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REPORT BY THE
Comptroller General
OF THE UNITED STATES

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**FAA Has Not Gone Far Enough
With Improvements To Its Planning
And Acquisition Processes**

In 1977 the Administrator of the Federal Aviation Administration (FAA) told a congressional subcommittee that FAA was well along with actions to correct deficiencies in its planning and acquisition processes.

However, GAO found that the planning directive FAA issued as part of these actions was not fully implemented and another directive on acquisition procedures did not provide sufficient guidance. This resulted in FAA having no comprehensive planning process and a weak acquisition management process and has made the System Requirements Group-established as part of the improvements-ineffective.

Without an agencywide comprehensive planning process and a sound acquisition process, the validity of FAA's budgetary process becomes questionable, including how effectively it uses resources. This report recommends ways the Department of Transportation and FAA can improve these processes.



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COMPTROLLER GENERAL OF THE UNITED STATES

WASHINGTON, D.C. 20548

B-198086

The Honorable John L. Burton
Chairman, Subcommittee on Government
Activities and Transportation
Committee on Government Operations
House of Representatives

HS201503

Dear Mr. Chairman:

This report discusses the improvements that are still needed in the Federal Aviation Administration's (FAA's) agencywide planning and acquisition processes. We found that while the concepts set forth in the FAA directives were sound and represented improvement over what existed in the past, the agencywide planning directive was not fully implemented and the acquisition directive did not provide sufficient guidance and needs to be revised.

As arranged with your office, we plan no further distribution of this report until 10 days from the date of the report. At that time we will send copies to interested parties and make copies available to others upon request.

Sincerely yours,

Comptroller General
of the United States

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AGC00030



D I G E S T

In November 1977 the Administrator of the Federal Aviation Administration (FAA) advised the House Subcommittee on Government Activities and Transportation, Committee on Government Operations, that the agency was well along toward comprehensively overhauling its acquisition management process. He said that directives for planning and system acquisition management processes were being implemented and a high-level management panel--the System Requirements Group--had been established to monitor the system acquisition process. FAA had taken these actions to correct deficiencies in its agencywide planning and system acquisition management processes.

GAO's review showed that while the concepts set forth in the directives were sound and represented an improvement over what existed, the agencywide planning directive was not fully implemented and the acquisition directive did not provide sufficient guidance and needed to be revised.

GAO also found that:

- The policy, mission analysis, long-range planning, and program performance and evaluation areas of FAA's agencywide planning directive have not been implemented. (See ch. 2.)
- FAA's system acquisition management directive did not provide sufficient guidance, was not always followed, and did not conform to either the Department of Transportation's acquisition directives or to the Office of Management and Budget's (OMB's) Circular A-109. (See ch. 3.)

- FAA's management concept limited the role of the program manager. (See pp. 9 to 11.)
- The System Requirements Group has been ineffective because of its exclusion from such significant functions as planning; agency requirements reviews; and decisions to approve, delay, or discontinue programs.
- The System Requirements Group has no written charter identifying responsibilities, authority, and tenure of office. (See ch. 4.)
- Requirements set forth in OMB's Circular A-109 continued to be rejected by the Department of Transportation and FAA. (See pp. 12 to 14.)

Although FAA's directives were established to correct deficiencies in its agencywide planning and acquisition processes, internal reports of FAA and the Department of Transportation issued since then show the same deficiencies continued to exist.

In three recent reports GAO has pointed out FAA's failure to follow sound planning and acquisition practices 1/ and improvements needed in its safety planning and program evaluation processes. 2/

Without an agencywide comprehensive planning process and a sound system acquisition management process, the validity of FAA's budgetary process can be questioned, including how effectively it uses resources, since its directives require that such processes be completed before its budget submission.

GAO recommends that the Secretary of Transportation require the FAA Administrator to:

1/PSAD-79-94, August 8, 1979, and PSAD-80-1, October 31, 1979.

2/CED-80-66, February 29, 1980.

- Implement FAA's agencywide planning directive emphasizing policy, mission analysis, long-range planning, and program performance and evaluation.
- Replace or revise FAA's system acquisition management directive to prescribe a simplified acquisition process, a stronger role for the program manager, and a restructured system acquisition management process to conform to requirements in the Department of Transportation's acquisition directives relative to identifying programs and the prescribed reporting of them and to meet OMB's Circular A-109.
- Improve the management of the acquisition process by (1) making the System Requirements Group a part of FAA's planning process so programs that should come under its review and evaluation are identified early, (2) assuring that the System Requirements Group's program reviews coincide with key decision points of the system acquisition process for selected programs, (3) giving the System Requirements Group the authority to approve, delay, or discontinue a program subject to the approval of the Administrator, and (4) providing each member of the System Requirements Group with a written charter setting forth the responsibilities, authority, and tenure of office.

Some of FAA's problems can be attributed to the Department of Transportation's acquisition requirements. GAO has previously made recommendations to the Secretary concerning compliance with OMB Circular A-109 which, if adopted, should assist in improving the Department's and, consequently, FAA's agencywide planning and system acquisition management processes.

MATTERS FOR CONSIDERATION

The House Subcommittee on Government Activities and Transportation, Committee on Government Operations, should require FAA to submit a detailed report of the definitive steps being taken to further improve its planning and acquisition processes.

AGENCY COMMENTS

The Department of Transportation, in responding to the GAO draft report (see app. I) stated that (1) FAA will review its planning directive by mid-1980, which will include consideration of GAO's recommendation to fully implement FAA's agencywide planning directive, (2) FAA will revise its System Acquisition Management directive by September 30, 1980, taking into account FAA's experience and the matters discussed in the GAO report, and (3) the Department's order, "Major Systems Acquisition Review and Approval," will be revised within the next 6 months and coordinated with OMB. It stated that the areas being considered for revision are mission analysis/planning, solicitation of alternative systems design concepts, and the role of the program manager/program manager's charter.

The Department of Transportation stated that it did not concur with the conclusions and recommendations contained in two reports ^{1/} identified in this report as examples of FAA's not following sound planning and acquisition practices, including compliance with the requirements of OMB's Circular A-109.

GAO has fully considered the Department of Transportation's objections to the conclusions or recommendations included in the two reports. Since Transportation did not provide additional information on its objections, GAO believes the conclusions or recommendations remain valid.

^{1/}"Unnecessary Procurement of an Aviation Weather and Notice to Airmen System by FAA," (PSAD-79-94, Aug. 8, 1979) and "FAA's Program to Automate Flight Service Stations: Status and Needs," (PSAD-80-1, Oct. 31, 1979).

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ABBREVIATIONS

DOT	Department of Transportation
FAA	Federal Aviation Administration
GAO	General Accounting Office
OMB	Office of Management and Budget
SAM	System Acquisition Management
SRG	System Requirements Group

CHAPTER 1

BACKGROUND

In November 1977 the Administrator of the Federal Aviation Administration (FAA) advised the House Subcommittee on Government Activities and Transportation, Committee on Government Operations, that the agency was well along toward comprehensively overhauling its acquisition management process. He stated that implementation of improvements in the areas of planning and the acquisition management process began in March 1977 with the publication of FAA Order 1800.13A, "Planning and Resource Allocation" and FAA Order 1810.1, "System Acquisition Management." FAA took this action to establish procedures to correct deficiencies in its agencywide planning and system acquisition management processes.

The subcommittee was told that FAA's Order 1800.13A covers the broad spectrum of all agency resources, appropriations, and activities from long-range plans through multiyear programming, current year budget submissions, budget execution, and evaluation of completed programs. The directive also addressed the analysis, evaluation, justification, controls, and procedures necessary to develop and execute programs in support of FAA and Department of Transportation (DOT) missions and objectives. This process was to have been tied to the System Acquisition Management (SAM) process through the mandate that certain activities in the process be accomplished before major system acquisition programs can move forward through the planning process.

The second order provided, among other things, for establishing a System Requirements Group (SRG) which reports directly to the Administrator. SRG was responsible for the review and evaluation of potential requirements for those major acquisitions designated for monitoring from concept formulation through transition and implementation as an operational system. Further, the Administrator stated that the SRG membership was designed to reflect the views of the major operational offices within the agency. SRG was to operate under a firm rule that commitment to major system hardware decisions would occur only after SRG evaluated the mission needs, assessed potential benefits, and considered alternative approaches.

SCOPE

Our review, conducted at FAA Headquarters, Washington, D.C., included (1) an evaluation of the directives developed

to support FAA's agencywide planning and the SAM processes, (2) an evaluation of the SRG activities in monitoring major system programs under the acquisition process, and (3) a review of various major programs to determine what impact the revised acquisition process had on their management.

We considered various reports of prior reviews of FAA acquisition systems, including our reports on "Issues and Management Problems in Developing An Improved Air-Traffic-Control System," (PSAD-77-13, Dec. 15, 1976) and "Implementation of Major System Acquisition Process--A-109--Is Inconsistent Among Civil Agencies," (PSAD-79-89, Aug. 14, 1979). We also considered our recent report on "How To Improve The Federal Aviation Administration's Ability To Deal With Safety Hazards," (CED-80-66, Feb. 29, 1980).

CHAPTER 2

ABSENCE OF AGENCYWIDE PLANNING

In November 1977, the FAA Administrator advised the House Subcommittee on Government Activities and Transportation that improvements in its planning processes were being made with the implementation of FAA Order 1800.13A. Our review showed, however, that the directive was not implemented in the areas of policy, mission analysis, long-range planning, and program performance and evaluation.

The absence of an agencywide comprehensive planning process has required FAA to rely on its budget process to fulfill its planning responsibilities. The budget process, however, is only one part of the planning process and does not go into the depth intended by FAA Order 1800.13A. In February 1980, we reported ^{1/} that FAA, as early as August 1977, and the Department of Transportation, as recently as April 1979, were aware of the absence of a comprehensive planning process. Also, our February 1980 report discussed the absence of program evaluations.

In our opinion, the planning process followed by FAA relied heavily on identifying equipment that was needed at the moment rather than on required operational capabilities which would have provided a basis for selecting the best of competing alternatives using cost-benefit analyses. While we have been advised that FAA has taken action to improve its planning process and program evaluations, we believe that the corrective measures taken still fall short of obtaining an agencywide comprehensive planning process and a program performance and evaluation process as envisioned by the FAA order.

We believe the continued absence of an agencywide comprehensive planning process and the exclusion of a program performance and evaluation process could raise some questions of the validity of FAA's budgetary process, including its effective use of resources.

^{1/}"How To Improve the Federal Aviation Administration's Ability to Deal with Safety Hazards," (CED-80-66, Feb. 29, 1980).

PLANNING DIRECTIVE
NOT FULLY IMPLEMENTED

According to FAA, the basic purpose of its planning process was to improve the decisionmaking process regarding the allocation of resources. The planning process consisted of four principal phases: (1) aviation policy and long-range planning, (2) multiyear programing, (3) annual budget process, and (4) program performance and evaluation. Policy formulation and long-range planning, including mission analysis, which were to be the starting points for developing the other phases and program performance and evaluation were never implemented agencywide. Also, a review board responsible for the adequacy of multiyear programing, issues, analysis, and evaluation was discontinued in 1977.

Lack of commitment and participation
in the planning process

Our February 29, 1980, report on aviation safety stated that in August 1977 a study was completed of FAA's planning process. FAA's Office of Aviation System Plans which performed the study found a general lack of commitment and participation in the processes spelled out in FAA Order 1800.13A. The report also stated that similar deficiencies were identified in an April 1979 report prepared by an evaluation team assigned to DOT's Office of the Assistant Secretary of Budget and Programs to review FAA's major engineering and development programs.

In response to these deficiencies, FAA stated it was actively engaged in establishing a comprehensive planning process to address safety issues and that this function had been assigned to the Office of Aviation Safety. While this is a positive step, we believe this effort falls short of meeting the agencywide comprehensive planning process envisioned by FAA Order 1800.13A. We are concerned in that other mission areas such as the efficient use of airspace, promotion of air commerce and civil aviation, and the support of national defense requirements may not be covered in the comprehensive planning process.

We were advised by the Associate Administrator for Administration that full implementation of FAA Order 1800.13A was delayed because of the turnover at the Associate Administrator for Policy and International Aviation Affairs level. In our discussions with various FAA officials, we were told that priority was given to the day-to-day requirement of maintaining safety in the skies which had priority over everything else.

The absence of an agencywide comprehensive planning process has required FAA to rely on its budget process to fulfill such responsibilities. The budget process is only one part of the planning process and does not go into the depth intended by FAA Order 1800.13A. In our opinion, the process FAA followed relied heavily on identifying equipment that it needed at the moment rather than on required operational capabilities which would provide a basis for selecting the best of competing alternatives using cost-benefit analyses. These problems were identified in one of our earlier reports. 1/ FAA Order 1800.13A was to have corrected these deficiencies, but it was never fully implemented; therefore, the deficiencies continue to exist.

As stated previously, Order 1800.13A was to work in conjunction with the SAM process; however, the absence of an agencywide comprehensive planning process, in our opinion, isolates the SAM process from the planning and budgeting processes.

Also, our latest report 2/ discusses the need for an effective agencywide program evaluation system. In responding to the contents of that report, FAA stated its Program Review Staff, Office of Associate Administrator for Administration, has responsibility for making appraisals and conducts special and independent evaluations as directed by the FAA Administrator. We are concerned that this effort also falls short of meeting the requirements set forth in FAA Order 1800.13A on program performance and evaluation.

According to the FAA order, program performance and evaluation involves the actual performance for which program planning and budgeting are preparatory, and this process produces the results which form the basis for judging how successfully the agency is meeting its basic objectives. We view this process as being a formalized agencywide reporting process, the results of which are to provide the basis upon which the agency can measure its performance against its goals and objectives. We believe, therefore, that further FAA action is required if an effective agencywide program performance and evaluation process is to be implemented as envisioned under the FAA order.

1/PSAD-77-13, Dec. 1976.

2/"How To Improve the Federal Aviation Administration's Ability to Deal With Safety Hazards," (CED-80-66, Feb. 29, 1980).

The continued absence of an agencywide comprehensive planning process and a program performance and evaluation process could raise some questions of the validity of FAA's budgetary process including its effective use of resources since in accordance with its planning directive such processes are to be completed prior to its budget submission. We believe, therefore, that FAA Order 1800.13A needs to be fully implemented agencywide as was intended in March 1977.

CHAPTER 3

SYSTEM ACQUISITION MANAGEMENT PROCESS

NEEDS STRENGTHENING

In response to improvements needed in its acquisition process FAA implemented FAA Order 1810.1, later revised as 1810.1A. Our review showed, however, that the directive did not provide sufficient guidance, did not conform to DOT acquisition requirements, was deficient in defining the role of program managers, was not being effectively evaluated to assure that it was current and viable, and was not being revised promptly to correct its weaknesses.

The acquisition process FAA followed did not adequately prescribe the procedures to be followed for acquiring major systems or the management structure for assuring the process was operating properly. This was illustrated, in part, in two of our recent reports on FAA's Aviation Weather System and the Flight Service Station Automation program in which we pointed out FAA's failure to consider all alternatives prior to a contract award, to conduct cost-benefit analyses, and to take full advantage of competition.

We believe that the absence of a sound acquisition process could raise some questions of whether FAA is effectively using its resources. Further, we believe that some of the problems FAA experienced can be attributed to DOT's acquisition directive which was not, as discussed in our August 1979 report, 1/ in full compliance with the Office of Management and Budget's (OMB's) Circular A-109.

DIRECTIVE DID NOT PROVIDE SUFFICIENT GUIDANCE

FAA issued Order 1810.1, "System Acquisition Management," in March 1977 and later revised it in March 1978 as 1810.1A to correct deficiencies in its acquisition process. The directive described the management framework and procedures that were to be followed in the acquisition of major systems. It defined major systems as those systems approved by the Administrator which (1) were critical to fulfilling agency missions, (2) entailed the allocation of relatively large resources, or (3) warranted special management attention.

1/"Implementation of Major System Acquisition Process--
A-109--Is Inconsistent Among Civil Agencies," (PSAD-79-89,
Aug. 14, 1979.)

The order also required the use of at least seven different documents in the acquisition process, but did not provide sufficient guidance as to what information should be included in each document. Several of the documents, beginning with the system requirements statement and followed by the program plan, transition plan, acquisition authorization, and implementation plan, contained much of the same information, such as the identification of the problem encountered, alternative solutions or systems evaluated and selected, benefits to be achieved, and a description of the system. Additional guidance to assist in the preparation of some documents was not formally accepted within FAA.

DOT's directive covering major systems acquisition review and approval revealed that the acquisition paper containing four key decision points was the key document to justify the system's entering the acquisition cycle. Much of the same information required in DOT's acquisition paper was also required in FAA's documents. Neither the four key decision points nor the significance of DOT's acquisition paper was discussed in the FAA directive.

Since DOT required an acquisition paper, we believe that it could replace FAA's system requirements statement, program plan, transition plan, acquisition authorization, and implementation plan documents. This would simplify the paperwork requirements of the acquisition process by reducing the number of documents that presently exist in the process and avoid the unnecessary duplication of information. If additional information was required because of a unique program requirement, such data could be provided as an attachment to the acquisition paper.

FAA officials said that due to the length of the acquisition cycle, no single document could satisfy the need for the procurement decisions that had to be made. We find this hard to believe since none of the information that is presently supplied would be eliminated and pertinent unique data could be added to the document if needed.

As another example of insufficient guidance provided by the FAA directive, DOT's Orders 4200.14A (Major Systems Acquisition Review and Approval) and 4200.9A (Acquisition Review and Approval) set forth specific criteria that must be followed in reporting programs to DOT. However, FAA's acquisition directive did not even refer to the criteria set forth in DOT's directives.

In reviewing FAA's procedures, we found that the following programs met DOT's criteria but were not included in the reporting process.

<u>Program</u>	<u>Estimated total cost</u>
Voice Switching and Control System	Over \$400 million
Surface Weather Automation	\$120 to \$200 million
Airport Surface Radar	\$39 million
Vortex Advisory System	\$31 million

We believe that FAA should revise its acquisition directive to meet DOT's criteria for identifying programs and the prescribed reporting of them.

ROLE OF THE PROGRAM MANAGER
NEEDS TO BE STRENGTHENED

According to FAA Order 1810.1A, a full-time program manager was normally to be designated for each major system acquisition by the service director responsible for overall program management of the development and implementation for that program under the SAM process. Program manager assignments were required to be documented in written charters which identified the resources being provided, guidance available, and schedules and goals to be met; defined the program manager's authority and accountability; and prescribed how the system being acquired was to be managed and what authority relationships existed among the various FAA organizations. Charters were to be clear enough so that management could measure progress against plans and objectives.

We found, however, that (1) the FAA program managers' charters either did not adhere to the provisions set forth in the directive or were nonexistent, (2) most program managers were devoting only part of their time to the program, and (3) all were required, due to limited staffs, to obtain services outside their parent organizations which limited their control over much of the work. Further, program managers have received no training to give them a better understanding of how the SAM process was to work and their role in the SAM process.

Program manager charters are not adequate

Eleven FAA programs have been designated as major programs, and FAA has assigned each a program manager. Written charters did not exist for five programs, while the six that have been prepared lacked sufficient information for FAA management to measure program progress. Some of the deficient

areas were an absence of program goals and objectives, failure to identify the office tenure of the program manager, and a lack of information on the relationships the programs have to other programs. Three of the charters did not indicate how much time the program manager was to devote to the program. Concerning office tenure, we were advised that new program managers were appointed when a program entered the implementation phase. FAA's directive was not clear in this matter, and we are concerned about the wisdom of such an action because the benefits of any knowledge obtained by the program manager in the development phase may be nullified by the new appointment.

Program manager authority is limited

Nowhere was it spelled out to whom the program manager was responsible. Most of them were branch chiefs who had one or two persons assisting them in managing the program, and much of the required work must be coordinated with other FAA organizations.

When work was to be done outside the program manager's organization, he was responsible to see that it was completed, but he had no authority over the personnel in those organizations. Therefore, many tasks were not completed in a timely manner. We saw evidence of this problem on both the Voice Switching and Control System and Beacon-Based Collision Avoidance System programs. In both cases, the system requirements statement (the document which was to validate system requirements) was to be prepared by FAA organizational elements other than that of the program managers. As of November 1979, the milestone date for the system requirements statement for the Voice Switching and Control System program had slipped 9 months. Also, no system requirements statement had yet been approved for the Beacon-Based Collision Avoidance System program, although that program had been under the SAM process since October 1978.

Because of a lack of authority, program managers were unable to exert any pressure on other organizational elements to complete tasks in accordance with the milestones. Unless an event occurred which focused on a particular program, a program tended to lose its significance. The Beacon-Based Collision Avoidance System program was a good example. It regained prominence in FAA after the San Diego airplane accident in September 1978.

We were also advised by an FAA official that the service directors and not the program managers controlled the programs. This was not intended in the directive. We believe

FAA should take steps necessary to give the project manager the authority needed to adequately carry out their responsibilities.

Need for formal training
of program managers

In November 1977 FAA advised the House Subcommittee on Government Activities and Transportation that it had incorporated material on the operation and need for the SAM process into its Lawton Management Training School course. At the time of our review, however, no program manager for the major programs had attended the course. We understood FAA had a seminar in February 1980 on the SAM process for its program managers. We believe that this seminar was a step in the right direction, and FAA should be in a better position to decide whether more formal training is necessary.

APPRAISAL OF THE SAM
PROCESS IS INADEQUATE

FAA Order 1810.1A required an appraisal of the SAM process to assure its currency and viability. This responsibility was assigned to the Office of the Associate Administrator for Administration. To date, only one written evaluation was provided to the Administrator, although we were told other oral briefings were given on the subject.

On December 20, 1977, the Administrator was advised by the Associate Administrator for Administration that it was too early to fully assess the effectiveness of the SAM process; however, some areas were in need of attention. These areas were: (1) Order 1810.1 required updating to reflect recent changes, (2) charters for program managers were to be prepared, (3) the requirements tracking system was to be implemented, and (4) consideration was being given for obtaining program status feedback from independent sources. This was the first and last written evaluation of the SAM process provided to the Administrator.

According to the Chief, Program Review Staff, other evaluations were made. He said that he found no need for additional written evaluations since he found no major problems with the SAM process. He also said that continual evaluations were made of the SAM process and that he briefed various Associate Administrators informally, as needed. The Associate Administrator for Administration said that an evaluation was currently in process concerning the need for any revisions to FAA Order 1810.1A.

We believe that the deficiencies as previously discussed, warranted being brought to the attention of the Administrator of FAA. The fact that such deficiencies were not brought to his attention further delays action by FAA to correct the deficiencies and improve the planning and acquisition processes.

REVISION OF FAA ORDER 1810.1A
SHOULD BE GIVEN PRIORITY ATTENTION

The evaluation previously cited by the Associate Administrator for Administration was done to determine the extent Order 1810.1A should be revised in light of DOT Order 4200.14A and FAA's implementing Order 4405.13, "Major Systems Acquisition Review and Approval," dated September 11, 1979. He stated that his deputy was reviewing the document to determine what changes were necessary.

Although we found nothing in writing to identify exactly what effort was to be given to revising the Order 1810.1A, it appeared that this effort lacked coordination. One group indicated that the revision could be as much as consolidation of the document with FAA Order 4405.13. However, a member of another group said that three changes were being considered: (1) participation of regional staff in meetings of SRG (the group's responsibilities are discussed in the next chapter), (2) bringing the implementation plan into sequence in the acquisition cycle, and (3) conforming the directive to OMB's Circular A-109 requirements.

Although the acquisition directive was to correct deficiencies in the acquisition process, the deficiencies have continued. This was further borne out, in part, in two of our recent reports. 1/ In the Aviation Weather and Notice to Airmen System report we disclosed that, in our view, FAA unnecessarily spent \$2.6 million because it had not considered all alternatives prior to a contract award. In the Flight Service Station program report, we disclosed that FAA may unnecessarily spend \$6 million because of the lack of a cost-benefit analysis. Additionally, FAA did not plan to take full advantage of competition. In each case, FAA had not followed sound planning and acquisition practices, including compliance with the requirements of OMB's Circular A-109.

1/"Unnecessary Procurement Of An Aviation Weather and Notice to Airmen System by FAA," (PSAD-79-94, Aug. 8, 1979) and "FAA's Program To Automate Flight Service Stations: Status and Needs," (PSAD-80-1, Oct. 31, 1979).

In responding to our first report, DOT stated that we failed to place the procurement and operation in proper perspective in terms of development effort and public interest. We do not believe this addressed our concern that all viable alternatives be considered prior to a contract award. Concerning the second report, DOT stated that just prior to issuance of the report, two cost-benefit studies were provided which supported the agency's position. It further stated that continued competition in the program would provide few, if any, benefits. In our opinion, the cost-benefit studies did not support the proposed expenditure of \$6 million, and we believe that further competition is necessary under the program to avoid problems of cost growth and schedule slippage.

While it appeared that FAA saw a need to revise Order 1810.1A, there was a lack of definitive direction to effectively complete this task. It appeared again to be a case of priorities. The work obviously was not considered a high priority within FAA. In our view, the continued absence of a sound acquisition process could also raise some questions of whether FAA is effectively using its resources. We believe, therefore, that Order 1810.1A needs to be replaced or revised to include (1) simplifying the acquisition process and conforming it to meet DOT's acquisition directives relative to identifying programs and the prescribed reporting of them and (2) strengthening the role of the program manager and conforming it to meet the requirements of OMB's Circular A-109.

DOT ACQUISITION DIRECTIVE NOT
IN FULL COMPLIANCE WITH OMB
CIRCULAR A-109

OMB's Circular A-109, dated April 1976, was issued as a new policy for the acquisition of major systems and is intended to effect reforms that will reduce cost overruns and diminish controversy on whether new systems are needed. In our August 14, 1979, report, we identified such areas as mission analysis or planning and the role of the program manager in DOT's acquisition procedures (DOT Order 4200.14A) that were not in full compliance with OMB's Circular A-109.

In October 1979 DOT, in response to our August report, stated, in part, that its acquisition directive was adequate and in full compliance with OMB's Circular A-109 in the mission analysis and program manager areas. We believe, however, that the continuing deficiencies identified in this report supported by those contained within FAA and the DOT-sponsored reports still reveal a need for DOT

to revise its acquisition directive at least in these areas
to comply with OMB's Circular A-109.

CHAPTER 4

EFFECTIVENESS OF SRG

NEEDS TO BE IMPROVED

SRG is composed of personnel such as the director, deputy director, or equivalent level of FAA's top organizations who are responsible for monitoring major programs subject to the SAM process. Our review showed, however, that SRG has not been effective in providing an independent review of the programs. In our opinion this was due to (1) its exclusion from the process of identifying potential requirements and as an active participant in FAA's annual budget review and evaluation process, (2) inadequate monitoring tools, (3) a lack of decisionmaking authority to approve, delay, or discontinue a program, (4) a lack of written instructions setting forth its specific responsibilities, and (5) a lack of informative progress reports to the Administrator of FAA to provide the true status of the SAM process.

We believe using SRG as only a monitoring group limits its effectiveness in assuring compliance with any acquisition process and prevents FAA from concentrating its resources on those programs that best meet its mission needs.

SRG HAS NOT BEEN EFFECTIVE

In early 1977 SRG reviewed the various FAA programs to determine which should be brought under the SAM process and selected 11 ongoing programs in various stages of the acquisition cycle by using both dollar and safety values as its criteria. A 12th program was added later. These 12 programs are still being monitored by SRG. Other than FAA Order 1810.1A, SRG has no written instructions setting forth its specific responsibilities, its schedule of meetings, the amount of time members are to devote to SRG activities, and the length of time members are to serve in the group. SRG's effectiveness is discussed below.

Identifying potential requirements is inadequate

According to FAA Order 1810.1A, potential program requirements to enable FAA to fulfill its mission objectives were to be furnished to SRG from a number of sources, including the aviation community, the general public, industry, and other Federal agencies as well as organizations within FAA. To be effective, we believe these programs or systems

should evolve through a long-range planning and budgeting process; however, SRG has not participated in either of these processes. Also, no procedure has been established to provide such information to SRG.

In our view, FAA Order 1810.1A has placed a requirement on SRG which under the present arrangements cannot be met. This came about because FAA lacked a comprehensive planning system which should be the foundation upon which an effective acquisition management system could be developed.

Inadequate monitoring tools
and a need for decisionmaking authority

Monitoring the progress of major programs by SRG is done by holding periodic program reviews and by using the requirements tracking system which is simply a schedule of key milestones. We found that the program reviews did not correspond to the key decision points in the acquisition cycle. Thus, SRG did not determine whether all pertinent actions had been completed. Further, the requirements tracking system appeared to be generally ignored.

SRG's program reviews are ineffective

SRG conducted program reviews every 2 weeks. During each program review meeting, two or three programs were covered. At this frequency, each program would be covered about every 10 weeks. We reviewed the SRG minutes of the meetings and found, in most instances, that little of significance took place in the 10-week interval periods. Generally, such matters as to whether the system had completed the necessary steps to enable it to advance to the next key decision point were not discussed. Therefore, it appeared that program reviews were held more for the purpose of adhering to the schedule rather than scheduling them to coincide with key points in the acquisition process. In commenting on this matter, some program managers said that the present method tended to keep them on course and reminded them of various commitments that needed to be met prior to the next meeting. Another FAA official expressed concern that if program reviews were held at only key decision points, SRG's effectiveness would be limited.

We believe that it would be more beneficial to hold meetings to correspond with key decision points because SRG would then focus its attention on pertinent areas of the program to determine if, for example, all of the pertinent actions and milestones had been accomplished so the program could advance to the next decision point in the acquisition

cycle. This would restrict the program reviews to major issues and would limit discussions on other matters that should be handled at the program manager's organizational level. We believe this would constitute an improvement rather than a limitation of SRG's effectiveness.

Requirements tracking system is ineffective

SRG's tool for tracking program progress was the requirements tracking system which sets forth the key milestones of the SAM process and was established by each program manager. The milestone dates identify when various tasks were to be accomplished; however, the significance of the work to be accomplished (for example, results to be achieved for that milestone) were not identified. We noted that the requirements tracking system appeared to be generally ignored by program managers since milestones were missed without any apparent implications. Each of the SRG members agreed that the effectiveness of the requirements tracking system as a monitoring tool was questionable, but none could offer suggestions for improvement.

In our review of the requirements tracking system, we noted that SRG, in October 1978, requested the program manager to prepare a system requirements statement for the Beacon-Based Collision Avoidance System program. Since this was a key document for the SAM program which sets forth the milestones to be met and to be reviewed by SRG, its preparation should be mandatory prior to program initiation. However, it has not yet been submitted, but the program has been funded despite its absence. In fact, an abbreviated requirements tracking system for the Beacon-Based Collision Avoidance System program was not submitted by the program manager until October 1979, or 1 year after the program came under the SAM process.

Milestones were also missed on the Electronic Tabular Display System program, the Voice Switching and Control System program, and the Air Route Surveillance program. The Electronic Tabular Display System program was to have the Administrator-approved system requirements statement prior to award of a development contract. Although the milestone slipped by 7 months, the development contract was awarded some 4 months earlier. Thus, a question arises as to what would have happened if the Administrator denied the approval. The system requirements statement milestone for the Voice Switching and Control System program, as of November 1979, slipped 9 months. However, funds were included in the fiscal year 1980 program which was in violation of FAA's Order 1810.1A prohibiting funding in such cases unless

a waiver was granted by the Deputy Administrator. We found no such waiver. The system requirements statement milestone has also slipped 1 year for the Air Route Surveillance Radar program. This program, however, has received no funding. In the other major programs, it was the exception rather than the rule when a key milestone date was met for such documents as the system requirements statement, acquisition paper, transition plan, or implementation plan.

By using the requirements tracking system, SRG was involved in paperwork and day-to-day problems of programs which should be the responsibility of the program manager. We believe SRG would be more effective if it dealt primarily with major issues in the program and had decisionmaking authority to approve, delay, or discontinue a program, subject to concurrence of the Administrator.

SRG's progress reports
do not reflect actual program status

Since August 1977, SRG has periodically submitted progress reports to the Administrator on the SAM process. The reports that we reviewed disclosed no such deficiencies such as the continued lack of program managers' charters, absence of program manager training, inadequacies in the requirements tracking system, and unexplained program cost growth.

FAA officials stated that the Administrator was briefed monthly or bimonthly on procurement problems and that there were other means of bringing problems to his attention. While we appreciate that there were various methods that could be used to keep the Administrator advised on the SAM process, we believe the SRG's progress reports were meant for this purpose and should be informative and reflect the actual status of the programs in the SAM process.

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We believe that to be an effective instrument of management, SRG must be included in the initial planning and budgeting processes and be provided with decisionmaking authority. Further, we believe that this will enable FAA to concentrate its resources on those programs that best meet its mission needs.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

CONCLUSIONS

In March 1977 FAA recognized that its acquisition process should be preceded by a comprehensive planning system which would serve as a basis for its decisions concerning the allocation of resources. Although the planning and acquisition directives were implemented, including the establishment of SRG to monitor the acquisition process to correct deficiencies in its planning and acquisition processes, the planning directive was not fully implemented and the acquisition directive, including SRG, has not proven to be effective, thereby allowing the deficiencies to continue.

As early as July 1977 and more recently in April 1979, serious deficiencies in FAA's planning process were noted by FAA and DOT, respectively. Also, our review has shown that these conditions continue to exist, including the fact that FAA has not successfully prescribed a management framework and effective procedures for acquiring major systems. Its procedures do not provide sufficient guidance and do not conform to DOT's acquisition directives relative to identifying programs and the prescribed reporting of them, program manager roles are not well defined and their authority is limited, SRG has been ineffective, and improvements to the process continue to be delayed.

We believe that the absence of an agencywide comprehensive planning process and a sound acquisition process could raise some questions of the validity of FAA's budgetary process, including its effective use of resources since in accordance with its directives such processes are to be completed prior to its budget submission. We believe, however, that the directives established by FAA, although needing revision and requiring more consistent compliance, set forth sound concepts and represent improvements over what existed in the past.

RECOMMENDATIONS

We recommend that the Secretary of Transportation direct the FAA Administrator to:

- Implement FAA's agencywide planning directive emphasizing policy, mission analysis, long-range planning, and program performance and evaluation.

- Replace or revise FAA's system acquisition management directive to prescribe a simplified acquisition process, a stronger role for the program manager, and a restructured system acquisition process to conform to requirements in DOT's acquisition directives relative to identifying programs and the prescribed reporting of them and to meet OMB's Circular A-109.

- Improve the management of the acquisition process by (1) making SRG a part of FAA's planning process so programs that should come under its review and evaluation are identified early, (2) assuring that SRG's program reviews coincide with key decision points of the acquisition process for selected programs, (3) giving SRG the authority to approve, delay, or discontinue a program subject to the approval of the Administrator, and (4) providing each member of SRG with a written charter setting forth the responsibilities, authority, and tenure of office.

Further, we believe that some of FAA's problems can be attributed to DOT's acquisition requirements which are not in full compliance with OMB's Circular A-109. Therefore, we recommend that the Secretary of Transportation revise DOT Order 4200.14A to bring the directive in agreement with OMB's Circular A-109.

MATTERS FOR CONSIDERATION

The House Subcommittee on Government Activities and Transportation, Committee on Government Operations, should require FAA to submit a detailed report of the definitive steps being taken to further improve its planning and acquisition processes.

AGENCY COMMENTS

DOT, in responding to our draft report (see app. I) stated that (1) FAA will review its planning directive by mid-1980, which will include consideration of our recommendation to fully implement FAA's agencywide planning directive, (2) FAA will revise its SAM directive by September 30, 1980, taking into account FAA's experience and the matters discussed in our report, and (3) DOT's order, "Major Systems Acquisition Review and Approval," will be revised within the next 6 months and coordinated with OMB. It stated that the areas being considered for revision are mission analysis/planning, solicitation of alternative systems design concepts, and the role of the program manager/progam manager's charter.

While it appears that DOT has generally accepted our recommendations, much remains to be done to revise the pertinent directives and procedures and to make certain they are accepted and effectively implemented.

DOT stated that it did not concur with the conclusions and recommendations contained in two reports 1/ identified in this report as examples of FAA's not following sound planning and acquisition practices, including compliance with the requirements of OMB's Circular A-109. We have fully considered DOT's objections to the conclusions or recommendations included in the two reports. Since DOT did not provide additional information on its objections, we believe the conclusions or recommendations remain valid.

1/"Unnecessary Procurement of an Aviation Weather and Notice to Airmen System by FAA," (PSAD-79-94, Aug., 8, 1979) and "FAA's Program to Automate Flight Service Stations: Status and Needs," (PSAD-80-1, Oct. 31, 1979).



**U.S. Department of
Transportation**

Office of the Secretary
of Transportation

Assistant Secretary
for Administration

400 Seventh Street, S.W.
Washington, D.C. 20590

May 12, 1980

Mr. Henry Eschwege
Director, Community and Economic
Development Division
U.S. General Accounting Office
Washington, D.C. 20548

Dear Mr. Eschwege:

This letter is in response to your request for our comments on the General Accounting Office (GAO) report, "Federal Aviation Administration's Agencywide Planning and Acquisition Processes Need Further Improvement," dated March 10, 1980.

The GAO has identified a number of problems in the Federal Aviation Administration's (FAA) planning and acquisition processes. Some of the problems have also been identified by internal studies. The GAO states that: (1) the policy, mission analysis, long-range planning, and program performance and evaluation areas of FAA's agencywide planning directive have not been implemented; (2) FAA's system acquisition management (SAM) directive was not explicit, not always followed, and did not conform to either the Departmental or Office of Management and Budget's (OMB) requirements; (3) the role of the program manager was limited due to FAA's management concept; (4) the System Requirements Group (SRG) has been ineffective because of its exclusion from such significant functions as the planning process, the requirements' reviews relative to mission needs, and decisions concerning the approval, delay, or discontinuance of programs; and (5) the requirements of OMB Circular A-109 continue to be rejected by the Department of Transportation and FAA.

GAO recommends that the Secretary of Transportation require the FAA Administrator to: (1) implement FAA's agencywide planning directive; (2) replace or revise FAA's SAM directive; and (3) improve the management of the acquisition process.

GAO believes that some of the problems experienced by FAA can be attributed to the Department of Transportation's acquisition directive which is not in full compliance with OMB Circular A-109. GAO recommends that the Secretary of Transportation revise the Departmental directive to bring it in agreement with the OMB Circular.

With respect to the agency's planning process, the FAA Associate Administrator for Policy and International Affairs has been directed by the FAA Administrator to undertake, in consultation with other Associate Administrators, the development of a comprehensive set of improvements concerned with decisionmaking on major long-range issues. An initial proposal is planned for mid-1980. The results of this effort will impact any future revision and implementation of FAA Order 1800.13A, FAA Planning and Resource Allocation. In this endeavor, the FAA will certainly give consideration to the GAO recommendation to fully implement its agencywide planning directive.

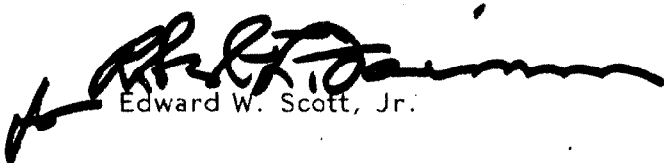
FAA recognizes that its agency directive, System Acquisition Management, including the System Requirements Group's involvement in the process, and other related procedures need review and revision. In this regard, FAA will issue a revised directive by September 30, 1980. FAA will take into account its experience and the matters discussed in the GAO report.

GAO references two of its prior reports, "Unnecessary Procurement of An Aviation Weather and Notice to Airmen System by FAA" and "FAA's Program to Automate Flight Service Stations: Status and Needs," as examples of FAA not following sound planning and acquisition practices. We believe that the report should point out that the Department did not concur with the conclusions and recommendations contained in those two reports.

As for the need to revise the Departmental Order, we acknowledge that we have experienced some "growing pains" since the directive was issued in May 1978. As a result, we are in the process of revising it to enhance certain areas. Among the areas being considered for revision are (1) mission analysis/planning; (2) solicitations of alternatives systems design concepts; and (3) role of program manager/program manager's charter. A draft of the revised directive will be completed within the next six months, and it will be coordinated with OMB prior to formal issuance.

If we can further assist you, please let us know.

Sincerely,



Edward W. Scott, Jr.

(951519)





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