: Title 5, U.S. Code, Government Organization and Employees
18. Congressional Publications: Fiscal Year 98
19. Congressional Products: 104th Congress, 1st Session
20. Congressional Record Statistical Report: 104th Congress, 1st Session
21. House Bill Clerk List—Update/Delete
22. Production Manager's Office: Summary of Work
23. Desk Manual—Specialized Procurement Section
24. Leases with General Services Administration
25. Lead Times—Paper, Envelope and Containers
26. Organizational Chart—Paper and Specialized Procurement & Sales Division
27. Ongoing Projects Reports
28. MMPCS II—Automated Inventory System
29. Automated Surplus Property System
30. Forward Supply Point: Procedures, Production, Accounts 9902–9907
31. Latent Defect Procedures
32. Central Receiving Unit Procedures
33. Self-Service Store
34. Materials Management Service-Charts
35. Materials Management Service: Commercial Leasing Program
36. Materials Management Service: Secretary Desk Procedures
37. Materials Management Service: Inventory Team Procedures

38. Inventory Schedule: Freezing Inventories, Counting Inventories, Composing Counts with Systems Balance, Recounting Inventories, Document Cutoff, Reconciling Variances, Processing Cyclic, and Spot Inventories
39. Semi-Annual Containers for the Term Beginning October 1, 1997
40. Defense Intelligence Agency (DIA) Contract
41. Newsprint Contract
42. Quarterly Paper for the Term Beginning January 1, 1998
43. Procurement Accounting Division: Agency Billing Totals
44. Michael DiMarioís Prepared Statement before the Committee on Rules and Administration (2/3/94) : U.S. Senate on Various Government Printing Proposals
45. DiMarioís Statement before the House Oversight Committee on Government Printing Reform (8/1/95)
46. DiMarioís Statement before the Committee on Rules and Administration (7/24/96): Senate on Public Access to Government Information in the 21st Century
47. DiMarioís Statement before the Joint Committee on Printing on Oversight of the Government Printing Office (3/13/97)
48. DiMarioís Statement before the Committee on Rules and Administration (4/24/97): Senate on Proposed Revisions to Title 44, U.S. Code
49. DiMarioís Statement before the Subcommittee on Government Management, Information, and Technology, Committee on Government Reform and Oversight, House of Representatives on GPOís Role in Federal Information Dissemination (5/8/97)
50. Proposed Revisions to Title 44—Discussion Draft (5/29/97)
51. General Procurement Division Guideline Book: Hauling Contracts, Hauling to Agencies, Hauling between GPO and Springbelt, Trash and Debris, Inks, Passport Ink, Regular Inks
52. Ongoing Projects Report
53. Organizational Chart for MMS
54. MMS Standard Operating Procedures (SOPS)
55. Annual Report of the Materials Management Service for the Fiscal Year Ending 9/30/97
56. FY 1998 & 1997: Full Time Equivalent Employment Workmonths
57. Detailed Budget Estimates by Account Number and Cost Code
58. Detailed Responsibility Report for the month ending 8/31/97
59. Monthly Work Measurement Report: Paper and Specialized Procurement & Sales Division, September and August 1997
60. Work Measurement Report—September 1997
61. Commercial Leases for the Regional Procurement Offices
62. Commercial Leases for the Bookstores.
63. Printing and Binding Operations 9/30/97
64. Springbelt Warehouse Standard Operational Procedures Manual, Revised January 1998: Shipping and Receiving Unit, Materials Control Unit, Inventory Management Specialist, Work Leader
65. Notice of Discrepancy in Physical Inventory Form
66. Hazardous Materials Report
67. Emergency Evacuation Procedures
68. Employees Eligible to Retire and GPO Retirement Eligibles as of 2/18/98
69. Fiscal Year 1997 and 1996 Paper Usage

-
70. In-House Printing Profit and Loss Statements
 71. General Ledger
 72. Paper Price Increase/Decrease Data for January 1995–January 1998
 73. Daily Paper Inventory
 74. Annual Report: Paper and Specialized Procurement and Sales Division FY 1997
 75. Springbelt Warehouse: Monthly Report 1995-1998, Damaged Stock Report, Quarterly Location Audit
 76. Proposal from the U.S. Government Printing Office in response to RFP97-3 Electronic Filing from the Federal Election Commission
 77. Main Press Section Monthly Detail Machine Report
 78. Office of Financial Management Commercial Examination and Billing Branch, Cumulative Analysis of Congressional Jacket Billings for the Period Ending October 31, 1997
 79. Engineering Service, Buildings Layout—Parking Lot Locations: Central Office and Local Warehouses
 80. Production Department Organizational Structure/Staffing
 81. Foreman's Reports
 82. Report of Production and/or Material Loss Due to Defective Paper or Material
 83. Daily Press or Machine Report (for PROBE Terminal Input)
 84. Production Control Card, Copy Prep, Press Division
 85. Copy Preparation Offset Order form
 86. Offset Data Sheet
 87. Maintenance Job Order Tracking System screens
 88. Binding Division Internal Report of Job Inspection
 89. Analysis of Postal Bulletin #21958 After Delivery from Press to the Bindery
 90. In-Plant Product Quality Audit Report, December 3, 1997
 91. Paper Waste Report, January 1998
 92. Press, List of Urgent Work
 93. Production Manager's Office, Summary of Work Report
 94. Office of the Production Manager, Daily Report of Press Loading
 95. PEPS Screen Review
 96. Office of the Production Manager, Bindery Workload by Operation
 97. Binding Division Production Standards
 98. CFR Checklist
 99. Guidelines for the Requisition Section (DARD) for Issuing Printing and Binding Jackets, revised March 27, 1997
 100. Press Division Internal Report of Job Inspection
 101. Production Manager's List
 102. Report of OIRM Charges to Cost Codes for FY 1998 Through December
 103. Billing Jacket
 104. Printing and Binding Jacket
 105. Jacket Cost Summary
 106. GPO Web site, Production Department pages

GPO Reporting Assessment

REPORTS		ACTUAL USERS			COMMENTS
		Superint.	Grp. Chief	Foreman	Worker
1	Automated Leave Card				
2	Bindery Cost Calculating				
3	Blank Paper Tracking				
4	Budget Formulation Reporting				
5	Congressional Printing				
6	Cyclical Inventory				
7	Daily Paper Material Cost				
8	Electronic Photocomposition				
9	EPD Measured Hours				
10	Foreman's Reporting				
11	Hazardous Substances Comm				
12	Jacket Billing				
13	Keystroke Measurement Reporting				
14	Labor Relations Reporting				
15	Large Machine Reporting				
16	Leave				
17	Maintenance Accounting				
18	Mat. Mgmt. Procurement Control				
19	OIRM Chargeout				
20	Paper Quality Test Control				
21	Planning Estimating Scheduling				
22	Platemaking Reporting				
23	Production Mgrs. List Sequencing				
24	Reproducibles Inventory Control				
25	Work In Process				

Appendix H

Survey Results From Employees of the U.S. Government Printing Office

As part of the management audit of the GPO Office of Personnel, Booz·Allen developed and administered a survey soliciting employee opinions regarding eight primary personnel-related issues:

- Organizational structure/job design/job classification
- Training and development
- Compensation and benefits
- Performance management/appraisal
- Work environment/health and safety
- Workforce relations
- Strategic role
- Recruiting and hiring.

A series of demographic questions and an open-ended comments section were also included in the survey.

In generating content for the survey, Booz·Allen relied on several previous organizational surveys. These surveys included our 1996 Library of Congress Employee Satisfaction Survey and the Office of Personnel Management's 1993 Personnel Services Customer Survey and 1993 Organizational Assessment Survey. Booz·Allen also conducted interviews with key GPO personnel to ensure development of pertinent and appropriate questions. The final survey, approved by GPO upper management, consisted of 77 issue-oriented questions, 6 demographic questions, and the open-ended comments section already described. It was administered to a representative sample of employees in January 1998.

Booz·Allen used a stratified random sampling procedure to determine who would be invited to participate in the survey. This procedure ensured that the sample was representative of the GPO workforce. The sample consisted of 307 on-site and field employees. For selected on-site employees, Booz·Allen conducted three survey administration sessions based on the time of day during which employees work. Selected field employees received their surveys through the mail and were given stamped, addressed envelopes for their use in returning the completed surveys. Prior to survey dissemination, GPO management and the unions issued notices of the survey to the selected employees to encourage them to participate.

Of the 307 possible survey participants, Booz·Allen received 223 completed surveys, for a response rate of approximately 73 percent. Based on agency-wide demographic data provided by the Office of Personnel, Booz·Allen determined that the responding survey sample was indeed representative of GPO's overall workforce. Furthermore, the response rate for the survey ensured statistical confidence in the data results. The response rate also provided statistical confidence that both blue-collar and white-collar employee groups were represented.

The response scale used by Booz·Allen for the nondemographic questions (or items/statements) was a five-point Likert-type Agreement scale, asking employees to indicate their level of agreement with different statements. The items also offered a “No Basis to Judge” response, for those respondents who did not possess enough information regarding the question to provide an accurate response. We decided not to include “No Basis to Judge” responses in our analysis so that all other responses, i.e., those made by respondents who had enough information to provide an answer, could be evaluated as 100 percent of the total responses. Booz·Allen used SPSS, a statistical software package, to help analyze the responses from the completed surveys. Specifically, Booz·Allen calculated descriptive statistics, including population percentage responses and frequency counts for each question. All open-ended comments received from the survey were transcribed verbatim and grouped by topic.

The results of responses from the overall survey are presented in Exhibit H-1. For each of the demographic questions, the respondents were given from 2 to 10 responses from which to choose. The overall survey results show the responses as percentages of all responses received. For each of the issue-oriented questions, respondents indicated their level of agreement with a statement by selecting one of five responses ranging from “Strongly Agree” to “Strongly Disagree.” The survey results show the responses to each selection as percentages of all responses received.

Exhibit H-1
Overall Results of GPO Employee Opinion Survey

Demographics	Possible Responses	Percentage of Response Received*
1. What is your work area?	A. Customer Service (DSS codes 4300–4399)	5
	B. Documents (DSS codes 9000–9999)	15
	C. Engineering (DSS codes 3000–3999)	6
	D. Materials Management (DSS codes 1015-1035; 1405-1495)	6
	E. Printing Procurement (DSS codes 1005; 1106-1390; 1510; 8210)	12
	F. Production (Bindery) (DSS codes 7000–7999)	8
	G. Production (Electronic Photocomposition) (DSS codes 5000–5999)	12
	H. Production (Press) (DSS codes 6000–6999)	13
	I. Production (all other areas) as well as Quality Control (DSS codes 4000–4225; 4500–4999)	10
	J. Other Administrative Offices (DSS codes 0000–0999)	14
2. What type of work do you do at GPO?	A. Craft Supervisors	3
	B. Journeyperson	23
	C. Printing Plant Workers (PPWs)	22
	D. White Collar Non-Supervisors	39
	E. White Collar Supervisors and Managers	13

Demographics	Possible Responses	Percentage of Response Received*
3. How long have you been working for GPO?	A. Less than 5 years	6
	B. 5–9 years	18
	C. 10–19 years	19
	D. 20–29 years	41
	E. 30–39 years	16
	F. 40 or more years	1
4. Are you...	A. Male	60
	B. Female	40
5. How old are you?	A. Less than 20 years old	0
	B. 20–29 years old	6
	C. 30–39 years old	13
	D. 40–49 years old	36
	E. 50–59 years old	37
	F. 60–69 years old	7
	G. 70 or older	1
6. What is your racial/ethnic background?	A. African American	52
	B. Asian or Pacific Islander	1
	C. Hispanic	3
	D. Native American/Alaskan Native	2
	E. White, not of Hispanic Origin	42

* Percentages rounded to the nearest whole number.

Issues	Percentage of Respondents Who—				
	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
ORGANIZATIONAL STRUCTURE/JOB DESIGN/JOB CLASSIFICATION					
7. I have the decision-making authority I need to do my work.	26	51	10	10	4
8. Teams are used to achieve work goals when appropriate.	25	43	10	15	7
9. I think that teams are effective at getting the job done at GPO.	28	47	14	6	5
10. GPO's organizational structure and reporting relationships are clear to me.	12	48	14	18	9
11. I know the roles and responsibilities required in my job.	49	48	1	1	1
12. I feel that the responsibilities of my job are appropriate.	32	52	6	7	3
13. There are enough employees to do the work.	15	28	11	26	21
14. I am satisfied with how much work I have to do at GPO.	20	50	7	15	8
15. I feel that different work groups at GPO communicate well with one another.	7	30	17	30	17
16. My job regularly offers me new learning experiences and opportunities.	11	28	14	24	24
17. My job requires me to use different skills.	22	51	8	9	10
TRAINING AND DEVELOPMENT					
18. I am encouraged to build new skills.	8	27	19	26	20
19. I receive the training I need to perform my job.	11	48	12	15	15
20. The training I have received at GPO has been useful for my career growth.	12	43	15	14	15
21. My supervisor actively supports my efforts to learn outside GPO (e.g., membership in trade or professional organizations, coursework).	4	16	28	24	28

Issues	Percentage of Respondents Who—				
	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
22. I am provided with training when new technologies and tools are introduced.	8	36	10	20	26
23. I am satisfied with the orientation program for new employees.	9	34	29	14	14
24. Training is available when I need it.	6	28	13	31	23
25. I can easily find out about different training courses and programs offered by GPO.	11	44	16	15	15
26. The quality of the training I have received at GPO is high.	8	35	26	17	14
27. Career counseling at GPO is available to me when I need it.	6	26	29	22	17
28. GPO cares about my long-term career growth and development.	4	18	21	23	35
29. Employees have the skills necessary to perform their jobs.	6	42	17	23	12
COMPENSATION AND BENEFITS					
30. Creativity and innovation are rewarded.	1	11	19	33	37
31. I promptly receive verbal recognition when I do more than what is expected of me.	8	23	13	27	29
32. I am rewarded for working with other employees (e.g., performance ratings, certificates, public recognition).	8	21	15	24	33
33. Supervisors are fair in recognizing individual and team accomplishments.	8	24	14	24	31
34. Employees with similar levels of responsibility are generally paid the same.	9	53	11	11	16
35. I feel that I am paid fairly in comparison to employees working at other printing organizations outside GPO.	17	47	10	12	13
36. I know where to go with questions about my pay and benefits.	24	60	10	5	2
PERFORMANCE MANAGEMENT/APPRaisal					
37. I understand what "good performance" means.	27	61	6	4	3
38. My supervisor reviews the results of my work with me.	13	40	15	19	13
39. My work is important to GPO's goals.	40	45	7	6	2
40. I am satisfied with the feedback I receive on my performance.	14	44	12	14	17
41. My supervisor sets challenging and attainable work goals.	8	38	23	14	17
42. I have input in developing my work goals.	9	40	18	15	18
43. It is clear to me what I need to do to get promoted.	9	26	15	21	30
44. The performance appraisal process is helpful for my career.	11	30	21	16	22
45. Promotions are given to qualified individuals, regardless of gender, race, national origin, religion, age, cultural background, or disability.	7	15	14	27	37
46. High-performing employees are promoted.	4	13	18	29	35
WORK ENVIRONMENT/HEALTH AND SAFETY					
47. GPO's policies and programs allow me to balance work and family obligations.	13	56	14	10	7
48. My supervisor respects my need to balance work and family obligations.	16	51	14	10	9
49. Physical conditions (e.g., noise level, temperature, lighting, cleanliness) allow employees to perform their jobs well.	13	41	8	24	15
50. GPO supports programs that encourage good health practices (e.g., wellness meetings, health education programs).	12	56	16	9	8
51. Reasonable measures are taken to protect employees from health and safety hazards.	13	61	12	7	7
52. Supervisors take steps to minimize the work-related stress of employees.	7	25	25	23	21
53. Adequate accommodations are made for people with disabilities (e.g., availability of sign language interpreters, ramps, Braille).	19	60	13	3	5

Issues	Percentage of Respondents Who—				
	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
WORKFORCE RELATIONS					
54. Employee differences are respected and valued (e.g., gender, race, national origin, religion, age, cultural background, disability).	9	42	21	10	17
55. Supervisors work well with employees of different backgrounds.	9	41	21	15	14
56. I am satisfied with the handling of GPO's disciplinary procedures.	5	36	23	16	20
57. Management keeps me informed about issues affecting my job.	7	31	18	21	24
58. Management understands my needs as an employee.	5	25	25	25	19
59. There is trust between employees and supervisors.	7	27	18	23	26
60. There is trust between management and the labor unions.	4	14	19	31	31
61. Management involves the labor unions in all important decisions that impact employees.	4	32	22	20	23
62. There is ongoing communication between employees and GPO management.	6	21	26	24	24
STRATEGIC ROLE					
63. I understand GPO's mission, vision, and values.	14	47	22	10	7
64. My manager tells me how my work contributes to GPO's mission and goals.	4	34	22	21	19
65. GPO managers lead by example.	6	22	25	21	26
66. I think that GPO is prepared for the new tools and technologies of the future.	11	28	20	17	24
67. Strategic planning takes place at GPO.	8	25	32	20	16
68. I participate in strategic planning at GPO.	3	9	22	31	34
RECRUITING AND HIRING					
69. Job announcements are readily available.	24	56	7	9	4
70. Job announcements are clear and understandable.	22	56	9	8	5
71. I can easily find out about job openings throughout GPO.	21	52	11	10	6
72. I can help decide who gets hired.	3	11	14	31	41
73. The tools used to select candidates (e.g., interviews, tests) for positions are effective.	5	22	28	20	25
74. Employees are hired on the basis of their qualifications.	5	24	25	18	28
75. My co-workers are qualified for their positions.	7	46	28	9	11
OVERALL SUMMARY QUESTIONS					
76. Overall, I believe GPO has an effective organizational structure in place.	8	40	26	12	15
77. Overall, I am satisfied with the training opportunities provided to me at GPO.	7	39	10	22	23
78. Overall, I am satisfied with the compensation and benefits I receive as an employee of GPO.	14	64	6	11	6
79. Overall, I am satisfied with GPO's performance management/appraisal process.	9	33	16	22	21
80. Overall, I am satisfied with my work environment at GPO.	9	47	14	15	16
81. Overall, I am satisfied with the quality of workforce relations at GPO.	7	43	18	17	15
82. Overall, I am satisfied with GPO's recruiting and hiring process.	4	21	27	21	26
83. Overall, I believe that GPO effectively manages its human resources.	6	25	30	17	22

Concluding this appendix, Exhibit H-2 summarizes the survey, results broken down into two respondent groups—blue collar and white collar. The survey forms distributed to each group were identical; the results are summarized in the same way as the overall survey results shown in Exhibit H-1.

Exhibit H-2
Blue-Collar and White-Collar Results of GPO Employee Opinion Survey

Demographics	Possible Responses	Percentage of Response Received*	
1. What is your work area?	A. Customer Service (DSS codes 4300–4399)	3	(6)
	B. Documents (DSS codes 9000–9999)	7	(23)
	C. Engineering (DSS codes 3000–3999)	14	(0)
	D. Materials Management (DSS codes 1015-1035; 1405-1495)	4	(7)
	E. Printing Procurement (DSS codes 1005; 1106-1390; 1510; 8210)	0	(24)
	F. Production (Bindery) (DSS codes 7000–7999)	18	(0)
	G. Production (Electronic Photocomposition) (DSS codes 5000–5999)	18	(7)
	H. Production (Press) (DSS codes 6000–6999)	27	(0)
	I. Production (all other areas) as well as Quality Control (DSS codes 4000–4225; 4500–4999)	10	(8)
	J. Other Administrative Offices (DSS codes 0000–0999)	1	(25)
2. What type of work do you do at GPO?	A. Craft Supervisors	NA	
	B. Journeyperson	NA	
	C. Printing Plant Workers (PPWs)	NA	
	D. White Collar Non-Supervisors	NA	
	E. White Collar Supervisors and Managers	NA	
3. How long have you been working for GPO?	A. Less than 5 years	4	(7)
	B. 5–9 years	18	(19)
	C. 10–19 years	13	(23)
	D. 20–29 years	42	(41)
	E. 30–39 years	24	(9)
	F. 40 or more years	0	(2)
4. Are you...	A. Male	71	(50)
	B. Female	29	(50)
5. How old are you?	A. Less than 20 years old	0	(0)
	B. 20–29 years old	5	(7)
	C. 30–39 years old	13	(14)
	D. 40–49 years old	31	(41)
	E. 50–59 years old	44	(31)
	F. 60–69 years old	8	(6)
	G. 70 or older	0	(1)
6. What is your racial/ethnic background?	A. African American	65	(41)
	B. Asian or Pacific Islander	0	(2)
	C. Hispanic	2	(3)
	D. Native American/Alaskan Native	2	(2)
	E. White, not of Hispanic Origin	31	(53)

* Percentages rounded to the nearest whole number. White-collar results in parentheses.

Issues	Percentage of Respondents Who—				
	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
ORGANIZATIONAL STRUCTURE/JOB DESIGN/JOB CLASSIFICATION					
7. I have the decision-making authority I need to do my work.	24 (28)	56 (47)	8 (10)	10 (9)	2 (6)
8. Teams are used to achieve work goals when appropriate.	29 (21)	46 (39)	6 (12)	14 (16)	4 (11)
9. I think that teams are effective at getting the job done at GPO.	39 (18)	45 (48)	8 (19)	6 (6)	1 (9)
10. GPO's organizational structure and reporting relationships are clear to me.	10 (15)	50 (46)	17 (9)	17 (19)	6 (11)
11. I know the roles and responsibilities required in my job.	49 (49)	48 (48)	2 (0)	1 (1)	0 (2)
12. I feel that the responsibilities of my job are appropriate.	38 (27)	50 (55)	5 (6)	4 (10)	3 (3)
13. There are enough employees to do the work.	10 (19)	23 (30)	10 (12)	34 (20)	23 (20)
14. I am satisfied with how much work I have to do at GPO.	25 (15)	47 (54)	5 (9)	18 (14)	6 (9)
15. I feel that different work groups at GPO communicate well with one another.	10 (4)	37 (22)	15 (20)	26 (34)	13 (20)
16. My job regularly offers me new learning experiences and opportunities.	14 (6)	18 (37)	14 (12)	27 (23)	27 (22)
17. My job requires me to use different skills.	27 (17)	42 (59)	5 (9)	14 (5)	12 (9)
TRAINING AND DEVELOPMENT					
18. I am encouraged to build new skills.	9 (6)	21 (34)	19 (19)	29 (23)	23 (18)
19. I receive the training I need to perform my job.	17 (6)	48 (49)	12 (11)	13 (17)	11 (18)
20. The training I have received at GPO has been useful for my career growth.	16 (9)	36 (50)	19 (11)	13 (16)	16 (14)
21. My supervisor actively supports my efforts to learn outside GPO (e.g., membership in trade or professional organizations, coursework).	4 (3)	10 (22)	35 (23)	21 (24)	30 (28)
22. I am provided with training when new technologies and tools are introduced.	8 (7)	30 (43)	17 (5)	17 (21)	30 (24)
23. I am satisfied with the orientation program for new employees.	11 (7)	35 (33)	27 (30)	14 (14)	13 (16)
24. Training is available when I need it.	6 (5)	23 (30)	15 (11)	31 (33)	25 (21)
25. I can easily find out about different training courses and programs offered by GPO.	10 (10)	38 (49)	15 (17)	19 (11)	17 (13)
26. The quality of the training I have received at GPO is high.	14 (3)	26 (41)	24 (29)	20 (16)	16 (11)
27. Career counseling at GPO is available to me when I need it.	10 (1)	24 (25)	29 (29)	22 (24)	15 (21)
28. GPO cares about my long-term career growth and development.	8 (2)	24 (11)	16 (26)	24 (21)	29 (40)
29. Employees have the skills necessary to perform their jobs.	6 (6)	53 (30)	15 (19)	17 (30)	9 (16)
COMPENSATION AND BENEFITS					
30. Creativity and innovation are rewarded.	1 (1)	14 (7)	22 (17)	32 (33)	31 (42)
31. I promptly receive verbal recognition when I do more than what is expected of me.	8 (8)	21 (24)	16 (12)	31 (24)	25 (32)
32. I am rewarded for working with other employees (e.g., performance ratings, certificates, public recognition).	10 (6)	24 (16)	12 (17)	27 (23)	27 (38)
33. Supervisors are fair in recognizing individual and team accomplishments.	10 (5)	22 (24)	11 (17)	20 (27)	37 (27)
34. Employees with similar levels of responsibility are generally paid the same.	14 (5)	55 (52)	10 (10)	8 (13)	13 (20)
35. I feel that I am paid fairly in comparison to employees working at other printing organizations outside GPO.	27 (8)	53 (42)	7 (11)	7 (19)	6 (21)
36. I know where to go with questions about my pay and benefits.	28 (20)	59 (60)	7 (12)	3 (6)	3 (2)
PERFORMANCE MANAGEMENT/APPRaisal					
37. I understand what good performance means.	33 (22)	54 (66)	8 (6)	3 (4)	2 (3)
38. My supervisor reviews the results of my work with me.	16 (9)	39 (43)	12 (17)	20 (19)	14 (12)
39. My work is important to GPO's goals.	48 (32)	40 (51)	9 (6)	3 (7)	0 (5)

Issues	Percentage of Respondents Who—				
	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
40. I am satisfied with the feedback I receive on my performance.	14 (12)	44 (44)	12 (13)	15 (14)	16 (18)
41. My supervisor sets challenging and attainable work goals.	10 (6)	37 (39)	22 (25)	15 (14)	17 (17)
42. I have input in developing my work goals.	10 (8)	38 (41)	21 (16)	12 (18)	20 (17)
43. It is clear to me what I need to do to get promoted.	13 (5)	29 (21)	13 (18)	20 (21)	26 (35)
44. The performance appraisal process is helpful for my career.	13 (9)	27 (33)	19 (22)	21 (14)	21 (23)
45. Promotions are given to qualified individuals, regardless of gender, race, national origin, religion, age, cultural background, or disability.	5 (6)	13 (16)	12 (17)	30 (24)	39 (38)
46. High-performing employees are promoted.	4 (3)	10 (16)	16 (19)	37 (24)	33 (39)
WORK ENVIRONMENT/HEALTH AND SAFETY					
47. GPO's policies and programs allow me to balance work and family obligations.	16 (9)	47 (65)	14 (14)	14 (6)	10 (6)
48. My supervisor respects my need to balance work and family obligations.	14 (19)	46 (56)	15 (13)	16 (4)	10 (9)
49. Physical conditions (e.g., noise level, temperature, lighting, cleanliness) allow employees to perform their jobs well.	15 (11)	40 (42)	5 (10)	29 (18)	11 (19)
50. GPO supports programs that encourage good health practices (e.g., wellness meetings, health education programs).	13 (12)	57 (57)	14 (14)	9 (8)	6 (9)
51. Reasonable measures are taken to protect employees from health and safety hazards.	14 (12)	59 (63)	11 (12)	7 (7)	8 (6)
52. Supervisors take steps to minimize the work-related stress of employees.	7 (6)	22 (26)	26 (26)	19 (26)	26 (18)
53. Adequate accommodations are made for people with disabilities (e.g., availability of sign language interpreters, ramps, Braille).	19 (20)	53 (66)	18 (8)	3 (3)	7 (3)
WORKFORCE RELATIONS					
54. Employee differences are respected and valued (e.g., gender, race, national origin, religion, age, cultural background, disability).	8 (9)	40 (44)	22 (21)	12 (8)	18 (18)
55. Supervisors work well with employees of different backgrounds.	8 (9)	44 (39)	19 (22)	13 (17)	16 (13)
56. I am satisfied with the handling of GPO's disciplinary procedures.	6 (3)	38 (34)	21 (26)	16 (17)	20 (20)
57. Management keeps me informed about issues affecting my job.	8 (6)	29 (31)	19 (16)	18 (24)	25 (24)
58. Management understands my needs as an employee.	6 (3)	25 (24)	23 (29)	24 (27)	22 (17)
59. There is trust between employees and supervisors.	6 (7)	26 (27)	14 (21)	24 (22)	29 (23)
60. There is trust between management and the labor unions.	4 (4)	16 (10)	19 (18)	30 (35)	32 (33)
61. Management involves the labor unions in all important decisions that impact employees.	3 (6)	34 (28)	17 (26)	23 (17)	23 (24)
62. There is ongoing communication between employees and GPO management.	9 (3)	22 (22)	19 (30)	26 (20)	25 (24)
STRATEGIC ROLE					
63. I understand GPO's mission, vision, and values.	18 (12)	43 (50)	24 (18)	10 (12)	6 (9)
64. My manager tells me how my work contributes to GPO's mission and goals.	5 (4)	32 (36)	28 (16)	18 (24)	17 (21)
65. GPO managers lead by example.	7 (5)	21 (21)	26 (24)	24 (19)	22 (30)
66. I think that GPO is prepared for the new tools and technologies of the future.	17 (6)	27 (27)	20 (21)	18 (18)	19 (29)
67. Strategic planning takes place at GPO.	9 (7)	30 (20)	35 (27)	17 (24)	9 (23)
68. I participate in strategic planning at GPO.	1 (5)	10 (8)	28 (18)	33 (26)	27 (42)
RECRUITING AND HIRING					
69. Job announcements are readily available.	25 (23)	49 (62)	9 (5)	11 (7)	6 (3)
70. Job announcements are clear and understandable.	24 (21)	53 (58)	7 (10)	8 (8)	8 (3)
71. I can easily find out about job openings throughout GPO.	18 (23)	51 (53)	13 (10)	12 (9)	7 (6)

Issues	Percentage of Respondents Who—				
	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
72. I can help decide who gets hired.	1 (4)	5 (15)	16 (13)	35 (27)	43 (40)
73. The tools used to select candidates (e.g., interviews, tests) for positions are effective.	6 (5)	21 (21)	22 (33)	22 (18)	28 (23)
74. Employees are hired on the basis of their qualifications.	6 (4)	14 (30)	30 (22)	21 (16)	29 (28)
75. My co-workers are qualified for their positions.	5 (8)	45 (46)	28 (27)	5 (12)	16 (7)
OVERALL SUMMARY QUESTIONS					
76. Overall, I believe GPO has an effective organizational structure in place.	9 (6)	40 (40)	24 (26)	13 (11)	14 (16)
77. Overall, I am satisfied with the training opportunities provided to me at GPO.	9 (6)	32 (45)	9 (10)	29 (17)	21 (23)
78. Overall, I am satisfied with the compensation and benefits I receive as an employee of GPO.	21 (8)	62 (65)	4 (6)	9 (12)	4 (8)
79. Overall, I am satisfied with GPO's performance management/appraisal process.	11 (7)	30 (35)	16 (14)	18 (26)	25 (19)
80. Overall, I am satisfied with my work environment at GPO.	11 (8)	46 (45)	14 (12)	16 (15)	12 (20)
81. Overall, I am satisfied with the quality of workforce relations at GPO.	10 (4)	42 (42)	16 (21)	19 (16)	13 (17)
82. Overall, I am satisfied with GPO's recruiting and hiring process.	8 (1)	18 (24)	26 (27)	18 (25)	30 (23)
83. Overall, I believe that GPO effectively manages its human resources.	7 (4)	28 (22)	25 (34)	16 (18)	25 (22)

Appendix I

Status of GPO Responses to the U.S. Government Printing Office Comments and Suggestions for Consideration (January 1996)

In 1992 and 1995, Arthur Andersen LLP conducted financial audits of GPO that studied their financial systems in detail. As a result of these audits, financial and other management related observations and recommendations were identified and reported in the report *U.S. Government Printing Office, Comments and Suggestions for Consideration* (January 1996). A listing of the comments and suggestions and the status of each one, in terms of a GPO documented response, is shown below:

General Comments and Suggestions	Status
1 Risk of weakened controls due to changes in environment	Documentation dated 5/28/97 received
2 Review of GPO's year-end adjustments	Documentation dated 10/10/97 received
3 No systems to track and report information required	Documentation dated 3/21/97, 5/28/97 received
4 Knowledge of accounting system shared by few persons	Documentation dated 10/10/96 received
5 Development of performance measures to review mgmt progress	Documentation dated 2/10/96 and 3/14/97 received for selected sections
6 Mgmt should obtain and review industry performance measures	Documentation dated 2/24/98 received for selected sections
7 Update honoraria policies into Standards of Conduct for Employees	Documentation dated 3/11/97 received
8 No process for documentation of supervisory review	Documentation dated 10/10/96 received
9 Enforcement of unidentified cash reconciliation procedures	Documentation dated 2/20/98 received
10 Establishment of separate account for credit card receivables	Documentation dated 2/20/98 received
11 Analysis of procedures to assist in reducing unbilled receivables	Documentation dated 10/10/96 received
12 Evaluation of consigned sales agent program	Documentation dated 2/17/98 received
13 Enforcement of security procedures re access to General Stores	Documentation dated 3/14/97 received, Updated 4/97
14 Increasing data entry controls over receipt of goods	Documentation dated 2/13/96 received
15 Require identification of damaged inventory during count process	Documentation dated 2/13/96 received
16 Formally documentation of inventory counts at RPOs	No documentation received
17 Reconciliation of deposit accounts subsidiary ledger monthly	Documentation dated 2/18/98 received
18 Analysis of basics and supplements calculations	Documentation dated 9/17/97, 7/3/97 received
19 Monitoring and proper recording of advance collections	Documentation dated 2/20/98 received
20 Evaluation of all intracompany transactions	Documentation dated 2/18/98 received
21 Strengthening of controls over passwords	Documentation dated 1994 received
22 Establish procedures to monitor aging of WIP and finished work	Documentation dated 2/20/98 received
23 Machine endorsement of checks	No documentation received
24 Centralization of work jacket logs; central computerized system	Documentation dated 9/22/97 received
25 Development of sales reserve for refunds	Documentation dated 2/18/98 received
26 Establishment of procedures to approve checks	Documentation dated 9/24/97 received
27 Modification of direct solicitation procedures for RPPOs	Documentation dated 2/20/98 received
28 Requirement for all employees to sign conflict of interest statements	Documentation dated 3/11/97 received

General Comments and Suggestions	Status
29 Conducting of periodic procurement integrity training	No documentation received
30 Establish procedures requiring verification of entry into PICS	Guidelines updated 3/27/97
31 Establish written procedures to determine to procure printing work	Documentation dated 3/26/97 received
32 Reevaluation of cost allocation drivers	Documentation dated 10/17/97, 2/17/98 received
33 Segregation of manual check processing duties	Documentation dated 2/23/98 received
34 Requirement of adequate documentation for purpose of all travel	Documentation dated 3/17/97 received
35 Enforcement requirements for signed purchase order	Documentation dated 2/23/98 received
36 Update tax rates used for prior period payments	Documentation dated 10/10/96 received
37 Interface PROBE with payroll system	Documentation dated 9/17/97 received
38 Require review of payroll discrepancies by payroll supv.	Documentation dated 2/23/98 received
39 Review daily time and attendance before entry into PROBE	No documentation received
40 Identify and utilize performance measures	Documentation dated 2/10/96 received
41 Require formal variance analysis at operational level	No documentation received
42 Ensure user access agrees with job responsibilities	Documentation dated 10/10/96 received
43 Improve data processing contingency procedures	Documentation dated 9/19/97 received
44 Improve security over mainframe computer system	Documentation dated 4/4/97 received
45 Restrict access to computer resources based on responsibilities	No documentation received
46 Document database security administration procedures	Documentation dated 4/4/97, 9/19/97 received
47 Review of security violation reports	Documentation dated 2/20/98 received
48 Restrict assignment of privileged user accounts	Documentation dated 2/13/96 received
49 Improve data processing procedures	Documentation dated 2/13/96 received
50 Evaluate information security department	Documentation dated 2/13/96, and 5/96 received

Appendix J

Information Sources for Section 6

Title/Function
Chief, Commercial Examination Section
Management Analyst, Documents, Planning and Development Branch
Director of Policy Coordination Staff
Supervisory Data Analyst (3)
Assistant Comptroller/General Accounting Division
Chief, Cash Management Branch
Chief, Plant Billing Section
Financial Data Analyst
Chief, General Examination and Support Section
Assistant Superintendent, Departmental Accounts
Assistant Comptroller, Procurement Accounting Division
Deputy Director, National Technical Information Service
Chief, Plant Production Branch
Office of Electronic Information Dissemination Services
Assistant Director, Office of Electronic Information Dissemination Services
Chief, Plant Reporting Section
Associate Director for Business Development, National Technical Information Service
Chief, Commercial Billing Section
Director, Office of Information Resource Management
Director of Budget
Chief, Supervisory Cash Management Specialist
Comptroller
Director National Technical Information Service
Chief, Examination and Billing Branch
Chief, Financial Reporting and Evaluation Section
Chief, Disbursing Section
Technical Support Group
Chief of Taxpayers Products, Internal Revenue Service
Chief, Payroll Section
Assistant Director, Office of Information Resource Management

Appendix K

Documents and Information Reviewed

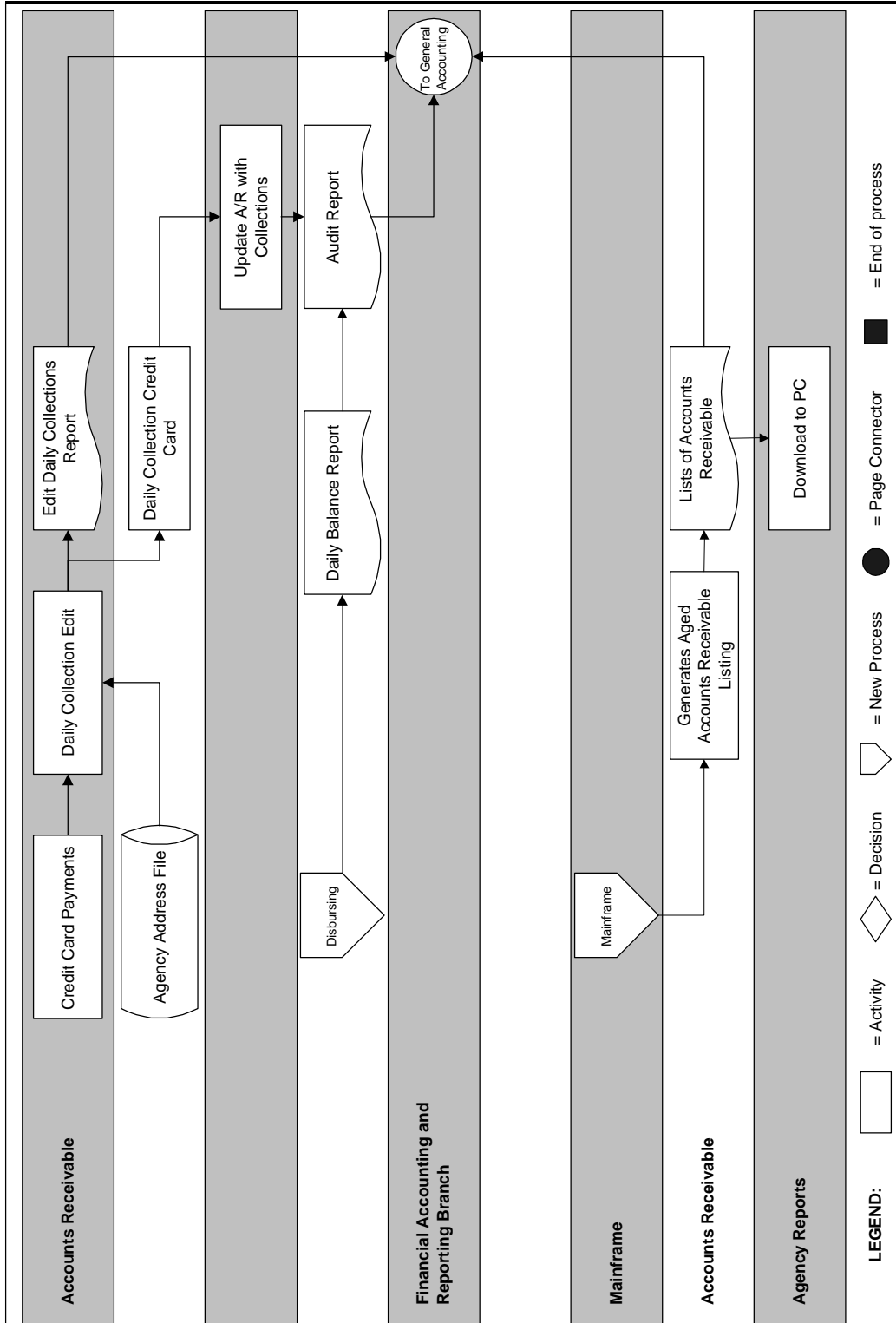
Title	Document Type	Source
Office of the Comptroller		
GPO Agency Billing Totals	Report	Bill Boesch
GPO Actual Square Feet of Space Report	Report	Bill Boesch
GPO Office of Financial Management Summary Aged Listing of Accounts Receivable by Agency Code (4-digit agency code)	Report	Bill Boesch
GPO Office of Financial Management Summary Aged Listing of Accounts Receivable by Budget Authorization Code (6-digit BAC)	Report	Bill Boesch
Overall Journal Entry Control Total	Report	Bill Boesch
Financial Operations Overview	Flow Chart	Rick Mattero
Revenue, Expense, and Net Income Projections for the Sales Program	Report	Bill Boesch
Public Law 104-197 (Special Appropriation Language for GPO)	Guidance	Bill Boesch
Offset Press New Web Rates	spreadsheet	Bill Boesch
Financial Management Procedures	SOPs	Bill Boesch
Documentation of GPO's Overhead Distributions as of 6/1/95	SOPs	Bill Boesch
GPO Financial Accounting Manual	Guidance	Bill Boesch
GPO General Ledger by Product Code	Report	Bill Boesch
Inventory Listing of the GPO Software In Use Over \$5,000	Listing	Bill Boesch
Procedures for Reconciling the Accounts Receivable Government Subsidiary Records to the General Ledger	Guidance	Bill Boesch
Procedures for Reconciling the Accounts Receivable Government Subsidiary Records to the General Ledger	SOPs	Bill Boesch
GPO Financial Briefing for Oct./Nov. FY 1998 Dated January 20, 1998	Briefing	Bruce Holstein
Biennial Report to Congress on the Status of GPO Access	Report	Bruce Holstein
Creating a Government That Works Better & Costs Less (NPR)	Report	Bruce Holstein
Financial Package FY 97 Dated December 29, 1997	Financial Report	Bruce Holstein
Financial Package/Total GPO Operations Summary FY 97 Dated August 1997	Financial Report	Bruce Holstein
GPO Instruction 105.1 Dated 1978–1995	General Guidance	Bruce Holstein from IG office
GPO Client Billing Survey	Survey	Bruce Holstein from IG office
GPO Financial Improvement Program: Action Plan to Stem Financial Losses	Report	Bruce Holstein
Memorandum to the Deputy Public Printer: Firm Pricing Dated December 30, 1997	Memo	Bruce Holstein
Memorandum to Francis Posniewski and Raymond Tatro Dated November 5, 1991	Memo	Bruce Holstein
Memorandum to the Deputy Public Printer: Firm Prices Dated December 3, 1997	Memo	Bruce Holstein
Memorandum to the Deputy Public Printer: Firm Pricing Dated December 16, 1997	Memo	Bruce Holstein
Office of Budget		
Actual and Chargeable Hours Report FY 89–97	Report	Charles Ballew
AIHR Jacket Listings Dated August 7, 1997	Rate Listing	Charles Ballew
Billing History Database	Disk	Charles Ballew
Breakdown of Overhead and Transfer Distributions by Major Receivers	Report	Charles Ballew
GPO Office of Budget All Inclusive Hourly Jacket Rate Listing	Report	Charles Ballew
GPO Office of Financial Management Cost Balance File Listing for November 1, 1997	Report	Charles Ballew
GPO Paper Inventory Description Catalog	Price List	Charles Ballew
GPO Regular Labor and Machine Production Chargeable Hours for FY 97	Report	Charles Ballew
GPO Scale of Prices and Production Time	Listing	Charles Ballew
GPO Schedule of Operations and Classes of Work Dated FY 95–98	Listing	Charles Ballew

Title	Document Type	Source
Operation Cost Record FY 1997	Worksheet	Charles Ballew
GPO Cumulative Analysis of Congressional Jacket Billings Period Ending Oct. 31, 1997	Report	Charles Ballew
GPO Financial Management Service Production Rate Determination Rate, January 6, 1998	Report	Charles Ballew
Open Cost Records FY 1997	Worksheet	Charles Ballew
Printing and Binding Jacket (sample work jacket)	Sample	Charlie Ballew
Regional Report Dated December 31, 1997	Status Report	Doug MacBride
U.S. Government Printing Office: Comments and Suggestions for Consideration	Report	Arthur Andersen
GPO Budget Process Worksheet	Worksheet	Office of Budget
GPO Budget Formulation Worksheet FY 98 and FY 99	Worksheet	Bill Guy
GPO Full Time Equivalent Employment (Workmonths)	spreadsheet	Bill Guy
GPO Budget Justification FY 94–99	Budget Report	Bill Guy
GPO Capital Requirements for FY 98 and FY 99	List	Bill Guy
GPO Detailed Budget Estimates by Account Number and Cost Code	List	Bill Guy
GPO Memorandum: Budget Call, FY 98 and FY 99 Dated May 16, 1997	memo	Bill Guy
Office of Information Resource Management Expense Budget Review Worksheet For FY 92–FY 97	Worksheet	Bill Guy
Financial Statements for GPO FY 97	Financial Report	Miguel Perez, Bill Guy
GPO Active and Completed Items List as of November 28, 1997	Listing	Miguel Perez
Other Information Reviewed		
Management Audit of the GPO Workplan Dated December 19, 1997	Workplan	Booz-Allen
U.S. Army: Printing and Publications Economic Analysis Dated June 11, 1997	Report	Booz-Allen
U.S. Army: Proponent Survey Dated August 1996	Survey	Booz-Allen
Best Practices Article: <i>“Competitive Edges”</i>	Article	Canadian Manager— Winter 1994 Ron Clutz
Defense Automated Printing Service “Can Do Right Now”	Pamphlet	DAPS
Reinvention With Results: 1995 Achievements at the Defense Printing Service	Pamphlet	DAPS
GPO Conference Report (Appropriation Report) from Congress	Report	Eric Peterson, JCP
Best Practices Article: <i>“Production Salaries Post Moderate Gains”</i>	Article	Folio June 1, 1996
Financial Audit: GPO Financial Statements FY 1992 (GAO/AFMD-93-62) Dated May 1993	Report	GAO
Financial Audit: GPO Financial Statements FY 1995 (GAO/AIMD-96-52) Dated April 1996	Report	GAO
Government Auditing Standards (GAO/OCG-94-4) Dated 1994	General Guidance	GAO
Government Printing: Comparison of DoD and GPO Prices For Printing and Duplicating Work (GAO/NSIAD-95-65) Dated February 17, 1995	Report	GAO
Report: GPO—Monopoly-Like Status Contributes to Inefficiency and Ineffectiveness (GAO/GGD-90-107) Dated September 1990	Report	GAO
Report: Managing for Results—Critical Issues for Improving Federal Agencies’ Strategic Plans (GAO/GGD-97-180) Dated September 1997	Report	GAO
Agency Procedural Handbook for the Procurement of Commercial Printing Services with the GPO (GPO Publication 305.1 Dated August 1995)	Handbook	GPO
GPO Functional Area Cycle Memos	Memo	GPO Inspector General
GPO Functional Area Process Flow Charts	Flowchart	GPO Inspector General
GPO Office of the Inspector General Customer Satisfaction Survey, November 1994	Survey	GPO Inspector General
Report to the Congress: Study To Identify Measures Necessary for a Successful Transition to a More Electronic Federal Depository Library Program	Report	GPO Pub. 500.11
Best Practices Article: <i>“What Is Strategy?”</i>	Article	Harvard Business Review Nov–Dec. 1996 Michael Porter
GPO Organizational Chart	Chart	Internet

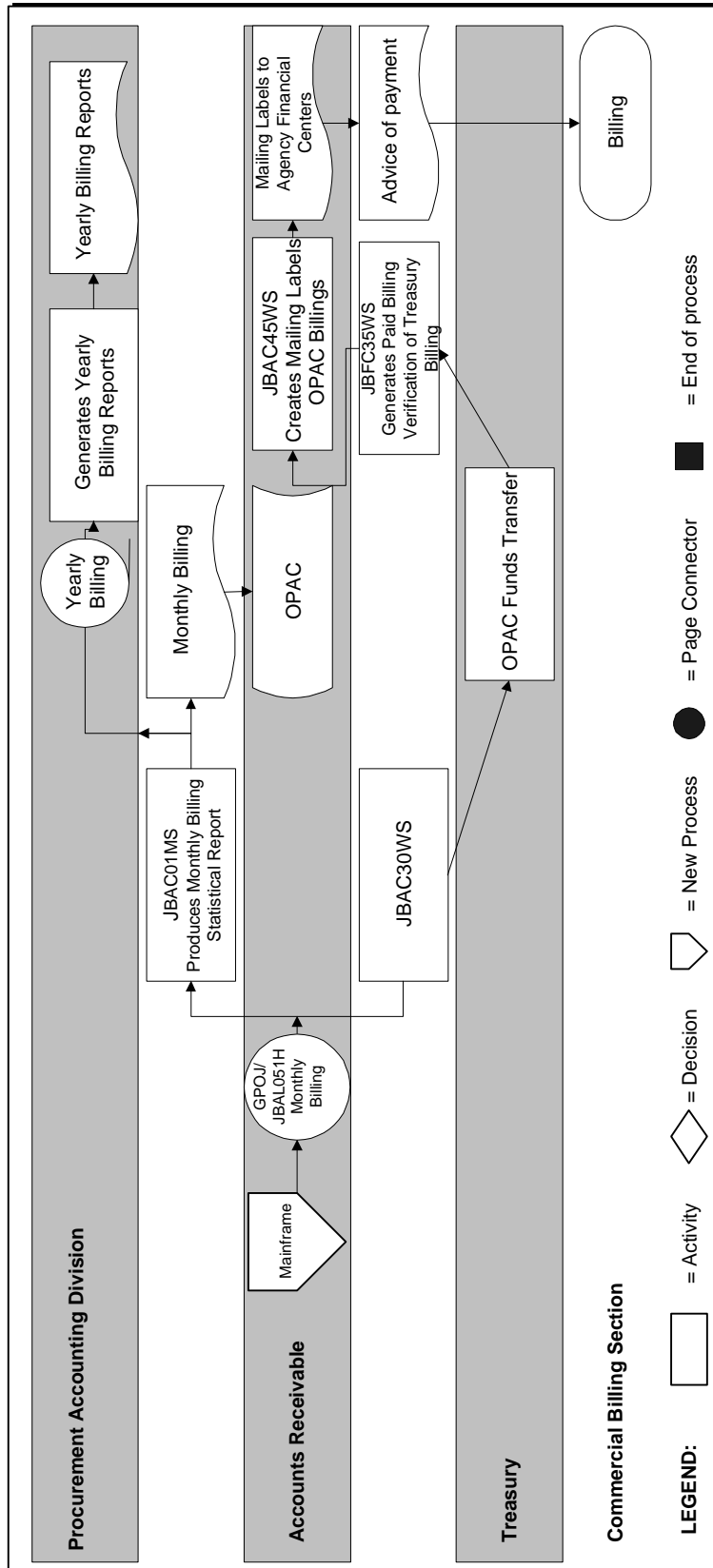
Title	Document Type	Source
Title 44—Public Printing and Documents Pub. L. 90-620, Dated October 22, 1968, 1997	General Guidance	Joint Committee on Printing
Letter to the JCP Dated August 12, 1994	Operating Plan	Michael Dimario Public Printer
Letter to the JCP Dated May 1, 1995	Operating Plan	Michael Dimario, Public Printer
Letter to the JCP Dated May 30, 1996	Operating Plan	Michael Dimario, Public Printer
Letter to the Joint Committee on Printing (JCP) Dated April 22, 1994	Operating Plan	Michael Dimario, Public Printer
Prepared Statement Before the Committee on Rules and Administration, U.S. Senate on Various Government Printing Proposals Dated February 3, 1994	Prepared Statement	Michael F. Dimario, Public Printer
Prepared Statement Before the Committee on Rules and Administration, U.S. Senate on Public Access to Government Information in the 21st Century Dated July 24, 1996	Prepared Statement	Michael F. Dimario, Public Printer
Prepared Statement Before the Joint Committee on Printing on Oversight of the Government Printing Office Dated March 13, 1997	Prepared Statement	Michael F. Dimario, Public Printer
Prepared Statement Before the Subcommittee on Government Management Information, and Technology Committee on Government Reform and Oversight House of Representatives on GPO's Role in Federal Information Dissemination Dated May 1997	Prepared Statement	Michael F. Dimario, Public Printer
Prepared Statement Before the Subcommittee on Legislative Appropriations Committee on Appropriations House of Representatives on Appropriations FY 1998 Dated February 11, 1997	Prepared Statement	Michael F. Dimario, Public Printer
Prepared Statement Before the Committee on Rules and Administration, U.S. Senate on Oversight of the GPO Dated February 27, 1998	Prepared Statement	Michael F. Dimario, Public Printer
Context Level Diagram of GPO Systems	Diagram	Pat Gardner
GPO Memorandum: GPO Networks	Memo	Pat Gardner
GPO Memorandum: Information Systems Skills Inventory	Memo	Pat Gardner
OIRM ISDD Initiatives	Letter	Pat Gardner
OIRM Automation Direction	Letter	Pat Gardner
OIRMNT Task Force	Memo	Pat Gardner
OIRM Automation Direction	Memo	Pat Gardner
OIRM Automation Direction	Letter	Pat Gardner
OIRM Information System Skilled Inventory	IG Letter	Pat Gardner
OIRM ORACLE information for General Ledger	Various Info	Pat Gardner
OIRM FY 98/99 Plans	Letter	Pat Gardner OIRM Chief
Budgeting, Accounting, and Financial Reporting Systems (Team 5) Weekly Status Reports	Slides	Team 5
Best Practices Article: <i>"Value of an Ink Goes Well Beyond Price"</i>	Article	American Printer Feb. 1996 Terry Scarlett
Best Practices Article: <i>"Partnering For Profit"</i>	Article	American Printer November 1995 Nancy Lowther
GPO Leg Appendix Part 1 J. 177-702 Leg. 024	General Guidance	
Leg Appendix Part 1 J. 177-702 Leg. 024 Government Printing Office	Guidance	

Appendix L Process Flows

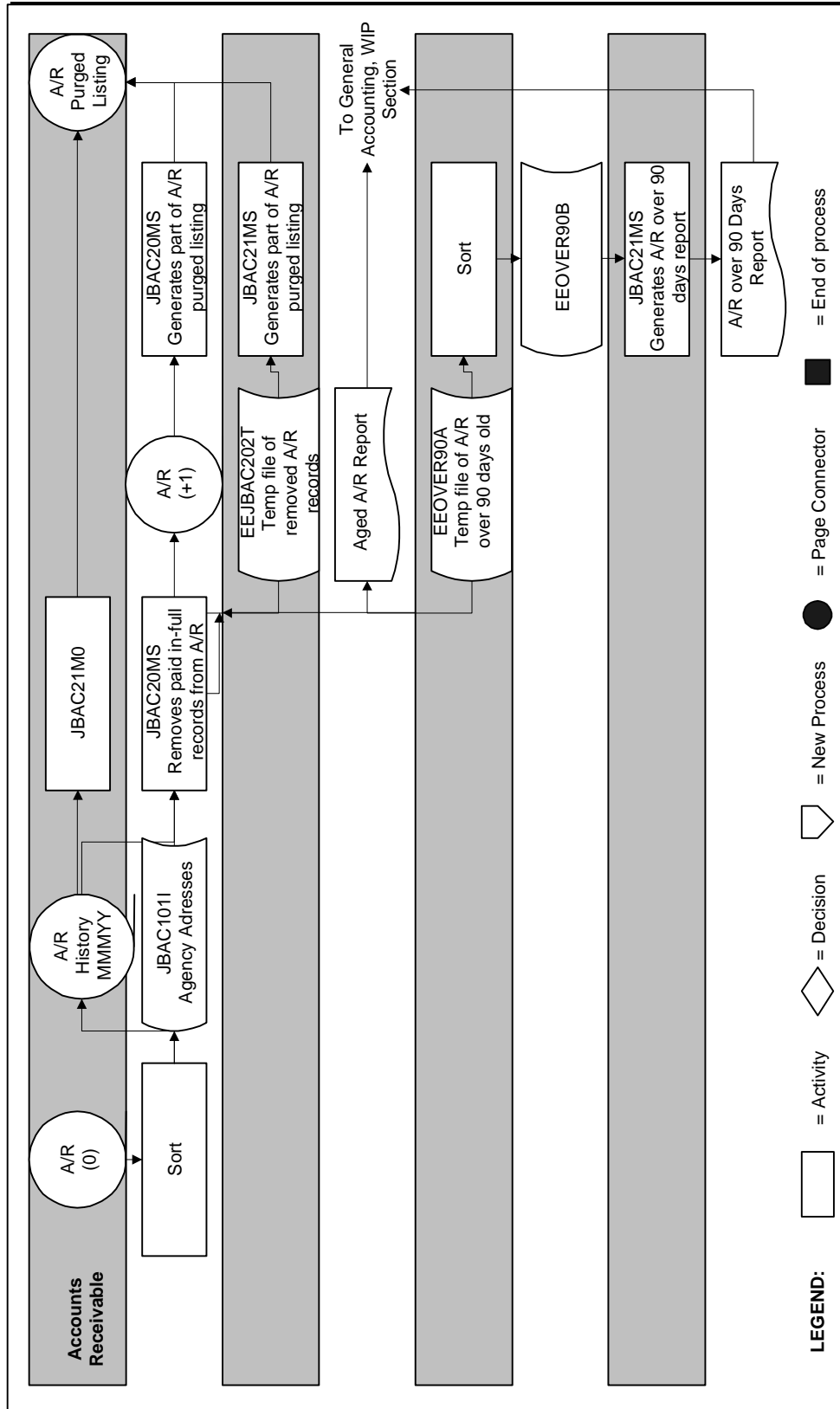
1. Collections Processing/Accounts Receivable



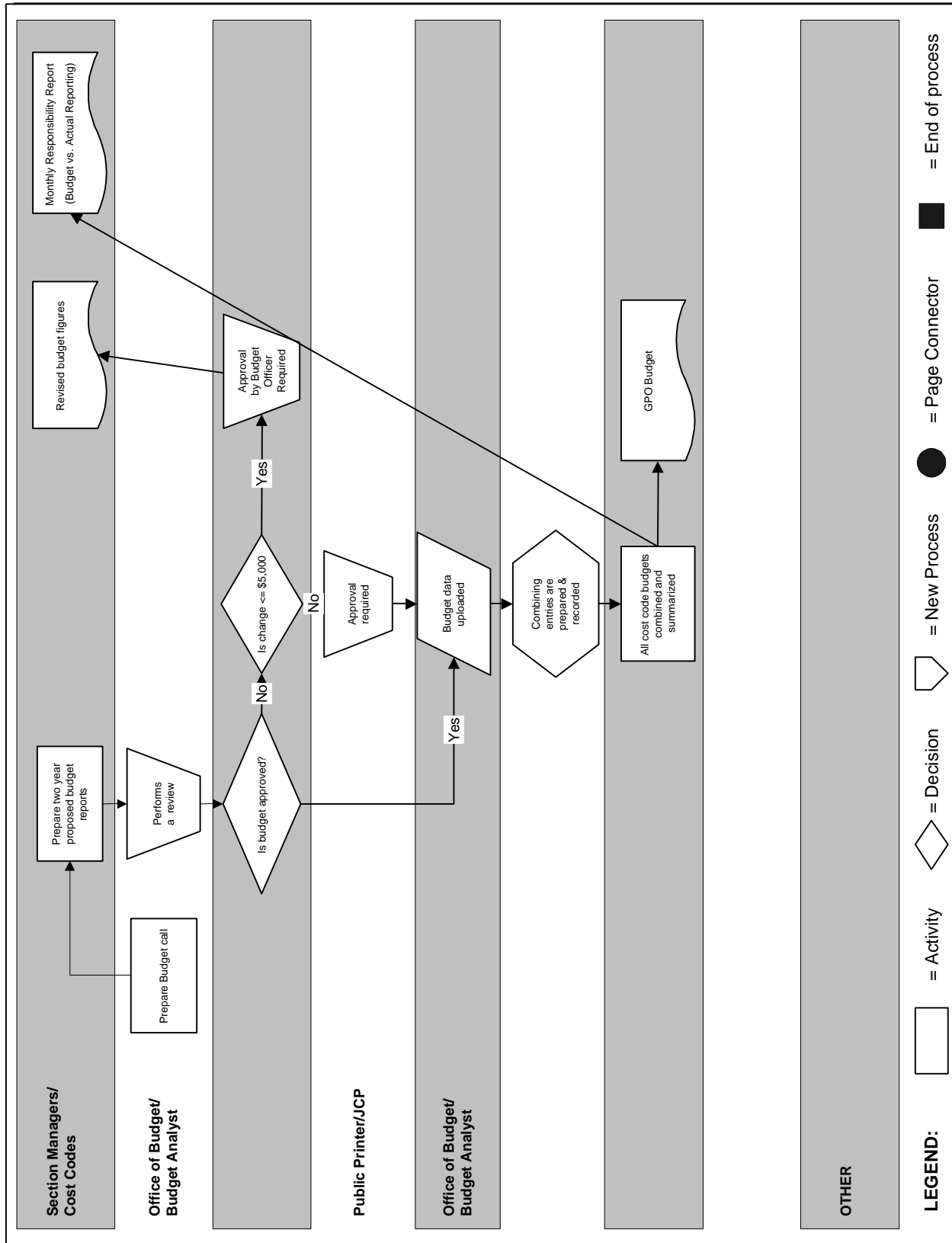
2. Collections Processing/Accounts Receivable/OPAC



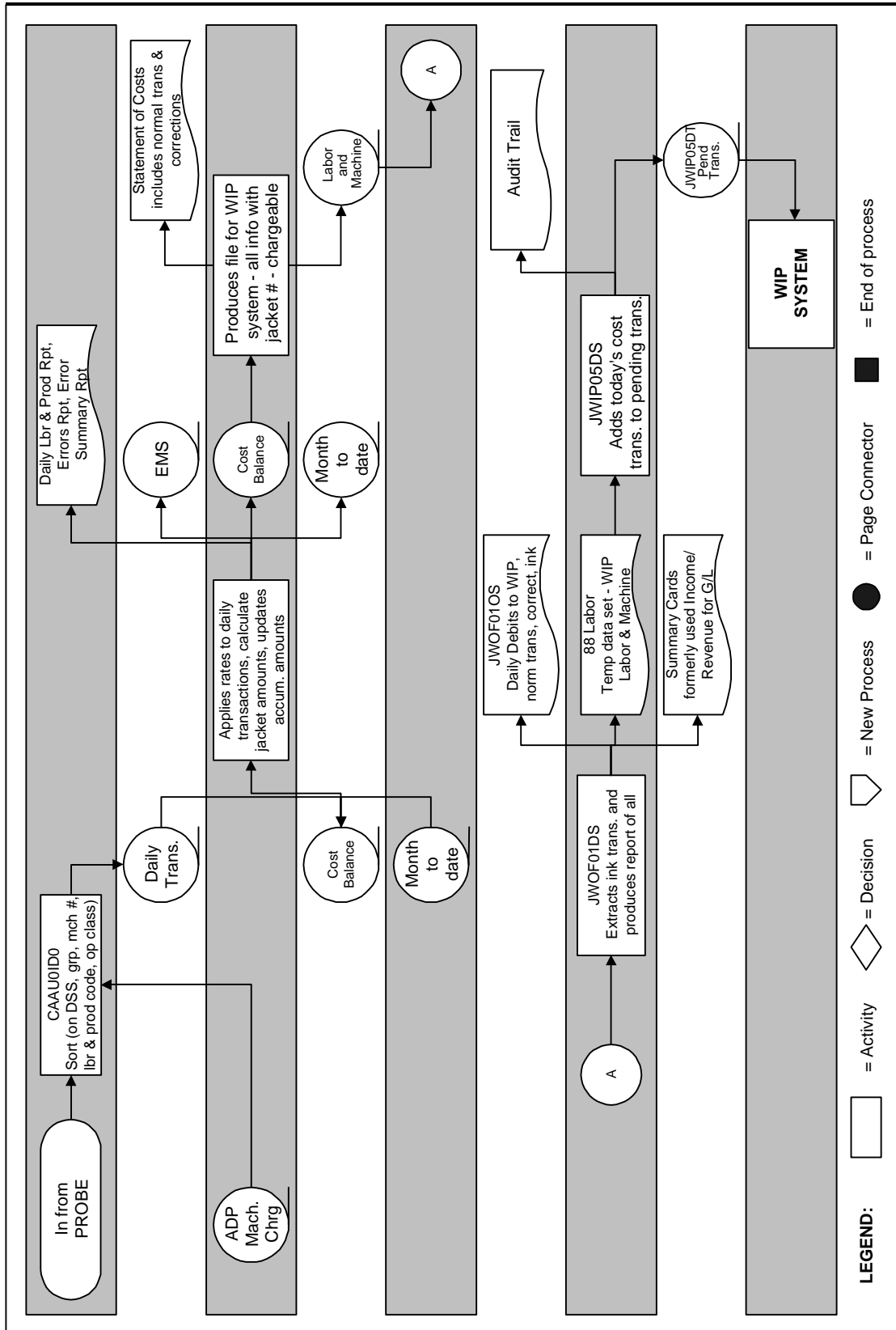
3. Collections Processing/Accounts Receivable Purchasing at End of Month



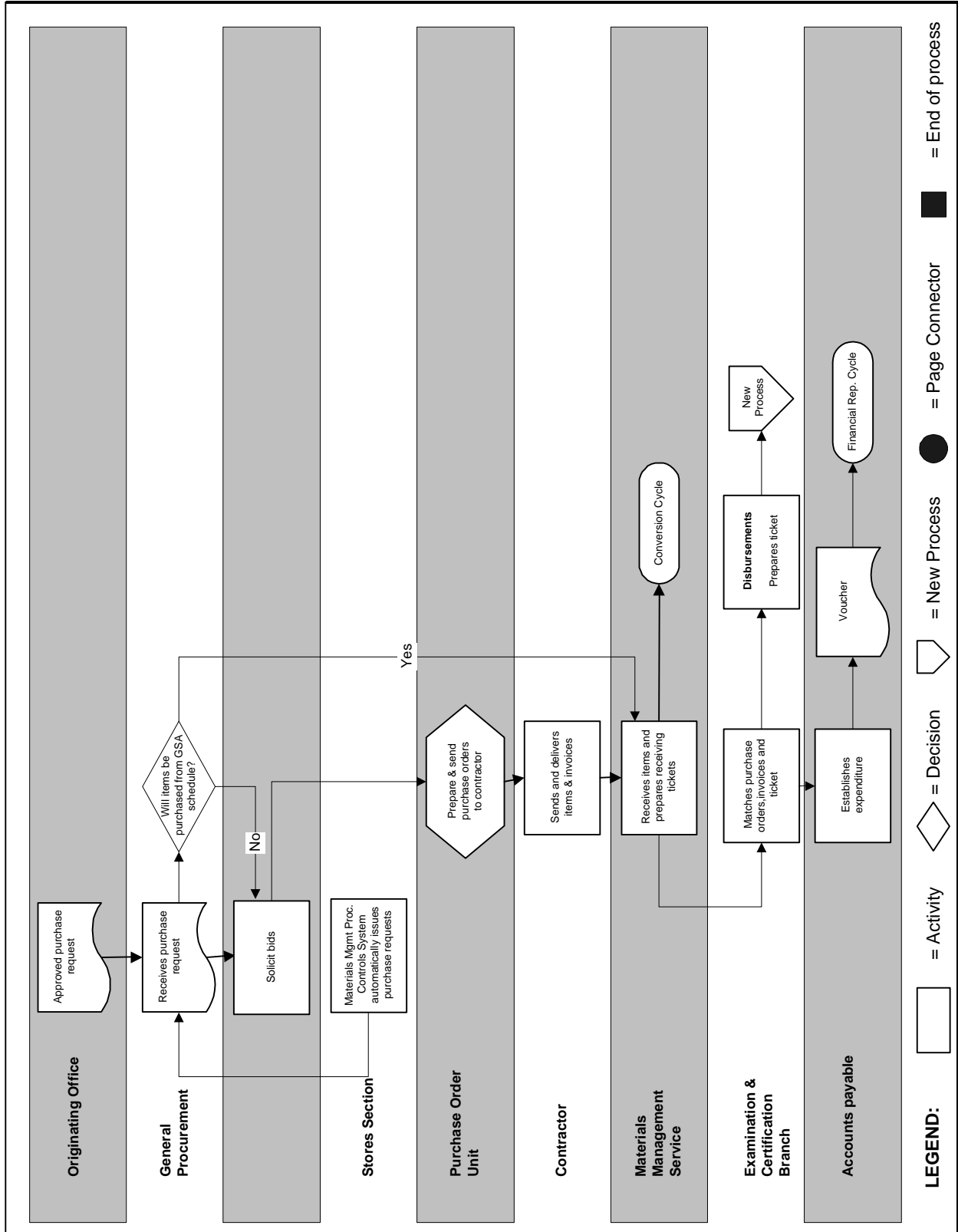
4. Budget Cycle



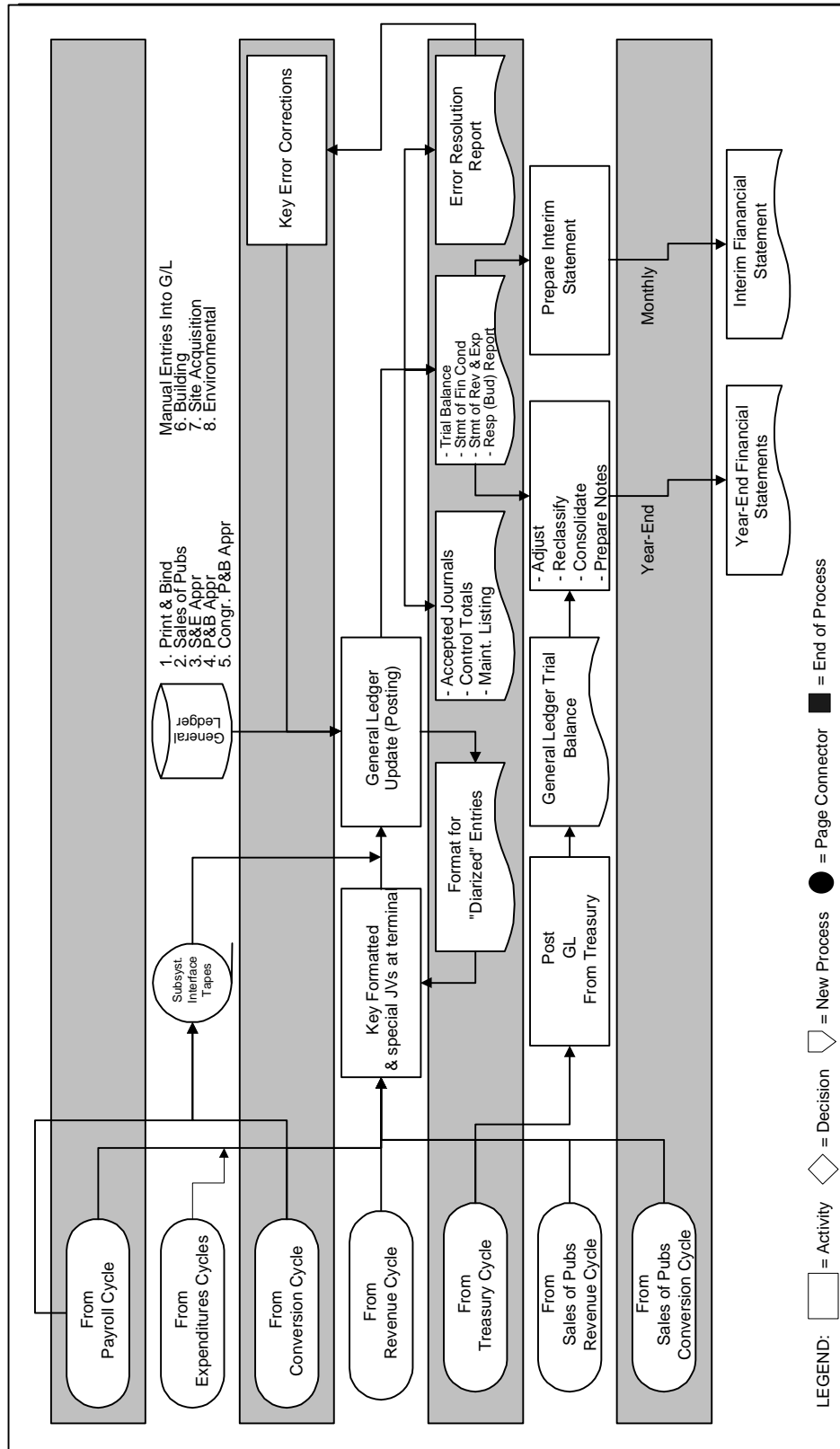
5. Cost System



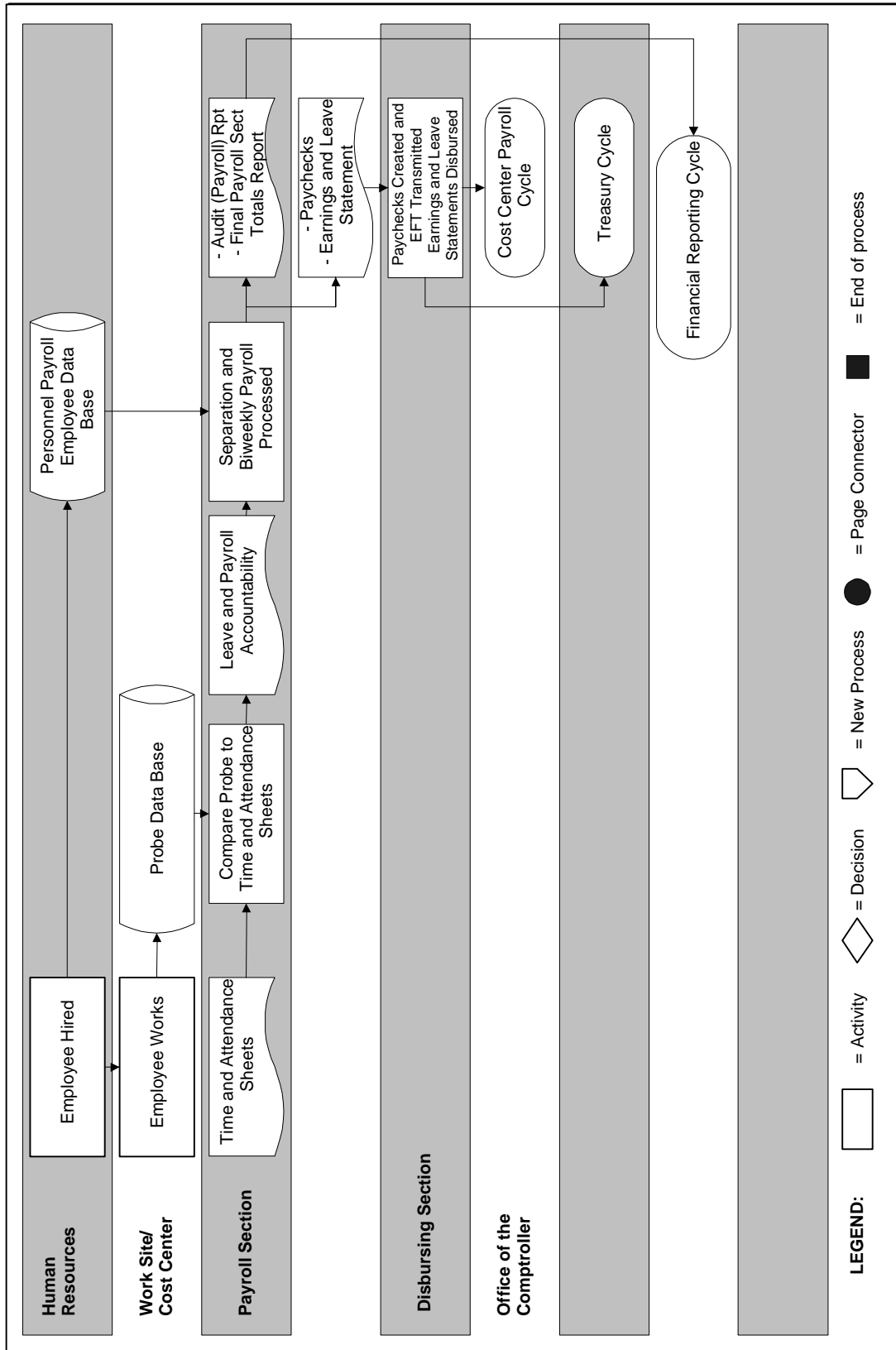
6. Expenditure Cycle



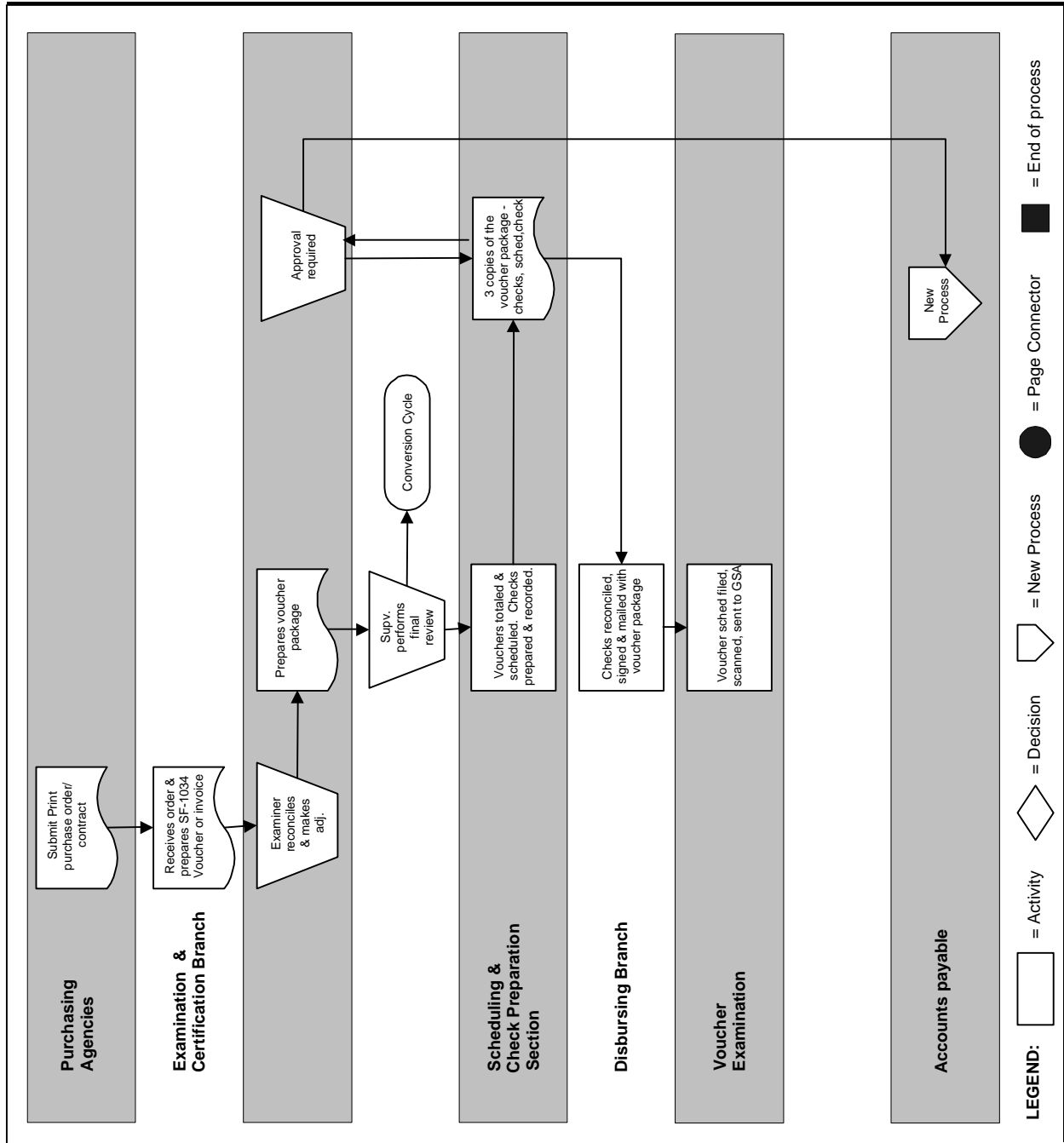
7. Financial Reporting Cycle



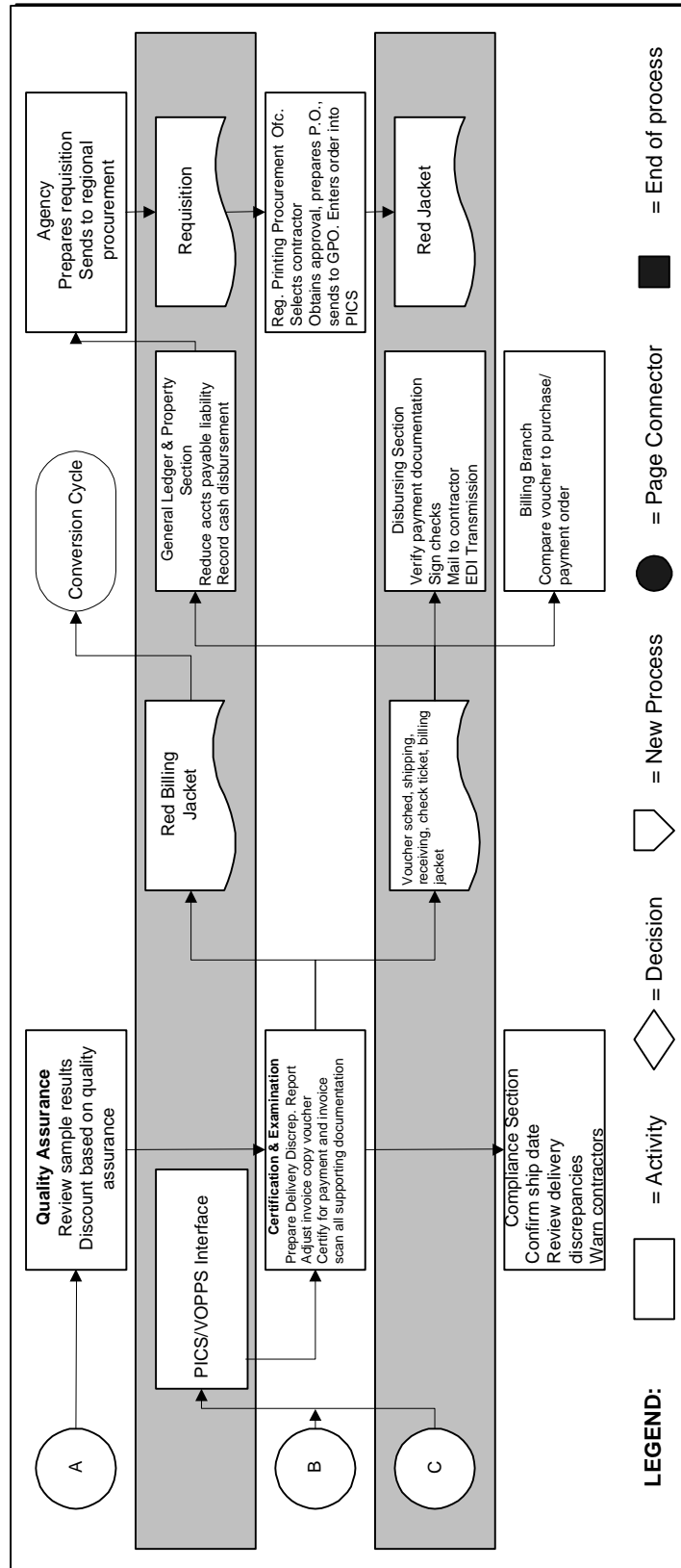
8. Payroll Cycle



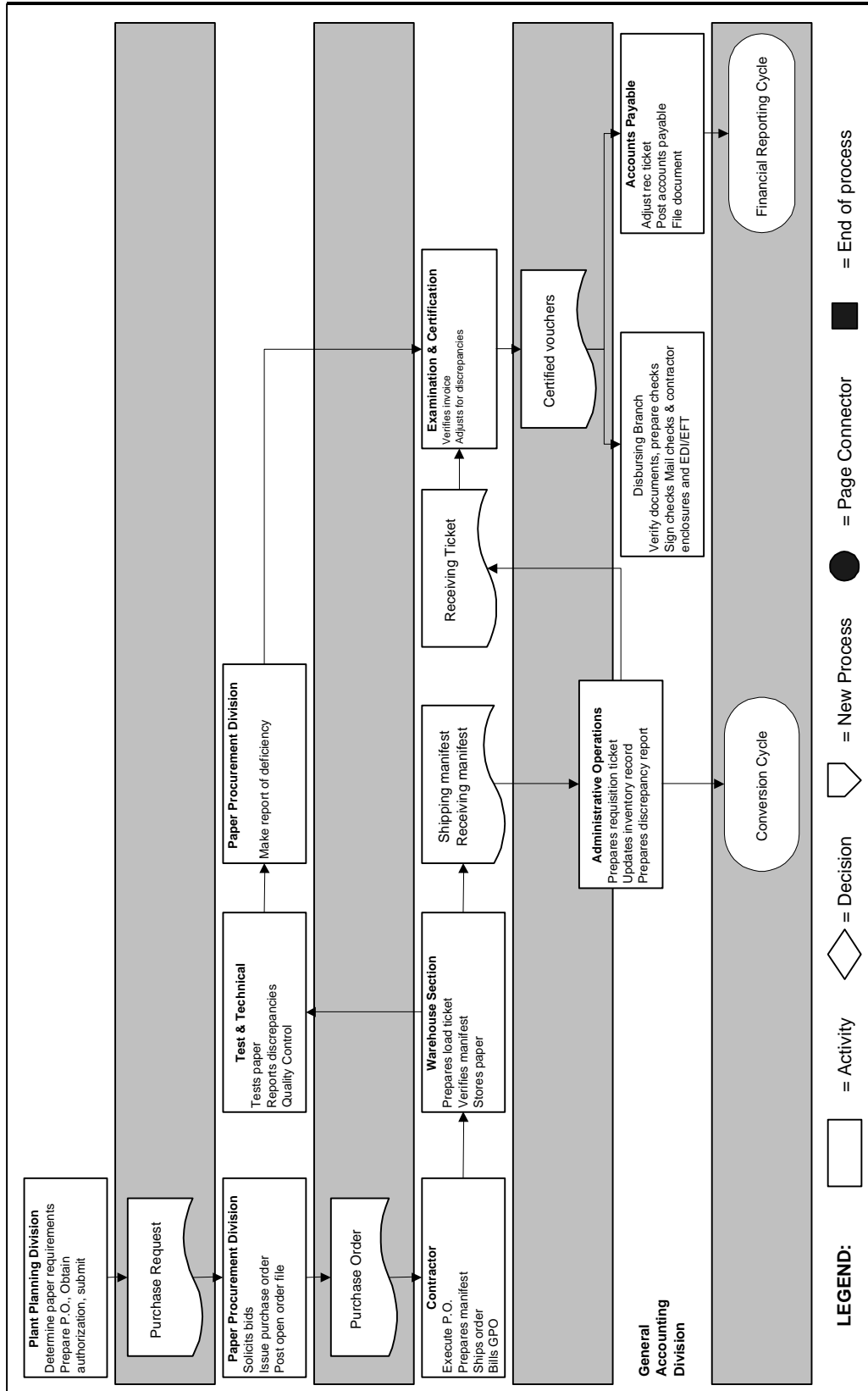
9. Purchasing Cycle



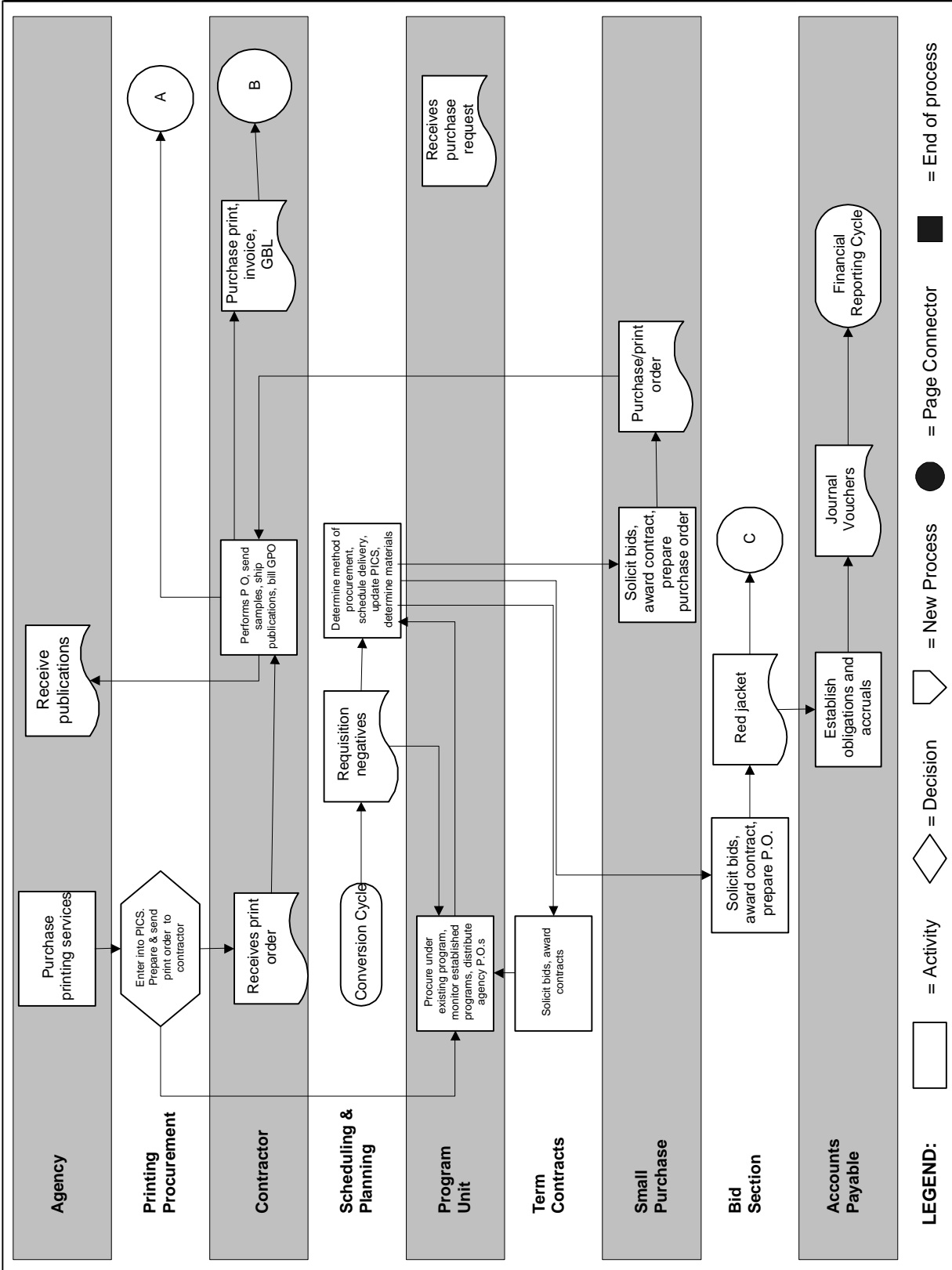
10. Purchasing Cycle (page 2)



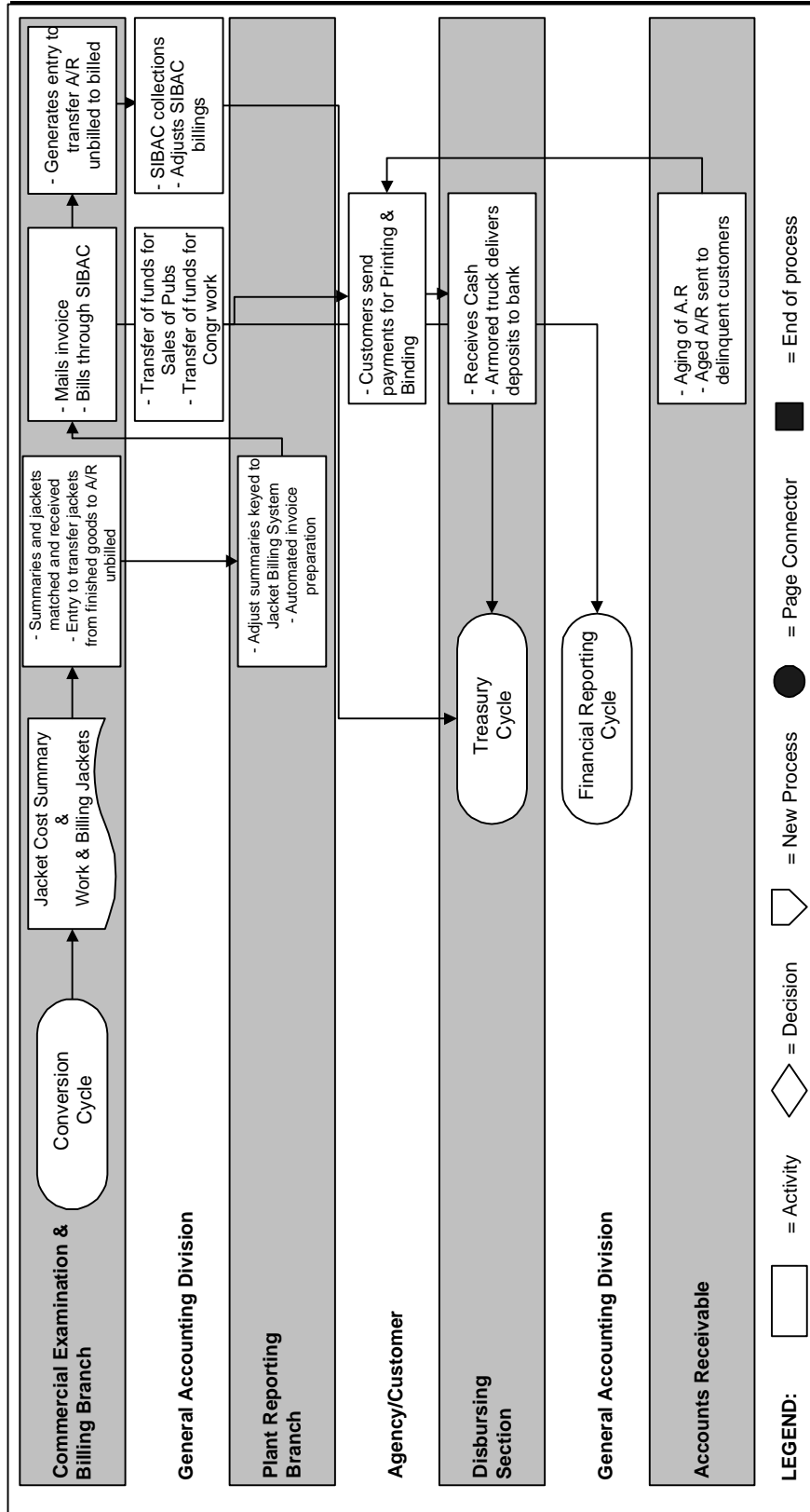
11. Purchasing Cycle (page 3)



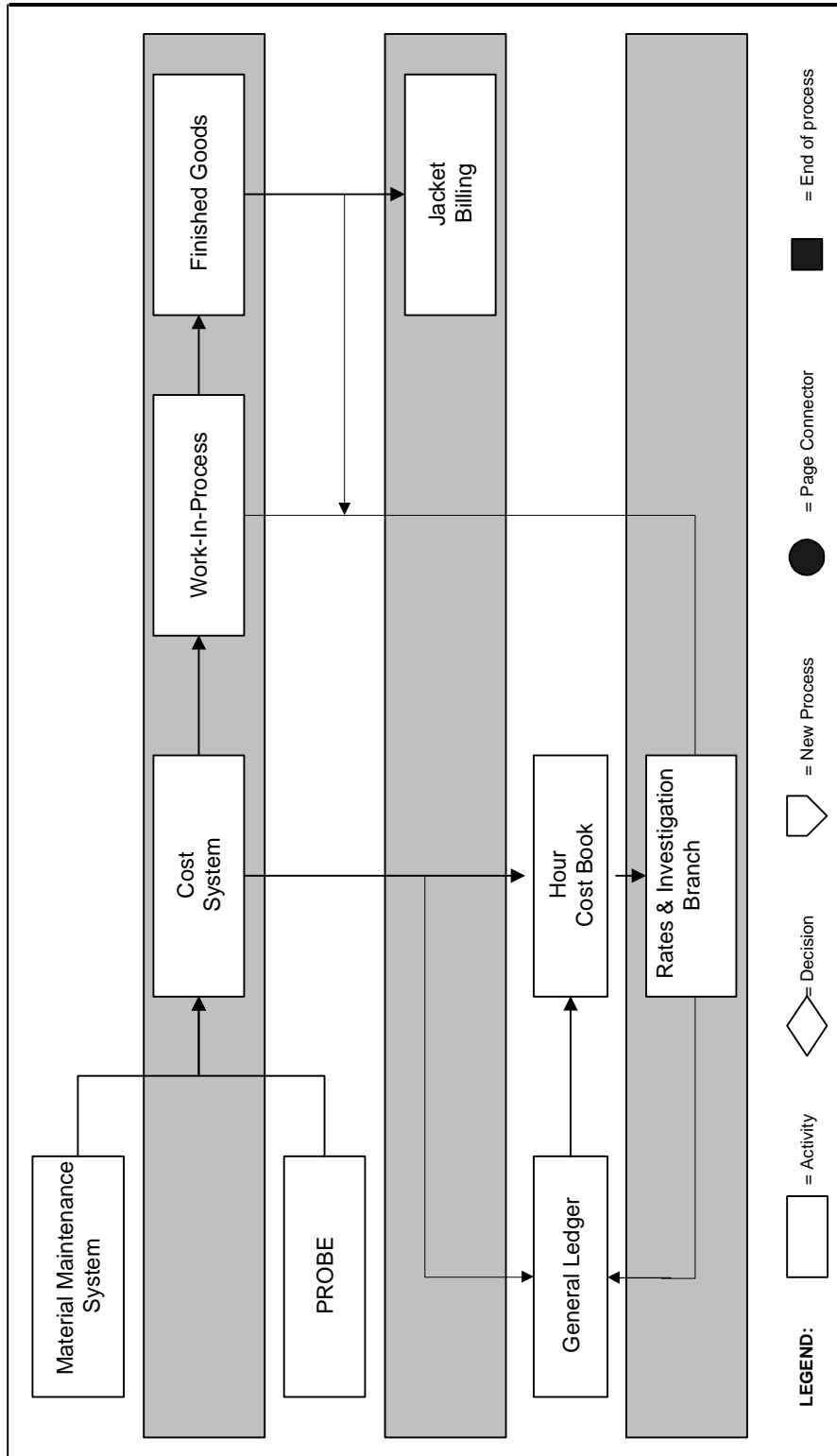
12. Expenditure Cycle (Purchasing)



13. Revenue Cycle



14. General Accounting Overview

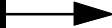


Appendix M

Pricing of In-House Printing

In-House Printing Captured by Activity Within Jacket Number

Cost Category	Method
Direct Labor	Std Hrs x Std Price*
Materials	Std Qty x Average Cost**
Section Burden	Applied
Overhead	Applied
= Total Costs	



<ul style="list-style-type: none">• Section Burden• Waste Paper/Materials• Damaged Stock• Accrued Leave• Retirement• Health/Life Insurance• Etc.

* Standard Prices are based on historical costs and include a 2% charge for capital investment replacements. There are about 2,000 activities priced in the system.

** Moving Wtd. average cost

Appendix N

Overhead Cost Allocation Methodology

Pool #	Pool Title	Allocation Base	Allocated To:	Costs of:
1	Administrative Services	Headcount	Revenue Generating Program	Public Printer, General Counsel EEO and Labor Relations Staff, Personnel and Payroll Staff
2	Building Expenses	Sq. Ft. (Note 1)	Revenue Generating Program	Security Personnel, Engineering and Cleaning Staff, staff to operate Power Plant and shops, Bldg. exp. (electricity, Steam, Water)
3	Production Support	Headcount	Production Department	Plant Reporting and Billing, Production Planning Div. Prod. Control Ctr, Prod. Information Mgmt., Production Manager
4	Divisional	Headcount	Production Department	Superintendents of EPD, Press and Bindery, Typography and Design
5	Administrative Support	Computer Time/ Revenue (Note 2)	Revenue Generating Program	IG, OIRM, Customer Svcs.
6	Procurement Support	Headcount	Printing Proc.	Admin. Law Judge, Voucher Exam., Billing Section, Proc. Analysis/Review Staff
7	Regional Support	Headcount	Regional Offices	Director of Regional Operations Staff
8	Transfers	Services Provided	Revenue Generating Program	Planning, Budget, Accounting, Occupational Health
9	Intraoffice–Documents	Specific	Revenue Generating Program	Sup. Offices for Sales Prog. and S&E Funded Programs

- Notes:**
1. When Engineering works on a project for a revenue generating unit, job costs are accumulated. If costs exceed \$5000, they are capitalized and depreciated. The remaining costs are allocated to both revenue and non-revenue generating units on the basis of square feet occupied.
 2. Specific programming costs are allocated first, then computer usage, remainder on revenue.

Appendix O

Detail on PROBE Correction Processes

Type of Correction	Reason for Corrections
Current period labor hour correction (within 24 hours of the day reported)	There are over 100 PROBE terminals within GPO from which most labor data are entered. Employees in these sections activate the PROBE system with their employee identification badges, entering their identification number, jacket and print order numbers, operation, class, and the quantity of a product that has been produced. The system also tracks the hours worked by employee during the day. Supervisors within all sections complete a manual report called the "Daily Time and Attendance Report" to verify the accuracy of the PROBE entries. The information in the Daily Time and Attendance Report is compared to the information entered in PROBE. Each day PROBE generates a "List of Absentees and Overtime" report and a "PROBE Daily Alert" report. These reports list the names of employees, cost codes, number of regular and overtime hours worked, and the amount of hours used for leave. The reports are forwarded to the section supervisors for review. The supervisors and timekeepers use the reports to verify the accuracy of the PROBE entries. If corrections are necessary, the supervisor makes the corrections on the report and the PROBE data are manually corrected to reflect the information listed on the Daily Time and Attendance Report. The report is collected by the Time Reporting section and forwarded to Plant Reporting. The Plant Reporting section inputs the corrections into the PROBE system through a FoxPro application.
Time and attendance (adjustments for periods older than 24 hours)	PROBE processes the information forwarded from the Time Reporting section to the Plant Reporting section for input and issues a "Daily Leave and Payroll Accountability" report. This report contains daily information for all employees needed in preparing the bi-weekly payroll. Errors in the reporting of time and attendance discovered after a 24-hour period are reported by the employee to the appropriate supervisor and to Payroll. Following the validation of the error by the employee, supervisor, and Payroll section, Payroll enters the correction into PROBE through an online system.
Job tracking correction	Employees activate the PROBE system with their employee identification badges, entering their identification number, jacket and print order numbers, operation, class, and the quantity of a product that has been produced. On a daily basis, the PROBE system generates a PROBE Daily Alert Report detailing these amounts. When erroneous input of product codes, quantity amounts, and jacket numbers or anything related to the plate-making process of a particular print job are detected, the supervisor has the ability to make corrections through an online system. Following the correction, a report is generated by Plant Reporting listing the correction and the employee number of the supervisor making the correction. This report is distributed to the supervisor.
Machine hour correction	Information on machine hours is written by the employee during his or her shift, or the supervisor following the employee's shift, in the "Machine Utilization Logs" located at each machine. Items listed on the report include the time spent on make-ready work, idle time, and jacket work. The logs are forwarded to Plant Reporting for input into the PROBE system. On a daily basis, the PROBE system generates a PROBE Daily Alert Report detailing these amounts. When erroneous input of quantity amounts, operation and class codes, and jacket numbers input are detected for a particular machine, the supervisor informs Plant Reporting. Plant Reporting enters corrections into the PROBE system through a FoxPro application.

APPENDIX P

Status of System Documentation Updates for Selected Financial Systems

Application	System Development Date Report Dated 9/22/1997	Application Modification Date Report Dated 9/22/1997	Data Dictionary Modification Date Report Dated 9/22/1997	Application Modification Date Report Dated 3/4/1998
Obligation Precertification System	November 1, 1977	November 1, 1989	September 15, 1994	March 3, 1998
Production, Reporting, Operations, Budget and Expenses System	June 1, 1976	July 1, 1986	September 15, 1994	March 3, 1998
Congressional Jacket Billing System	June 1, 1976	No date listed	February 8, 1995	March 3, 1998
Congressional Source Reporting System	July 1, 1976	October 1, 1982	May 7, 1997	December 31, 1997

Note: For selected systems only. The system development date shows the age of the system. The application modification date shows the date the system was updated. The data dictionary modification date shows the date when definitions of data within the system were updated.

Source: PREDICT 3.1.4. Report dated 9/22/97 and 3/4/98

Appendix Q

Acronyms

A&R	Analysis and Review
ABC	Activity-Based Cost
ABLS	Automated Bid List
ACD	Automated Call Distributor
ADP	Automated Data Processing
ADR	Alternative Resolution Technique
AFGE	American Federation of Government Employees
APHA	American Printing History Association
APP	Assistant Public Printer
BEP	Bureau of Engraving and Printing
BIA	Binding Industries of America
BPA	Blanket Purchase Agreement
BTS	Bureau of Transportation Statistics
BUDCALL	Budget Call
CBD	Commerce Business Daily
CEO	Chief Executive Officer
CFO	Chief Financial Officer
CFR	Code of Federal Regulations
CGI	Common Gateway Interface
COTS	Commercial Off-the-Shelf
CP&B	Congressional Printing & Binding
CPA	Certified Public Accountant
CPMD	Congressional Print Management Division
CTP	Computer-to-Plate
CPR	Cardiopulmonary Resuscitation
CTU	Columbia Typographical Union
CY	Calendar Year
DAPS	Defense Automated Printing Service
DARD	Departmental Account Representative Division
DBOF	Defense Business Operating Fund
DCB	Documents Control Branch
DIT	Director of Information Technology
DITS	Digital Information Technology Support (Group)
DLA	Defense Logistics Agency
DNS	Domain Name Services
DSS	Decision Support System
DTP	Desktop Publishing
EEO	Equal Employment Opportunity
EIDS	Office of Electronic Information Dissemination Services
EIS	Executive Information System
EJPS	Estimating and Jacket Preparation Section

EOB	Employees on Board
EPD	Electronic and Photocomposition Division
ESD	Electronic Systems Development (Division)
ESOP	Employee Stock Ownership Plan
EST	Eastern Standard Time
FAA	Federal Aviation Administration
FAR	Federal Acquisition Regulations
FLDP	Federal Depository Library Program
FOP	Fraternal Order of Police
FR	Federal Register
FTE	Full Time Equivalent
FY	Fiscal Year
GAO	General Accounting Office
GBL	Government Billing of Lading
GCIU	Graphic Communications International Union
GILS	Government Information Locator Service
GPO	Government Printing Office
GPRA	Government Performance Results Act
GS	General Schedule
GSA	General Services Administration
GSD	Graphic Systems Division
HR	Human Resources
HRIS	Human Resources Information System
I/T	Information Technology
IAM	International Association of Machinists and Aerospace Workers
IBEW	International Brotherhood of Electrical Workers
IDIQ	Indefinite Delivery/Indefinite Quantity
IFPEP	Institute for Federal Printing and Electronic Publishing
IPS	Integrated Processing System
IPO	Independent Public Offering
IRS	Internal Revenue Service
ISSA	Inter-Service Support Agreement
ITA	International Thermographers Association
ITMRA	Information Technology Management Reform Act
IV&V	Independent Verification and Validation
JBW	Journeyman Bindery Worker
JCP	Joint Committee on Printing
JCU	Joint Council of Unions
JIT	Just in Time (inventory system)
KSA	Knowledge, Skills, and Abilities
LAN	Local Area Network
LPS	Library Programs Service
MIS	Management Information System
MMS	Materials Management Service
NAPL	National Association of Printers and Lithographers

NPR	National Performance Review
NRC	Nuclear Regulatory Commission
NTIS	National Technical Information Service
OAS	Office of Administrative Support
OFPP	Office of Federal Procurement Policy
OIRM	Office of Information Resource Management
OJT	On the Job Training
OMB	Office of Management and Budget
OPM	Office of Personnel Management
OWCP	Occupational Worker Compensation Program
PCCS	Printing Cost Calculation System
PD	Production Department
PDF	Portable Document Format
PEPS	Production Planning and Scheduling Committee
PG	Printing Grade
PIA	Printing Industries of America
PICS	Procurement Information Control System
PMS	Product Management System
POS	Point-of-Sale
PPD	Printing Procurement Department
PPR	Printing Procurement Regulations
PPW	Printing Plant Worker
PROBE	Production Operations Budgeting and Expenditures
QA	Quality Assurance
QCTD	Quality Control and Technical Department
R&I	Rates and Investigations
RDBMS	Rational Database Management System
RPPO	Regional Printing Procurement Office
RPS	Roadway Packaging System
S&E	Salaries and Expense
SGML	Standard Generalized Markup Language
SIGCAT	Special Interest Group for CD-ROM Applications and Technology
SMD	Sales Management Division
SMWIU	Sheet Metal Workers ?? Union
SPUR	Small Purchase Quotation System
SuDocs	Superintendent of Documents
SWOT	Strengths, Weaknesses, Opportunities, and Threats
TAISS	Telecommunications and Automated Information System Security
TQM	Total Quality Management
U.S.C.	United States Code
UB of C&J	United Brotherhood of Carpenters and Joiners of America
UPS	United Parcel Service
USGS	U.S. Geological Survey
USPS	U.S. Postal Service
WAIS	Wide Area Information Server

WIP Work-in-Progress



United States Government Printing Office
Washington, DC 20401

OFFICE OF THE PUBLIC PRINTER

April 29, 1998

Ms. Joyce C. Doria
Vice President
Booz-Allen & Hamilton, Inc.
8283 Greensboro Drive
McLean, VA 22102-3838

Dear Ms. Doria:

Thank you for providing us the opportunity to review and comment on the draft final report, *Management Audit of the Government Printing Office* (April 15, 1998).

Report Affirms Continued Role for GPO. House Report 105-254, accompanying H.R. 2209, the Legislative Branch Appropriations Act for Fiscal Year 1998, directed the General Accounting Office (GAO) to produce an "objective evaluation" of GPO's documents sales program, printing procurement program, in-house production operations, personnel management activities, financial systems, and information technology programs (H. Rpt. 105-254, p. 33). The GAO was specifically instructed that its work "should not be encumbered by presupposing that GPO's current operations... cannot be changed" (H. Rpt. 105-254, p. 34). In view of this charge, I am pleased that the independent review performed by Booz-Allen & Hamilton, Inc., affirms a continued positive role for GPO in the Federal Government in the production, procurement, and dissemination of Government information products.

Booz-Allen & Hamilton, Inc., found strong support in Congress for GPO's in-house production operations for congressional printing, stating that GPO's production area "consistently meets a demanding congressional production schedule" (p. 4-17) and that "GPO effectively satisfies its priority congressional customers and meets the variable demands and outputs requested by Congress" (p. ES-8). The report further states that GPO's "production functions are geared toward rapid and consistent turnout of congressional products" (p. 4-17) and are "flexible and responsive to changing congressional needs" (p. 4-17). In addition, it states that GPO has "developed strong and cordial relationships with their contacts within congressional organizations and offices" (p. 4-17) and that GPO's "communication with the congressional customer is frequent and regular" (p. 4-17). These are highly positive indicators of GPO's performance in service of Congress, our primary mission.

With respect to GPO's statutory mission to provide printing for executive branch agencies, the auditors found "universal support" (p. 1-7) among the agencies for our printing procurement program. The final draft report says "these agencies viewed this service that GPO provides as an example of 'government at its best,' and none of them felt that they wanted or could do this function better than GPO" (p. 1-7).

We are disappointed, however, that other positive statements concerning printing procurement which were presented to us in the March 18, 1998, project review briefing are not contained in the draft final report. These include the finding that "the Printing Procurement Department is dedicated to customer service and performs many value-added services which are transparent to their customers" (Project Review Briefing Document, p. 5-9), and the statement that "for some time now, GPO has been employing contracting techniques that have recently become recognized as best practices through the Government" (Project Review Briefing Document, p. 5-17). Among other things, the project review originally stated that "long before the use of past performance in award decisions became a best practice, GPO was evaluating and collecting data on vendor quality and contract performance" (Project Review Briefing Document, p. 5-17). It also stated that "GPO's term contract provides ordering features which the rest of the Government began to allow only within the last several years" (Project Review Briefing Document, p. 5-17). I urge you to include this information in the final report.

Concerning GPO's mission to disseminate Government information, the draft final report says GPO's depository library program "is well managed, provides a valuable public service, and is respected by the library community" (p. 2-52). Booz-Allen & Hamilton, Inc., found strong support for GPO to make an increasing amount of Government information available electronically, free of charge, over the Internet and praised the success of *GPO Access* (p. 2-32, p. 1-7). The draft final report says *GPO Access* is "one of the Federal Government's largest and most active web sites" (p. ES-15) and suggests that GPO seek additional funds from Congress to expand this program (p. 2-32).

The final draft report notes other positive aspects of GPO. It says "GPO has successfully implemented new IT [information technology] capabilities in many parts of the organization" (p. 7-2). In GPO's production area, it says "production has established important information access and dissemination systems and capabilities" (p. 4-13) and observes that "the Production Department is implementing state-of-the-art printing technology, computer-to-plate (CTP) to improve quality and throughput and reduce operating costs" (p. 4-16).

In GPO's financial management area, the report says that "GPO has been a leader in providing Congress accrual-based accounting and financial statements" (p. 6-3). This service, which GPO has been providing since 1951, was only recently required of all other Federal agencies by the Chief Financial Officers Act of 1990. The March 18, 1998, project review briefing stated "GPO has long-standing experience with business-oriented accounting systems that other Federal agencies are just beginning to adopt" (Project Review Briefing Document, p. 4-3). I urge you to include this information in the final report. The draft final report also notes "the high level of subject matter expertise" in GPO's budget and accounting areas (pp. 6-7, 6-18).

Overall, these comments signify a continued need for GPO operations and affirm GPO's performance of mission-critical responsibilities.

Procurement of the *Congressional Record*. Booz-Allen & Hamilton, Inc., cursorily reviewed the feasibility of privatizing the production of the *Congressional Record*. It found interest among the few private sector printers surveyed but was inconclusive on any savings and suggested further study would be required.¹ Most importantly, it "found little support among congressional staff for relinquishing control of the in-plant production capability of GPO" (p. 4-88).

Based on long experience with Government printing, I have serious concerns about whether any savings can be achieved by procuring congressional printing. I also have concerns about the level of control that could be retained over printing that is essential to the legislative process if it is commercially procured. I testified at length on legislative proposals to privatize congressional printing during the 104th Congress. As I stated at that time, privatizing congressional printing would have a strong potential for leading to increased costs and compromising Congress's control over its printing. Also testifying before Congress on this subject were two former Public Printers, one a Republican appointee and the other a Democratic appointee. Neither agreed that privatizing the printing GPO performs for Congress would generate savings.

If Congress decides to pursue this issue again, the overriding question to be addressed is the desirability of contracting out printing and other information product needs that are essential to the conduct of the Nation's constitutionally-mandated legislative business. Within the context of history, such a move would represent less a movement toward reform than a revisitation of the past, when congressional printing was the exclusive province of private printers. The record shows that contractors frequently failed to perform on time or even to complete the work, and they generated enormous costs. Congress remedied these problems by creating GPO in close physical proximity and under close congressional scrutiny.

As the draft final report notes, strong consideration must be given to the "numerous qualitative and/or service-level impacts to Congress [resulting from contracting out the production of the *Congressional Record*] as they would likely lose some of the current flexibility they enjoy by having dedicated print facilities within a few blocks of Capitol Hill" (p. 4-88). GPO has taken a variety of measures, including equipment backups, personnel contingency plans, and paper storage, to ensure that congressional work is delivered on time, and it is prepared to work under any circumstances. In November 1995, and at the specific request of the Senate Majority Leader and the Speaker of the House of Representatives, GPO kept its production staff on duty during the Government-wide budget shutdown to support Congress's constitutionally-mandated functions. Most Government contractors were forced to cease operations during this period due to lack of funding authority to continue operations. These factors must be weighed with great care in analyzing the privatization of congressional printing.

Documents Sales is a Governmental Function. I strongly disagree with the finding by Booz-Allen & Hamilton, Inc., that the Superintendent of Documents' Sales Program could be privatized. As stated in the draft final report itself, the specifications for the audit called for an evaluation of "the appropriateness and adequacy of the policies and procedures involved in the

management of publication inventories" (p. 1-1, emphasis added), not a review of whether the Sales Program is an inherently governmental function. In my view, in reaching this finding the audit not only exceeded its intended scope but produced an opinion that is not sustainable.

The basis used for reaching the assessment that the Sales Program is not an inherently governmental function—an interpretation of a provision in Office of Management and Budget (OMB) Circular No. A-76—is insufficient when balanced against the statutory provisions of the Sales Program or even against other OMB Circulars. Circular No. A-25, for example, provides for fees assessed for the sale or use of Government property or resources, such as Government publications.

Title 44 clearly authorizes and requires the Superintendent of Documents to sell publications, an authority dating to the Printing Act of 1895. Section 1702 of Title 44 states that "the Superintendent of Documents...shall receive and sell [documents] under this section" and must turn over revenues received to the Public Printer. Section 1705 states that "the Public Printer shall print additional copies of a Government publication...required for sale to the public by the Superintendent of Documents." Congress's interest in the Superintendent of Documents' Sales Program extends to the price at which Government documents may be sold and the value of discounts provided to book dealers (section 1708), and to the requirement that documents not needed by the departments "shall be turned over to the Superintendent of Documents annually for distribution or sale" (section 1720). When Congress recently enacted the GPO Electronic Information Access Enhancement Act of 1993 (P.L. 103-40), it included a statutory provision authorizing the Superintendent of Documents to charge for the online dissemination of certain products based on the Superintendent's authority to sell Government publications (this information is now disseminated free of charge to meet strong public expectations for free access to Internet-based materials). Contrary to the statements provided in the draft final report, the Superintendent of Documents Sales Program is firmly grounded in both statute and a century of administrative practice and service to the public.

GPO is one of a several Government agencies authorized to perform the retail sale of publications and other materials, including the U.S. Mint, the U.S. Geological Survey, the National Technical Information Service of the Department of Commerce, the U.S. Postal Service, the Library of Congress, the National Archives, and the Smithsonian Institution. If Booz-Allen & Hamilton, Inc., wants to raise the question of whether a government organization should operate a retail sales activity, its review should be applied equally to all of these organizations.

The draft final report asserts that "disseminating government information to the public is an inherent government responsibility. We found no evidence that people believe otherwise" (p. 1-7). These statements apply equally to the Sales Program and the Federal Depository Library Program (FDLP). Historically, the Sales Program and the FDLP have been viewed as complementary rather than conflicting. The FDLP provides no-fee public access to Government publications as defined by section 1902 of Title 44, while the Sales Program provides the public with a reasonably-priced means to obtain personal copies of a broad spectrum of Government publications on a cost-recovery basis.

Indeed, the Sales Program provides a remedy to the general failure of the marketplace to offer Government publications for sale. Congress has recognized and even encouraged the distribution of Government publications through private sector mechanisms, providing in section 1708 of Title 44 a discount for bookdealers and in section 505 a means for the sale of reproducible to private sector purchasers. However, a private sector source for the range of titles offered by the Sales Program has never developed. Absent a private sector source, the Government has made the Sales Program available as a public service.

The value of the Sales Program lies in its being the official source for a broad range of Government titles. Many of these titles are for limited interest publications that would not meet the qualifications for inclusion in commercial sales programs. If the Sales Program were privatized the public would simply lose access to these publications. In its role as the official source of Government sales titles, the Sales Program now maintains a permanent inventory of certain "core" publications of the Government with enduring historical and educational value. The inadvertent disposal of some of these titles two years ago, including copies of *The Senate, 1789-1989*, led to the implementation of the concept of "indefinite availability" for these titles following a GAO review of the matter (GAO, *Government Printing Office: Information on September 1996 Major Inventory Reduction*, GAO/GGD-97-177, September 1997). In this review of Sales Program management practices, the GAO did not suggest that the Program is not an inherently governmental function. Neither did the GAO propose that the private sector should be made responsible for ensuring the indefinite availability of copies of *The Senate, 1789-1989* and similar publications.

Absent a comprehensive market-based alternative, therefore, the Sales Program—including its nationwide network of bookstores providing local access to Government publications—continues to be necessary as a visible, convenient, public service. This service is funded entirely by revenues earned from the sale of publications, not taxpayer dollars. Since 1982, it has recovered its costs in every year but one (1996), and in that year actions were taken to restore the program to a sound financial basis.

I also take issue with statements made in the report which seem to attribute the decline in sales of Government publications solely to the free availability of information on the Internet. This is only one factor affecting the performance of the Sales Program. Cutbacks in agency publishing budgets and competition from private sector reprinters and other Government sales programs are contributory factors to the decline of Sales revenue. The decline in subscriptions to the Commerce Business Daily (CBD) predates its availability via the Internet by almost a decade. Reductions in the Defense budget (a prime source of Government contracting dollars) and widespread dissemination of CBD data to many private sector vendors that repackage and sell it in a variety of formats affected CBD sales. Federal Register subscriptions were also declining prior to its online availability via *GPO Access*.

Apart from these matters, the recommendations by Booz-Allen & Hamilton, Inc., to improve the operation of the Sales Program are well-taken. The public has the right to expect that Sales Program services are provided as efficiently and as economically as possible, with the foremost regard for customer service. We outsource Sales Program functions, such as processing payments through the Mellon Bank, when the outsourcing proves economical and efficient. In

addition, as the draft final report notes, we are also currently making internal improvements that will "offer the potential for dramatic improvements in order processing and inventory management" (p. 2-24). We will use the draft final report recommendations to guide us in making improvements to the Program wherever we deem them to be necessary and feasible.

General Review of Draft Report Recommendations. The draft report contains a number of specific recommendations to improve the efficiency and effectiveness of GPO's programs. These include recommendations for developing a strategic planning program, providing smaller spans of control for top management, improving customer communications and marketing, capitalizing on opportunities to increase revenues and reduce costs in printing procurement, improving internal communications and management information systems, expanding training opportunities agency-wide, and accelerating efforts to prepare computer systems for year 2000. GPO management is currently reviewing all of the recommendations and will take action to address them as it deems necessary.

We are particularly sensitive to the need to ensure the readiness of GPO's computer systems for the year 2000. We are working closely with the GAO in this matter and are confident that we will be fully prepared. We will utilize the recommendations made by the draft final report to help guide us in making these preparations.

GPO's printing procurement operation is one of the Government's most successful procurement activities. The program makes effective use of available capacity in the private sector, provides a full range of contracting services to customer agencies, secures the lowest possible prices through full and open competition, generates jobs and tax revenues nationwide, and obtains millions in savings for the taxpayers each year. To the extent that this program can be made more efficient and effective on behalf of our customer agencies and the taxpayers, without compromising the level of service we provide and the policy goals that the program is designed to meet (and within available resource levels), we will utilize the recommendations to help guide us in making improvements.

Some of the draft final report's recommendations would require major changes in standing policy in order to be implemented. For example, the notion that printing procurement jobs below a certain dollar level could be non-competitively procured in the interest of efficiency contravenes existing policy to provide full and open competition on all printing procurement orders. Similarly, the recommendation to add an additional shipping charge to GPO's publication sales prices when standard postage is already included would require a substantive change in pricing policy.

Other recommendations have been reviewed before and rejected. With respect to the recommendation to implement a just-in-time (JIT) inventory system, prior analyses have disclosed that it would reduce competition, increase costs, fail to provide for items with long lead times, and restrict our ability to deal with emergency needs. We have previously considered and rejected recommendations to consolidate Engineering Service and Materials Management Service functions with the Production Department. These organizations, which provide services GPO-wide, function more effectively as separate organizations providing services on a charge-back basis to recipient organizations.

We also have previously reviewed and rejected the consolidation of all GPO I/T functions because it would mix the management (and job skills) of dedicated production I/T systems with business support systems having a GPO-wide basis. However, while a consolidated approach still presents significant problems, it is also clear that there are increasing similarities in I/T solutions for both our production and business support systems. There are increasing opportunities for cross-functional operations in these areas that can be utilized.

I agree that GPO needs to ensure that its internal control systems are functioning effectively and will take the necessary steps to ensure that they are. However, I am concerned that some of the recommendations in this area, such as the one regarding internal controls over billing, are overdrawn and not based on quantitative tests of billing data. Similarly, the identification of opportunities for human error in the acquisition, classification, ordering, and production processes in GPO's Library Programs Service did not carry with it a quantification of the actual occurrences of error. We will monitor current internal control systems and make changes when necessary. Financial controls are also periodically tested in audits of our financial systems.

The recommendations concerning information management and communications with Congress, executive branch agencies, publications customers, and GPO's employees will be useful to us. Effective communications with GPO's customers are essential to our status as a service agency, and to our ability to market our products and services in the increasingly competitive Government information product arena. GPO's employees also have the right to expect full and frequent communications from management. The recommendations on improving communications across functional areas and using cross-functional teams to address specific tasks will also be useful. GPO has had notable successes in this area—in the implementation of *GPO Access*, the development of the new *Commerce Business Daily*, and in other projects—that have demonstrated the value and utility of this approach.

Audit Indicates Need for New Investment. Many of the specific recommendations address a substantial need for investment to offset the effects of reduced spending and downsizing pursued by GPO in recent years.

Following congressional direction, GPO has downsized significantly in the past 5 years, reducing its workforce by 25 percent. Congressional direction for this was provided through reductions in GPO's annual statutory ceiling on full-time equivalent employment (FTE's). A policy of cost reductions has also been pursued in response to a pattern of declining congressional appropriations (appropriations declined by 7 percent from 1993 to 1998) and to offset reductions in agency work stemming from agency budget reductions, non-compliance with Title 44 requirements, and the transition to increased electronics. Part of GPO's cost reduction policy stemmed from direction provided by the Joint Committee on Printing (JCP) to hold GPO's printing rates at stable levels over the 1990-96 period. This direction was incorporated into two resolutions in 1994, directing GPO to break even in the final quarter of fiscal year 1994 and in fiscal year 1995 without adjusting prices. In response, GPO offset rising costs of production and materials with cost cutting actions in other areas, including staffing (both at the top management and line employee level), training, travel, employee incentives, and non-essential modernization and maintenance of buildings and equipment.

Investment for the future—the kind of investment targeted by the recommendations in the final draft report—has been minimized in recent years because declining funding levels have restricted spending to essential needs. I agree that investment is necessary to ensure GPO's future effectiveness. For fiscal year 1999, I have requested that Congress remove the statutory ceiling on GPO's FTE's and allow us to manage within our own funding limitations, instead of being subjected to constant downward pressure on the ceiling from Congress. If it continues much farther, this pressure will eventually jeopardize our ability to perform even our mission-critical operations.

However, there is more that must be done to address GPO's needs for the future. I agree with the concept to ensure the appropriate level of staffing, including the use of effective recruitment strategies. I agree also with the need to increase the amount of training made available to GPO's employees. I particularly agree with the need to expand our investment in I/T GPO-wide to improve information management, productivity, and product and service offerings. However, our ability to address these recommendations is conditioned on our ability to pay for them. In an environment of reduced spending, and in view of the critical modernization needs confronting our revolving fund, we will require increased investment by Congress through appropriations in order to fully fund these recommendations. Unfortunately, the draft final report makes no recommendation directly to Congress in this regard.

GPO's Experience with Strategic Planning. Also minimized in recent years has been strategic planning, due to the continuing debate over GPO's mission. In the 1993-94 period, GPO's future was being discussed in terms framed by the "reinventing government" report of the National Performance Review. This report urged decentralizing executive branch printing authority to the agencies. In the 1995-96 period, GPO's strategic outlook was dominated by proposals to privatize its operations during the 104th Congress. At the same time, the Justice Department released an opinion claiming that the requirement to use GPO is unconstitutional because of congressional "entanglement" with GPO operations through the JCP. In the most recent period, there has been discussion of Title 44 reform involving downloading JCP responsibilities to the Public Printer to resolve the question of constitutionality and modernizing the FDLP to facilitate the transition to a more electronic future.

The continued changes in public debate about GPO have not contributed to the kind of atmosphere in which effective strategic planning involving the entire GPO organization can thrive. Indeed, in an era of scarce resources, they formed a potent argument against making a substantial investment in the development of a strategic plan that would risk being out of step with changing thinking about GPO's role in the Government. During this period, the best possible vision that could be articulated for GPO was one of downsizing and transformation to an electronic future. This vision has been communicated constantly to Congress, customer agencies, GPO employees, and other stakeholders.

I agree with the value of a strategic plan, and indeed GPO has generated a number of highly valuable planning instruments in recent years. At the strategic level, these have included the 1996 *Study to Identify Measures Necessary for a Successful Transition to a More Electronic Federal Depository Library Program*. Other plans have been issued at the tactical level,

including Production Department planning for the implementation of computer-to-plate technology and Office of Information Resources Management (OIRM) planning for migrating from mainframe legacy systems to server-based solutions with commercial off-the-shelf applications. Planning helps to guide spending decisions, prioritizes agency decisionmaking, and provides a highly valuable communications tool to GPO's stakeholders. I agree that GPO needs to reinstitute this process, particularly in view of the use of planning by other Federal agencies under the Government Performance and Results Act. Hopefully, the conclusions of Booz-Allen & Hamilton, Inc., in this draft final report will help to restore a consensus on GPO's role in Government and provide an environment conducive to effective strategic planning for this agency.

Once again, thank you for the opportunity to review and comment on this draft final report. Your findings will be useful to us in guiding GPO forward into the future.

Sincerely,


MICHAEL F. DIMARIO
Public Printer