

United States General Accounting Office

Report to the Chairman, Committee on Government Reform, House of Representatives

July 2000

INFORMATION TECHNOLOGY

Selected Agencies' Use of Commercial Off-the-Shelf Software for Human Resources Functions







United States General Accounting Office Washington, D.C. 20548 Accounting and Information Management Division

B-285087

July 31, 2000

The Honorable Dan Burton Chairman, Committee on Government Reform House of Representatives

Dear Mr. Chairman:

Commercial off-the-shelf (COTS) systems and applications for human resources (HR) functions are automated tools that can help streamline management activities such as position management and classification, recruitment and staffing, personnel action administration, benefits administration, labor management and employee relations, and workforce development. In response to your request, we reviewed the use of COTS software applications to improve HR functions within federal agencies. You requested that we review the Department of Health and Human Services' (HHS) Centers for Disease Control and Prevention (CDC) and the Department of Veterans Affairs (VA); we chose three other agencies—the Department of Defense (DOD), the General Services Administration (GSA), and the Department of Labor (DOL)—based on their size and type of COTS products used.

Accordingly, our objectives were to (1) determine how the five agencies were using COTS systems/applications to improve their HR functions, and (2) for these five agencies, identify the agencies' reported estimated costs and expected benefits from using HR COTS systems.

In our review, we determined that the five agencies have acquired the services of two primary HR COTS vendors—Oracle and PeopleSoft—to provide most of the functional system requirements called for by the federal Joint Financial Management Improvement Program (JFMIP),¹ which issued a common set of human resources and payroll systems requirements. In addition, DOD, CDC, and VA have contracted with other vendors, such as Avue and Resumix, to augment the services of the primary vendors in areas such as recruitment.

¹A joint undertaking of the Department of the Treasury, the Office of Management and Budget, the Office of Personnel Management, and GAO. JFMIP's mission is to work cooperatively to improve financial management practices in government.

	To determine HR system capabilities and assess the basis for investment decision-making, we used criteria from the Government Performance and Results Act of 1993, the Clinger-Cohen Act of 1996, and JFMIP's Human Resources and Payroll Systems Requirements of April 1999. We reviewed documentation of the five agencies' efforts to use the HR COTS systems and interviewed HR and information technology (IT) officials about their applications. We also observed demonstrations of implemented or planned systems. We did not verify cost or benefit information provided by the agencies. Finally, we provided representatives of the five agencies with draft copies of the slides pertaining to their individual agencies; clarifications and corrections have been made as appropriate. On July 17, 2000, we briefed your staff on the results of our work, and this report summarizes those results. The briefing slides are included as appendix I. We performed our work at the Washington, D.C., headquarters of each agency, as well as at the Atlanta headquarters of CDC, from February through July 2000, in accordance with generally accepted government auditing standards.
Results in Brief	DOD, GSA, HHS/CDC, Labor, and VA all have efforts underway to use COTS systems and applications to improve their HR functions. Quantifiable benefits expected included requiring fewer employees to perform HR functions, reducing manager time for transactions and data analysis, eliminating duplicative or multiple systems, and implementing self-service HR functions, such as employee changes to health and life insurance benefits. Nonquantifiable benefits expected included a more user-friendly environment, easier manager/employee access, better decision-making and data analysis, improved data accuracy, and better information sharing. Despite these expectations, four of the five agencies' systems efforts have encountered delays, while three of the four agencies have increased cost estimates. To date, three of the five agencies—DOD, Labor, and VA—have reportedly achieved quantifiable benefits, such as full-time equivalent (FTE) reductions from their HR COTS systems or related efforts.
Department of Defense	Based on a 1994 study, DOD decided to move to regional servicing of its civilian personnel and a single, integrated information system, referred to as the modern Defense Civilian Personnel Data System, that—when fully

	implemented—is expected to contain records for about 800,000 employees. DOD expects the quantifiable benefits to include enhanced productivity requiring fewer field employees and the ability of personnel specialists to service greater numbers of customers: from 1 for every 60 employees in 1996, to 1 for every 77 this year, to 1 for every 88 in 2001. Nonquantifiable benefits expected include providing improved data to the DOD payroll system and a more responsive, open systems environment.
	According to DOD, the system was originally expected to be deployed by September 1999; however, the current estimate is March 2001 because of the need for additional testing and a delay in internal DOD committee approval. The estimated cost has grown by \$248 million to about \$1.3 billion, while estimated quantifiable benefits have decreased by \$340 million, to about \$2.4 billion. Cost increases were attributed to developmental delays, vendor revisions to the COTS products, and limited customization. Estimated monetary benefits have decreased, according to DOD, because of increased regionalization costs and delayed implementation of the modernized system.
	To date, the system has been implemented at 3 of 25 regional/centralized servicing sites. Total project costs reported, as of September 30, 1999, were \$351 million; total quantifiable benefits as of that date were \$123 million.
General Services Administration	In 1996, GSA began to plan for a new, integrated HR/payroll system, referred to as the Comprehensive Human Resources Integrated System, to replace its current legacy system. GSA expects fiscal year 2001 quantifiable benefits to be \$4.5 million, due to reduced costs for such activities as transaction processing in HR offices, external recruitment, and internal competitive staffing. Nonquantifiable benefits expected include more timely report generation, better data control, and increased manager and employee satisfaction.
	The system is expected to be deployed next month, an 8-month delay from original estimates. According to GSA, this delay was caused by a lack of maturity in the Oracle product relative to the HR needs of federal agencies, a lack of skilled resources, and GSA's decision to implement the system with internal staff. System cost is estimated at \$34 million.
	At present, GSA is conducting parallel testing of the old and new systems. The first test was completed on June 21, and the testing is continuing. Pilot testing of some of the HR COTS products supporting the new system is

	taking place in GSA's national capital region. As of December 6, 1999, total reported costs incurred were \$20 million.
Department of Health and Human Services	HHS' aging legacy system was the driving force behind the October 1999 initiation of a new system to improve HR/payroll operations, called the Enterprise Human Resource Project, which will be used at CDC. The new system is a global module intended to allow customers to build fully integrated HR processes and databases that are shared across the department. Savings of \$127 million are expected from having flexible processes to use in HR actions and eliminating duplicative systems in various operating divisions. Nonquantifiable benefits expected include improved decision-making and data analysis, trend analysis, insight into combined civilian and commissioned officer personnel data, assurance of regulatory compliance, and more customer satisfaction.
	Work on the new system started in October 1999, with HHS approving continued work on June 2, 2000. System deployment is expected in February 2003. The cost to build the system is set at \$214 million, and total costs incurred as of June 30, 2000, were reported as \$2.2 million.
Department of Labor	In 1998, Labor initiated a new, integrated HR/payroll system—referred to as PeoplePower—after it was informed that its legacy HR system, an Air Force personnel system, would not be made Year 2000 compliant. The department expects quantifiable benefits of \$226 million by replacing multiple systems with a single system and reducing a number of FTEs over 15 years. Nonquantifiable benefits expected include increased efficiency due to reduction in cycle time, better information, higher staff satisfaction, and time for more value-added work.
	Work on the new system started in February 1998; full system deployment is running 1 year late, now projected for September 2002. According to Labor, this delay was caused by its decision to reexamine payroll alternatives. The initial cost was estimated at \$26.5 million, based on a 5-year time frame for system implementation. The estimated total cost has now risen to \$71 million because, according to Labor, it did not initially account for operating costs after the system is fully deployed and because it underestimated implementation costs, including database, hardware, and end-user equipment needs. Further adding to the increase, according to the department, were (1) lack of maturity of the vendor's COTS application and

	(2) technical programming staff charges and billing rates that were higher than expected.
	The new system has already replaced the legacy HR system and currently supports Labor processes for personnel actions, benefits administration, training administration, position management, automated workflow, workforce analysis, and HR reporting. As of June 30, 2000, reported costs incurred totaled \$15.3 million, while reported savings were estimated at \$3 million due to the elimination of about 30 FTEs.
Department of Veterans Affairs	VA's new system, referred to as HR LINK\$, was initiated in October 1994 to replace a 30-year-old legacy system; the new system is expected to incorporate HR and payroll and include managers' and employees' modules—and a presence at VA headquarters and at each field office. The system is intended to push transaction processing to the lowest appropriate level, changing HR from a gatekeeper role to one of strategic partner. Quantifiable benefits are estimated at \$664 million; nonquantifiable benefits expected include employee and manager self-servicing, VA-wide information sharing, and the "One VA" vision being achieved through integrating HR and payroll processes.
	System development began in 1994; system deployment is now expected to be completed in September 2001—2 years later than originally planned. VA attributes the delay to union negotiations, cultural change, additional development and testing, and the desire for a seamless integration of all COTS and custom-designed applications. The total estimated cost has risen as well: from \$170 million to \$417 million. This rise, according to VA, is due to inflation and cost overruns stemming from unanticipated expenditures for extended development time frames, software maintenance for an added 2 years, additional shared service center equipment, more marketing and contractor services, upgrades to primary vendor software, and regulatory changes to self-service functionality.
	The shared service center was opened in February 1998; employee self- servicing has been deployed, along with other personnel modules; and total reported expenditures were \$147 million as of March 30. Quantifiable benefits as of that date were reported as \$172 million.

As agreed with your office, we will not distribute this report until 30 days after its issue date. At that time, we will send copies to Representative Henry A. Waxman, Ranking Minority Member, Committee on Government Reform; the Honorable David J. Barram, Administrator of General Services Administration; the Honorable William S. Cohen, the Secretary of Defense; the Honorable Hershel W. Gober, the Acting Secretary of Veterans Affairs; the Honorable Alexis M. Herman, the Secretary of Labor; Jeffrey P. Koplan, Director, Centers for Disease Control and Prevention; the Honorable Jacob J. Lew, Director, Office of Management and Budget; and the Honorable Donna E. Shalala, the Secretary of Health and Human Services. Copies will also be made available to others upon request.

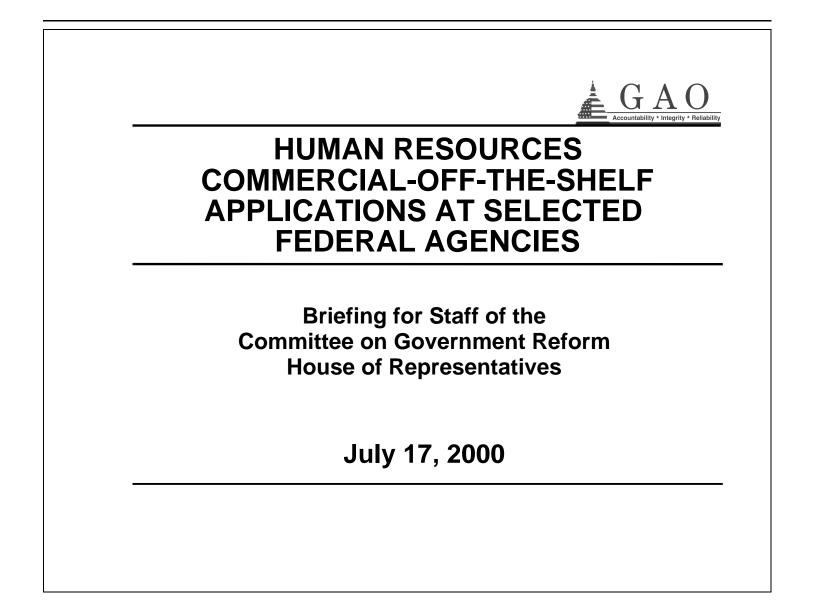
Should you have any questions on matters discussed in this report, please contact me at (202) 512-6253 or Helen Lew, Assistant Director, at (202) 512-9356. We can also be reached by e-mail at *willemssenj.aimd@gao.gov* and *lewh.aimd@gao.gov*, respectively. Key contributors to this report were Nabajyoti Barkakati, Mary J. Dorsey, Michael P. Fruitman, Amanda C. Gill, Pamlutricia Greenleaf, Robert G. Kershaw, and Michael R. Sanchez.

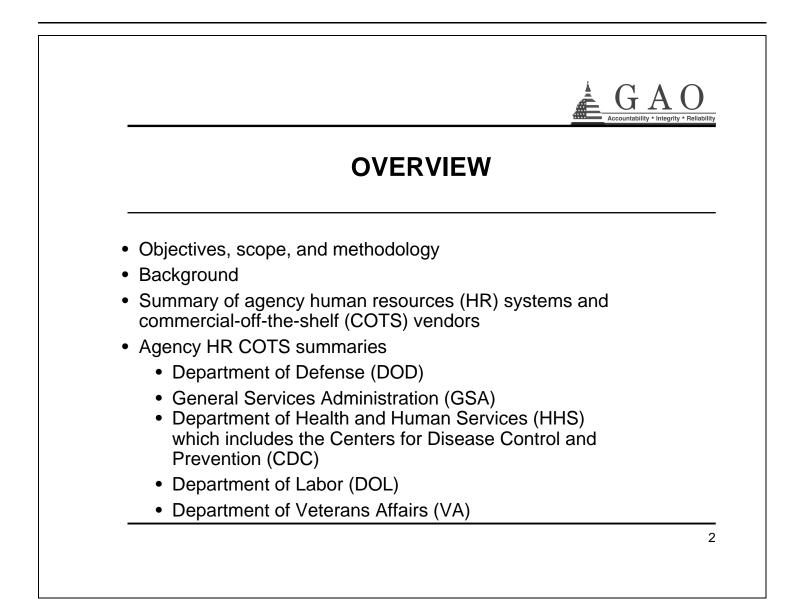
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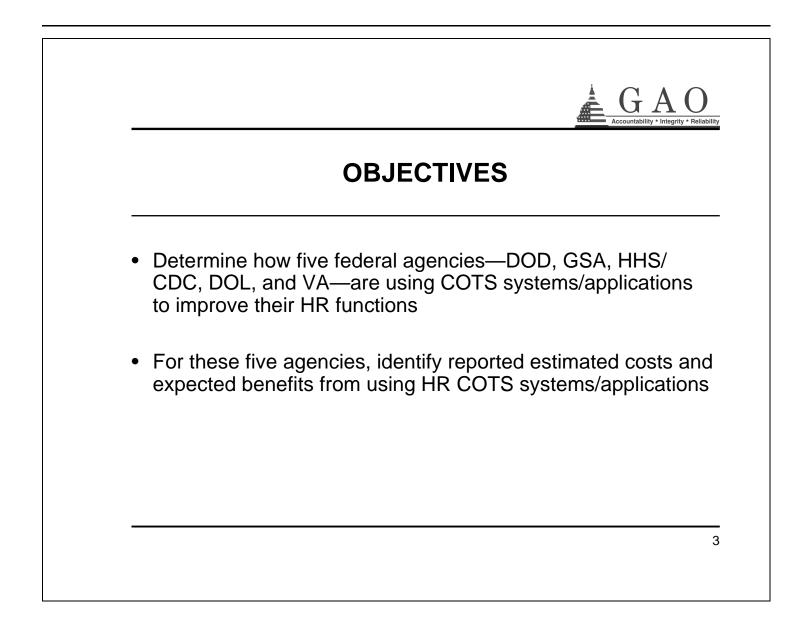
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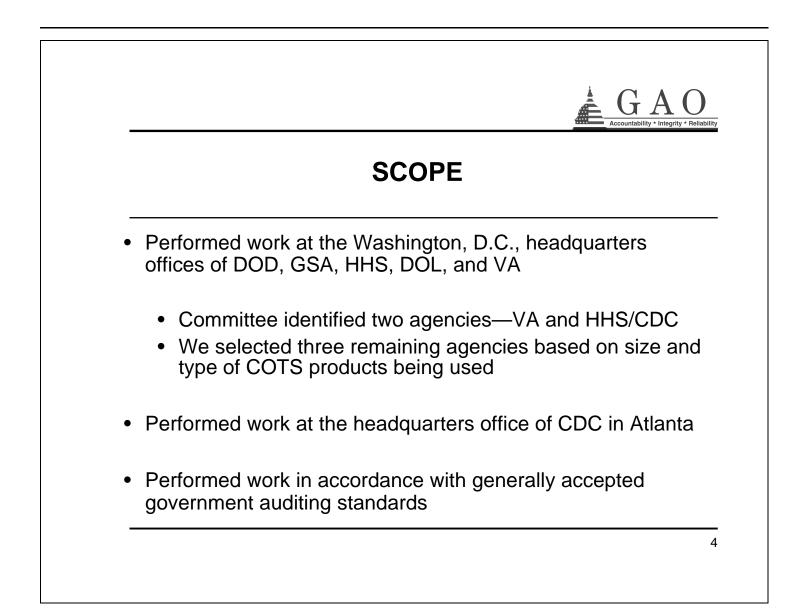
Joel C. Willemssen Director, Civil Agencies Information Systems

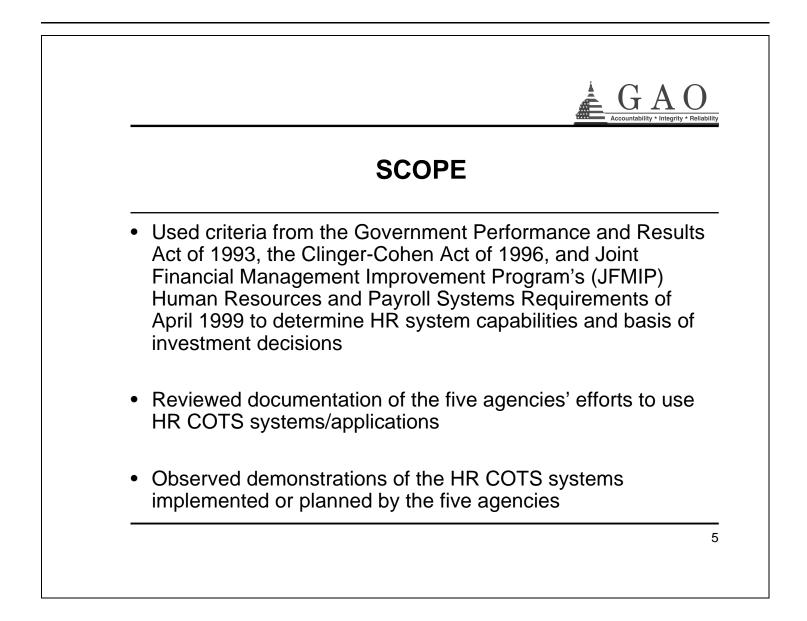
July 17, 2000, Briefing to House Committee on Government Reform

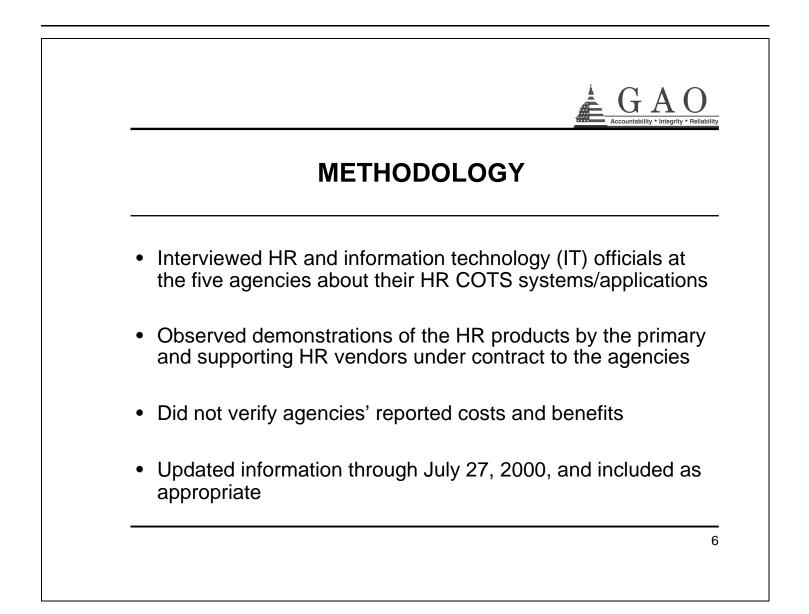


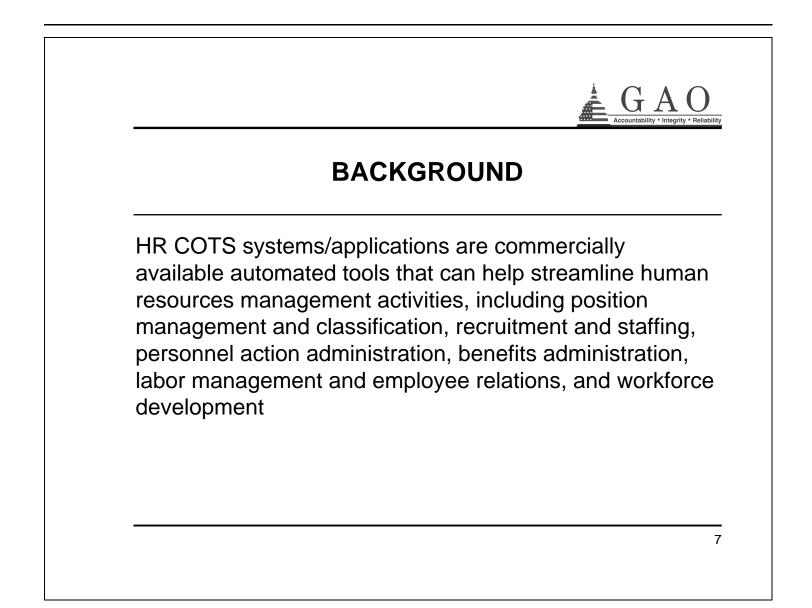


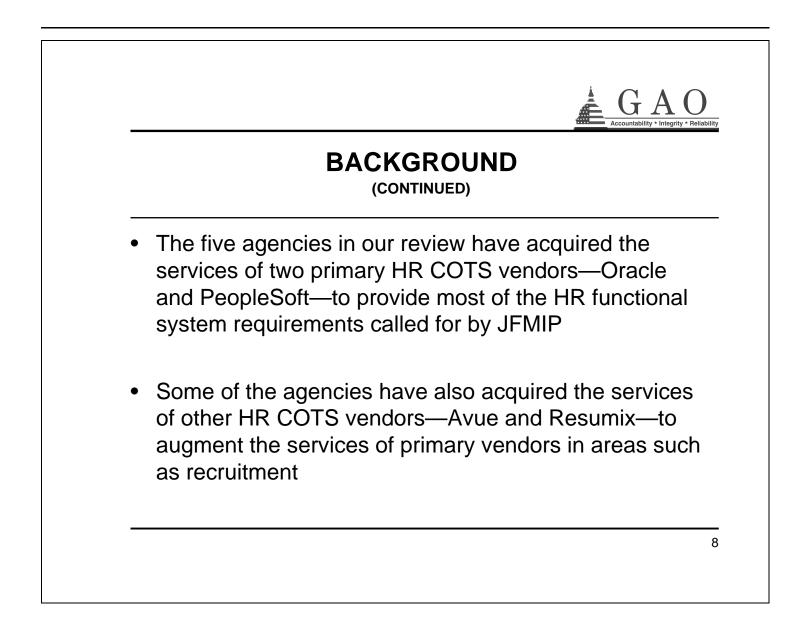




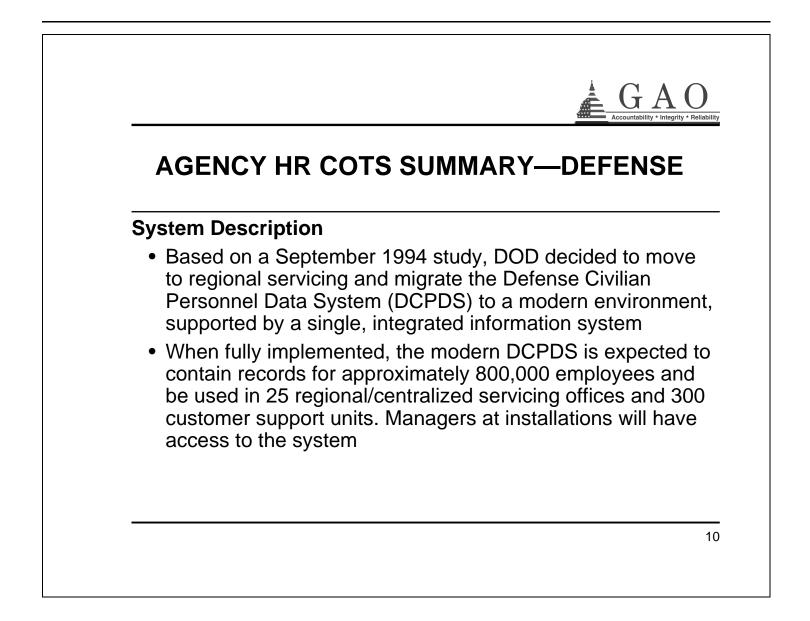


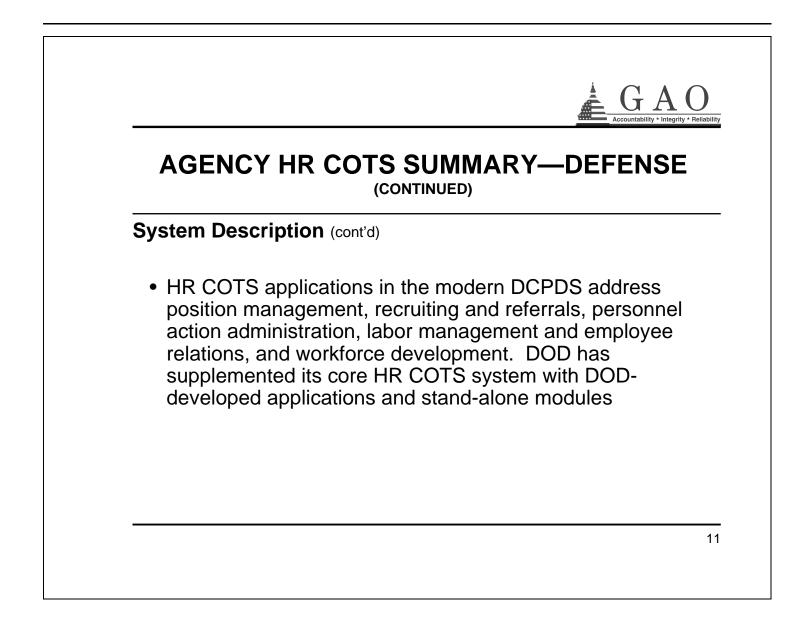




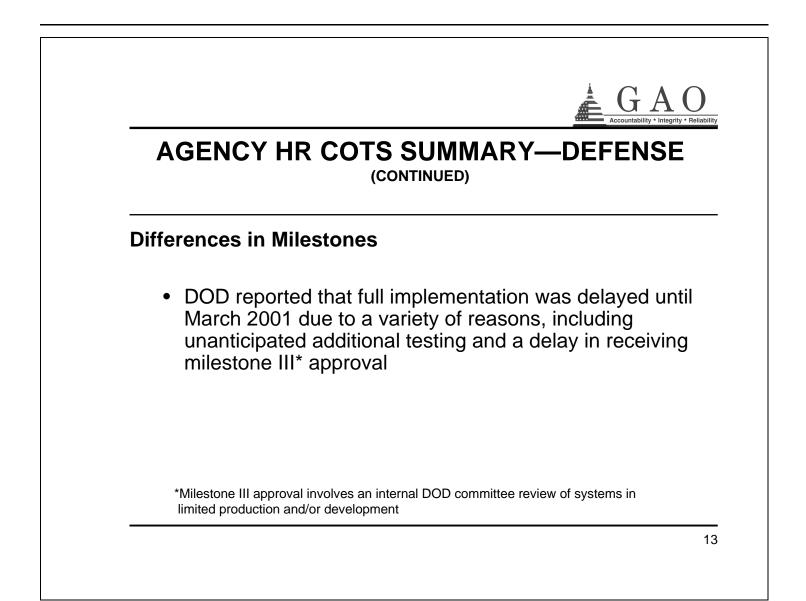


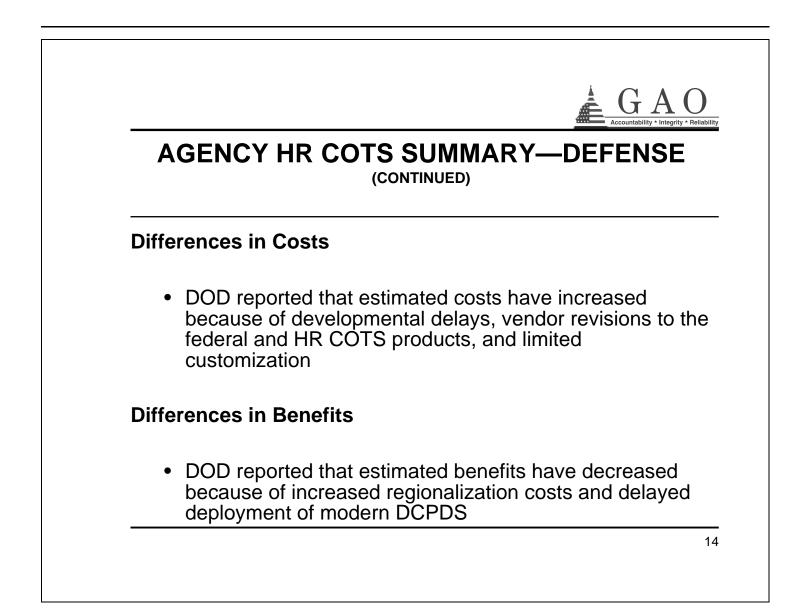
SUMMARY OF AGENCY HR SYSTEMS AND COTS VENDORS			
Agency	Name of System	Vendors	
DOD	Modern Defense Civilian Personnel Data System (DCPDS)	Oracle, Resumix	
GSA	Comprehensive Human Resources Integrated System (CHRIS)	Oracle	
HHS/CDC	Enterprise Human Resources and Payroll Project (EHRP)	PeopleSoft (Avue Resumix at CDC)	
Labor	PeoplePower	PeopleSoft	
VA	HR LINK\$	PeopleSoft, Avue	



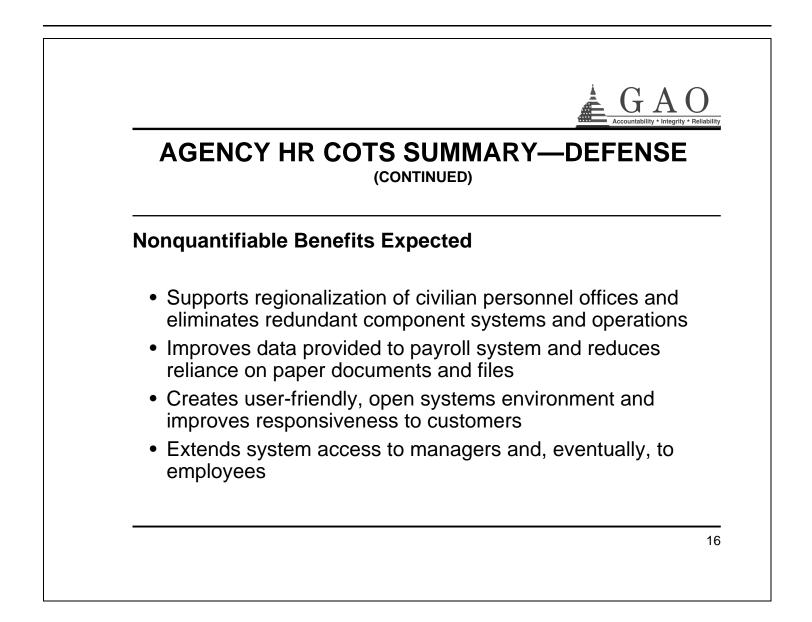


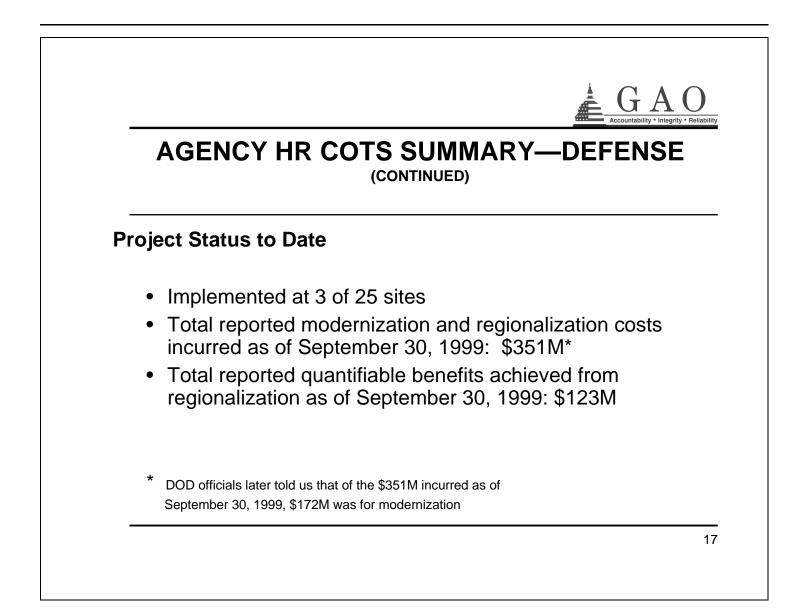
AGENCY HR COTS SUMMARY—DEFENSE (CONTINUED)				
Reported Estimated Costs, Benefits, Milestones				
ltem	Original	Current	Difference	
System life (years)	15	16	1	
Milestones Initiation Deployment	May 1995 Sept 1999	May 1995 Mar 2001	- 18 mos.	
Cost	\$1,085M	\$1,333M	\$248M	
Quantifiable benefits	\$2,737M	\$2,397M	(\$340M)	

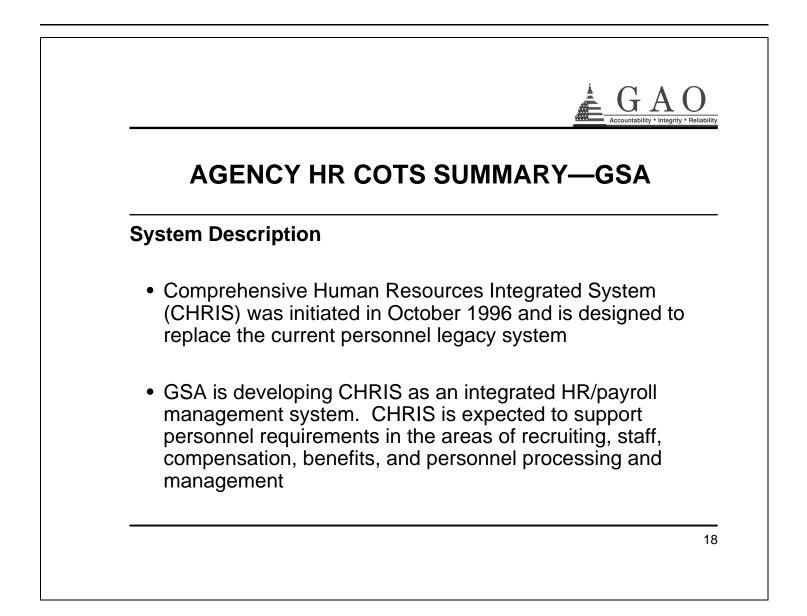




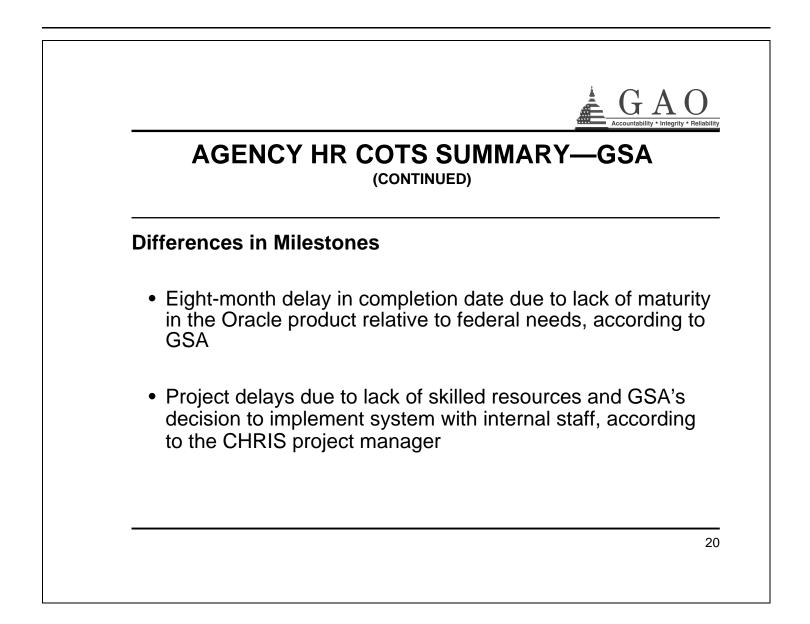
AGENCY HR COTS SUMMARY—DEFENSE (CONTINUED)			
Quantifiable Benefits Ex	pected		
Productivity enhancer	nents (i.e. performing the same HR		
function with fewer res	sources) due to reduction of field HR by regionalization and DCPDS		
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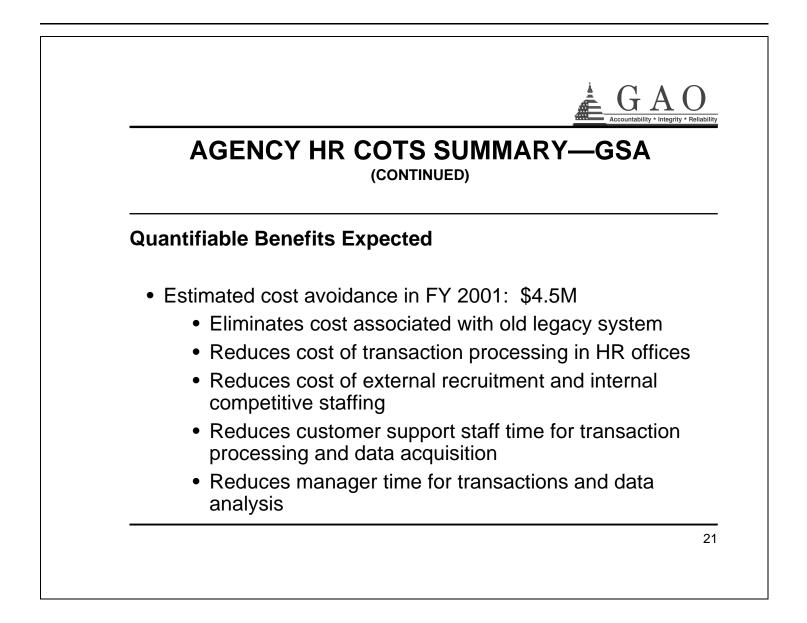


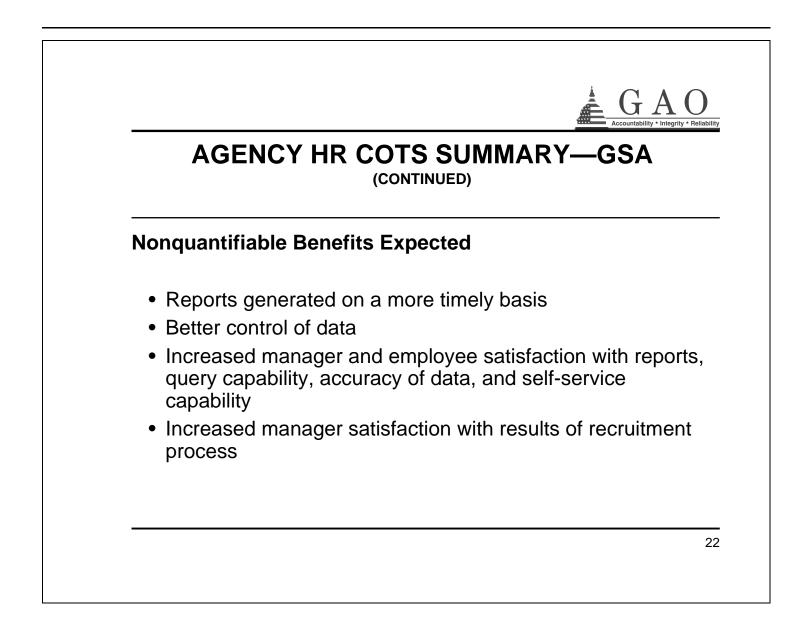


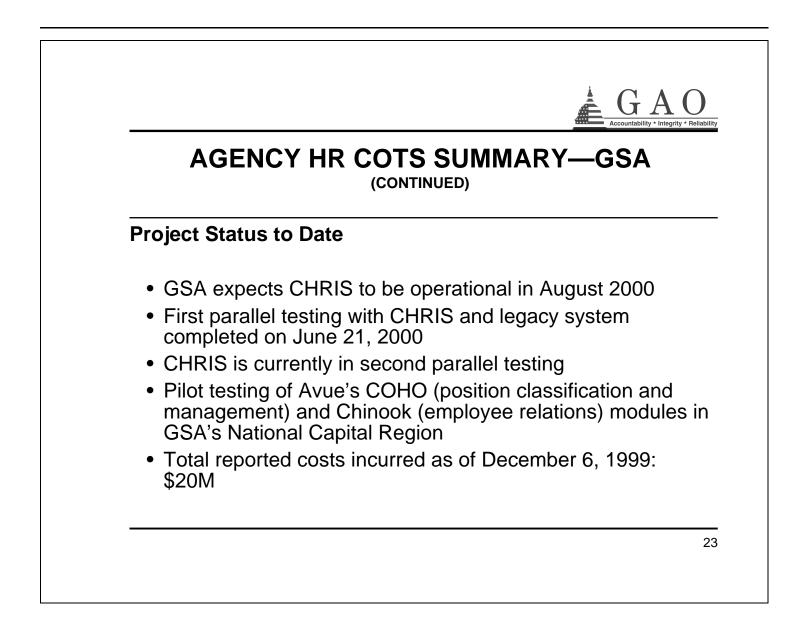


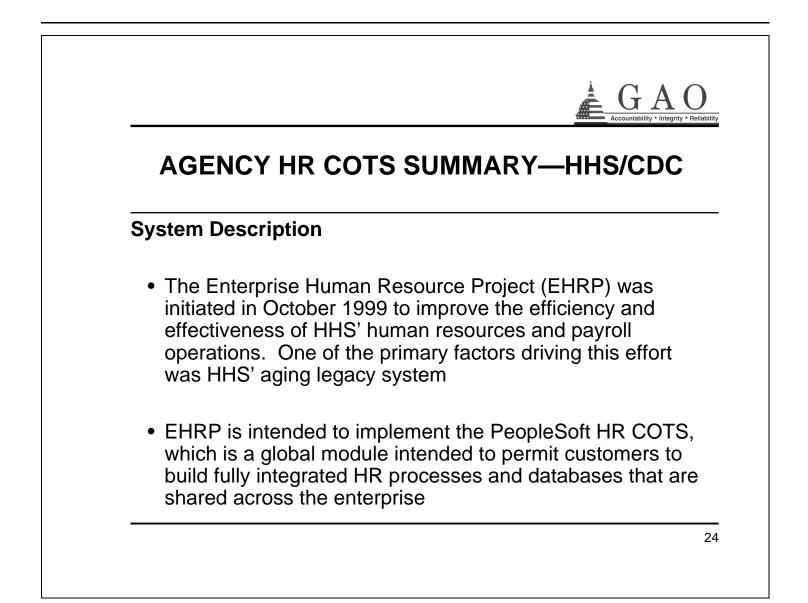
AGENCY HR COTS SUMMARY—GSA (CONTINUED)			
Reported Estimated Costs, Benefits, Milestones			
ltem	Original	Current	Difference
System life* (years)	6	6	
Milestones Initiation Deployment	Oct 1996 Dec 1999	Oct 1996 Aug 2000	 8 months
Cost	\$34M	\$34M	
Quantifiable benefits	\$4.5M (FY2001)	\$4.5M (FY2001)	
*GSA views syst	em life as beginning with o	peration in August 2000)

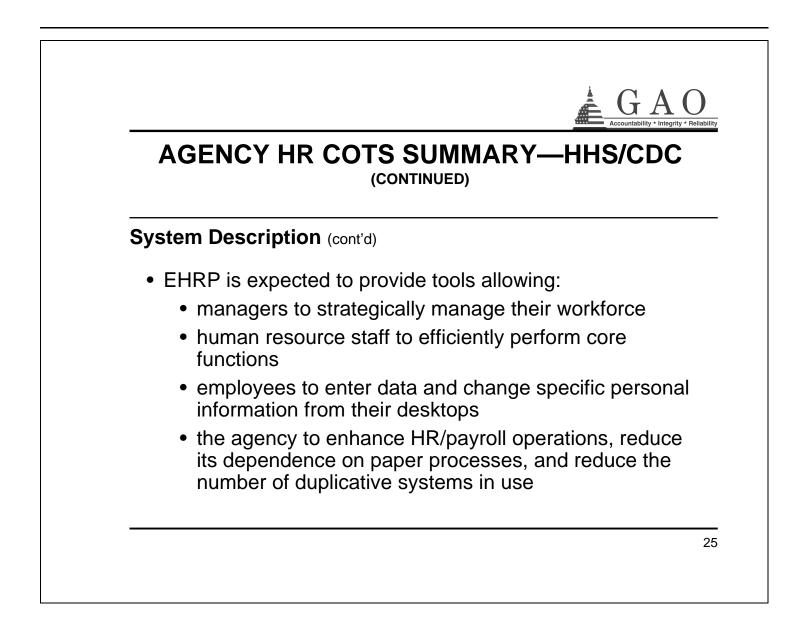




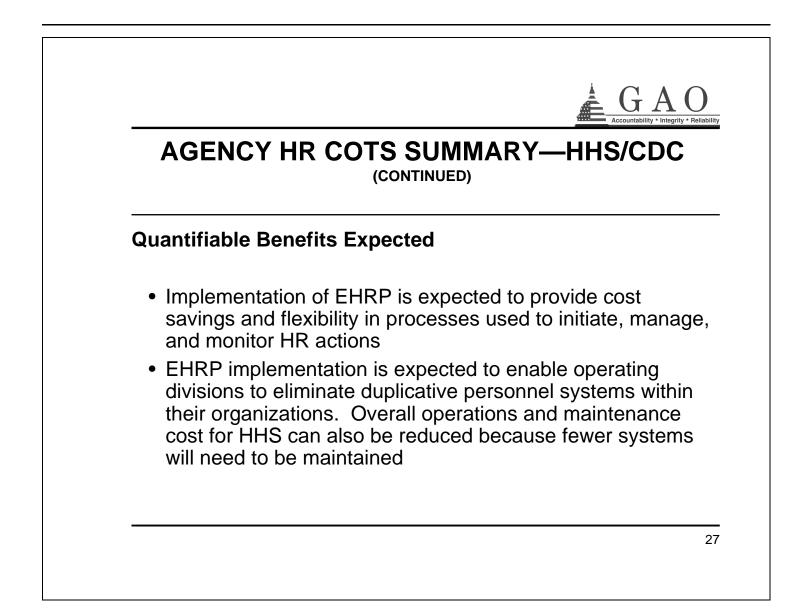


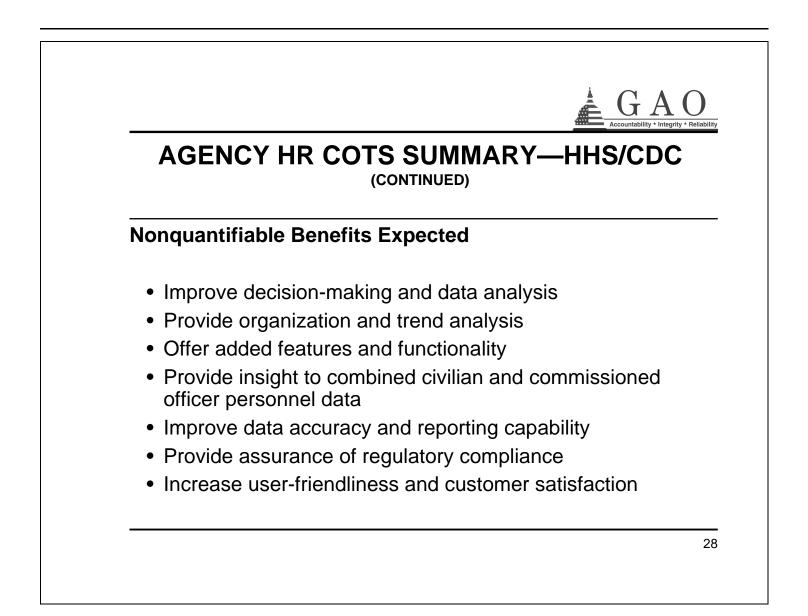


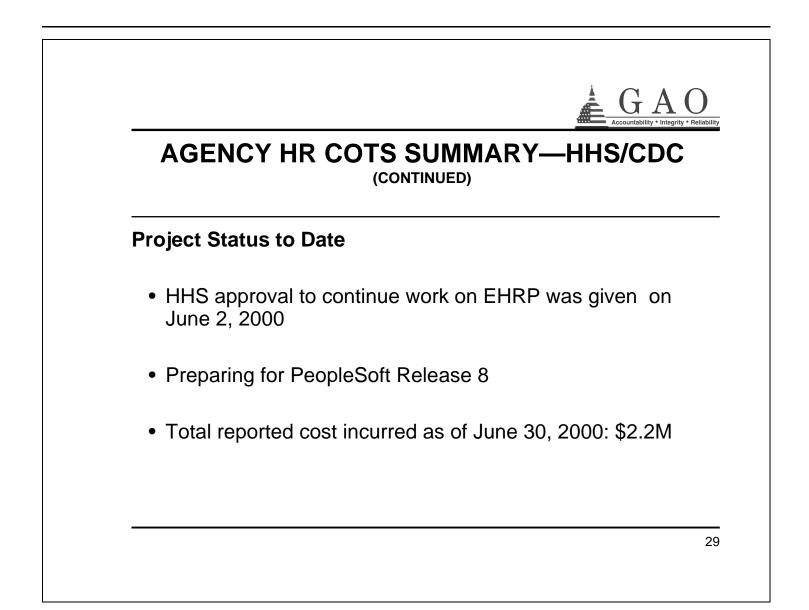


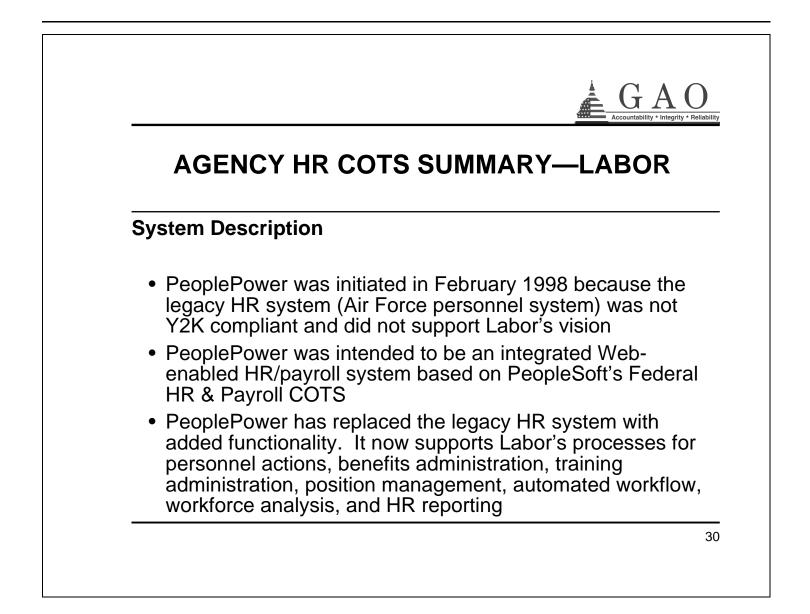


AGENCY HR COTS SUMMARY—HHS/CDC (CONTINUED)			
Reported Estimated Costs, Benefits, Milestones			
ltem	Original	Current	Differen
System life* (years)	10	10	
Milestones Initiation Deployment	Oct 1999 Feb 2003	Oct 1999 Feb 2003	
Cost	\$214M	\$214M	
Quantifiable benefits	\$127M	\$127M	

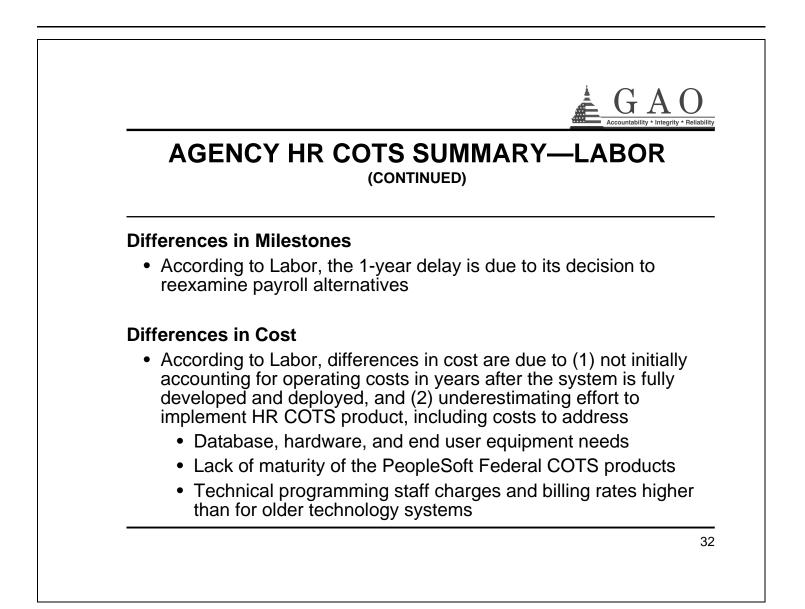


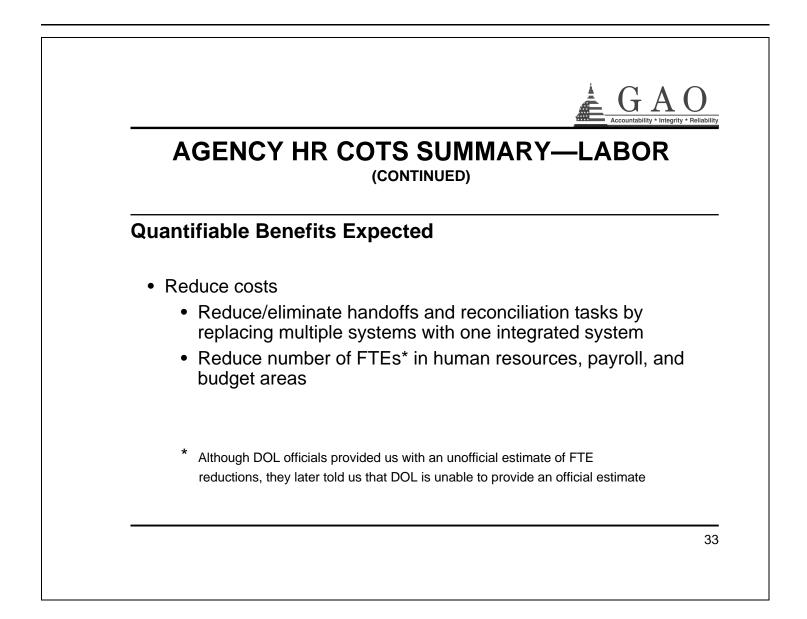


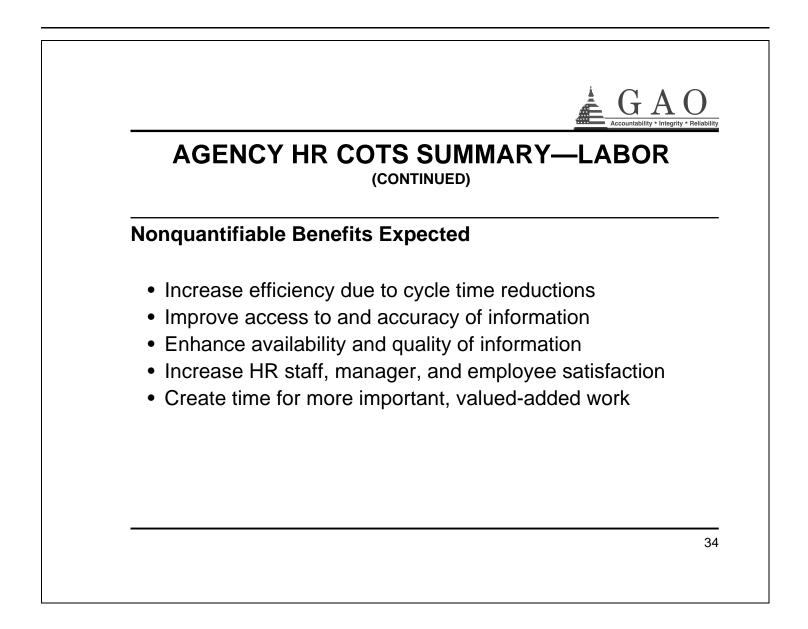


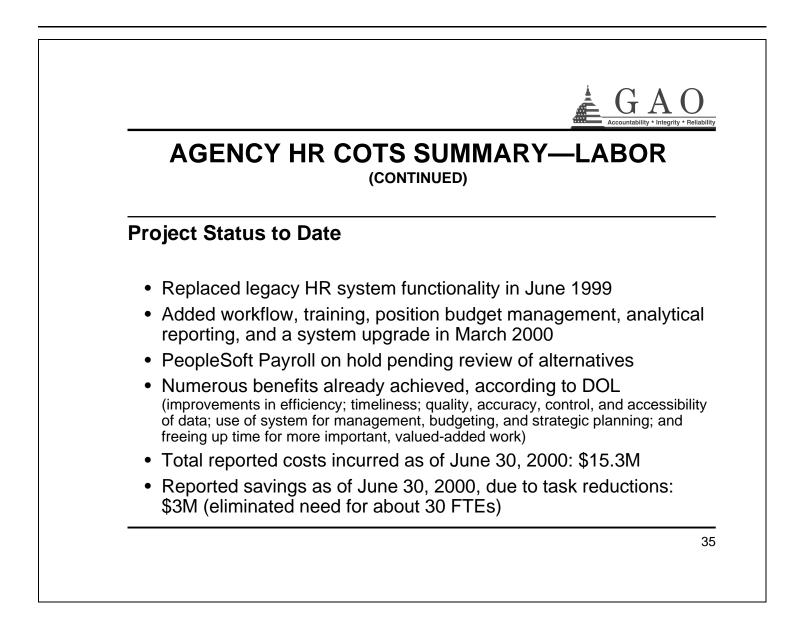


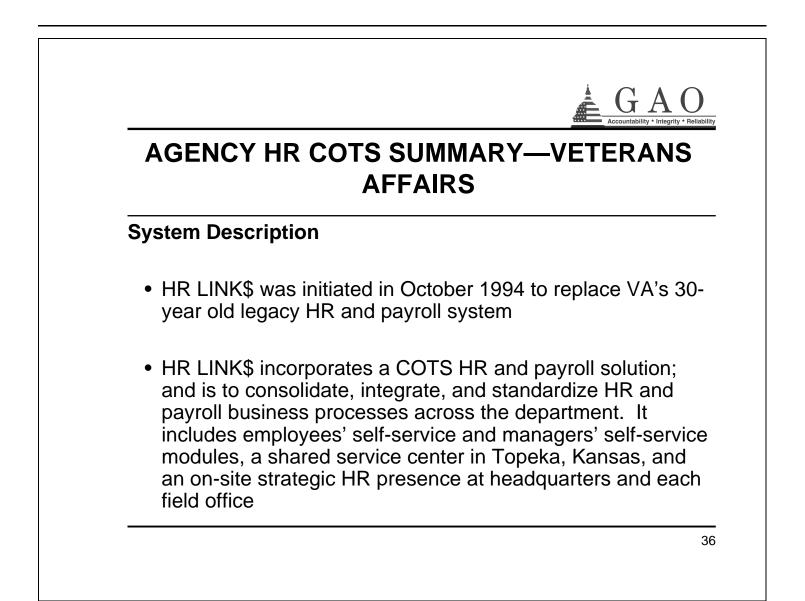
Reported Estimated Costs, Benefits, Milestones			
Item	Original	Current	Difference
System life (years)	5*	15**	Not comparabl
Milestones Initiation Deployment	Feb 1998 Sept 2001	Feb 1998 Sept 2002	 1 year
Cost	\$26.5M*	\$71M**	Not comparab
Quantifiable benefits	Not estimated	\$226M	Not comparab
ased on DOL estimates of tin			-

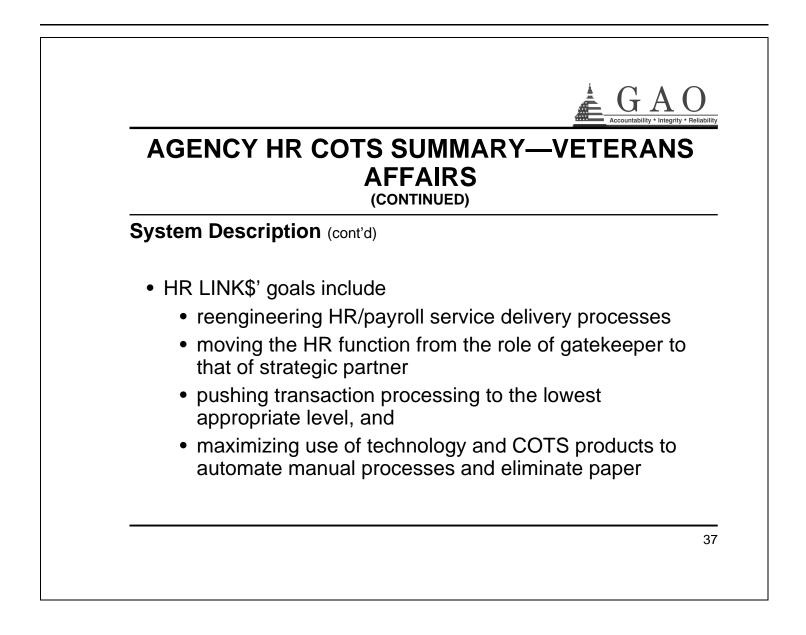




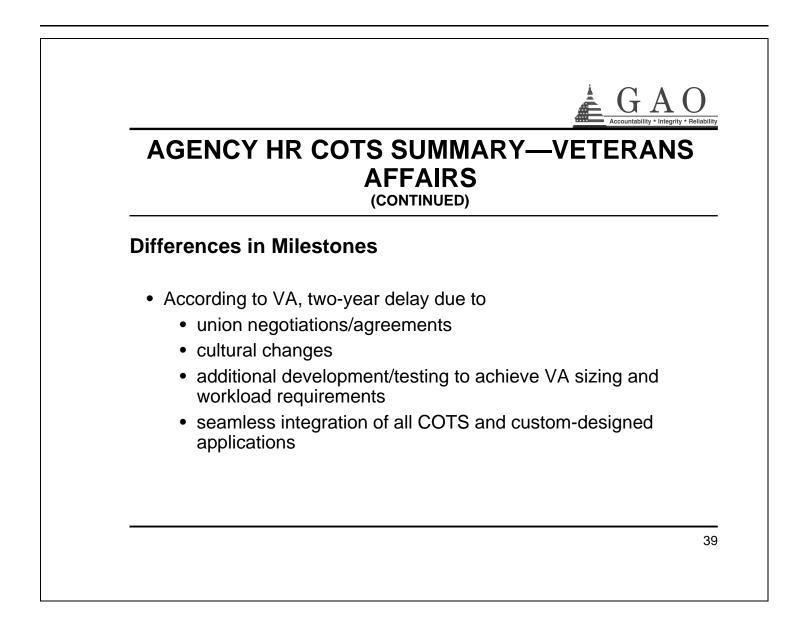


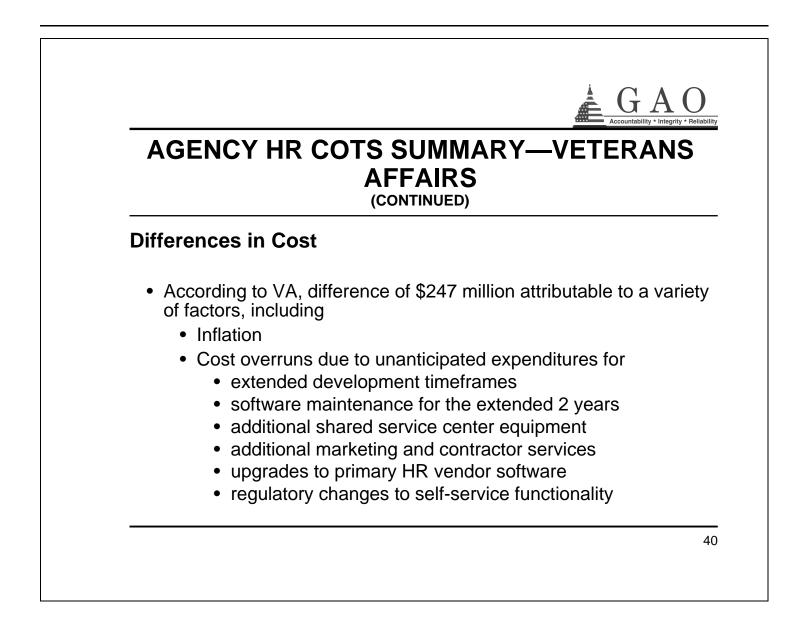


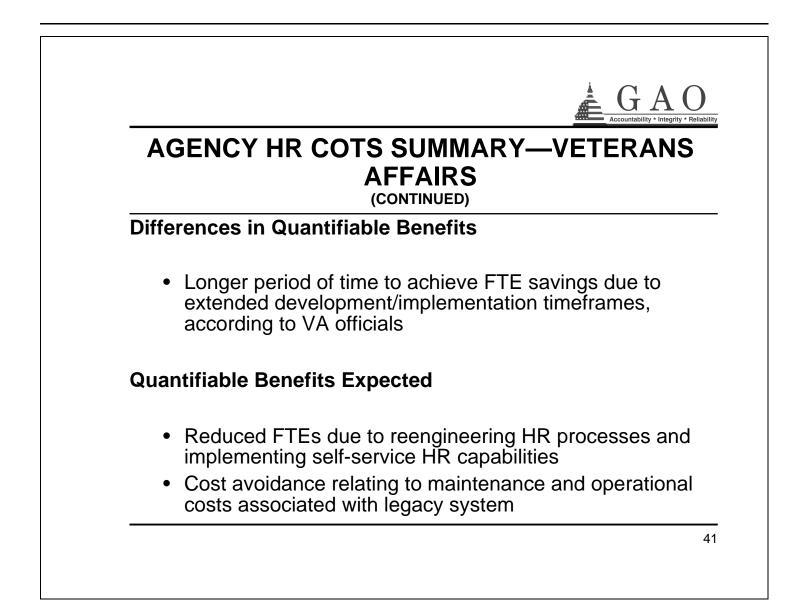


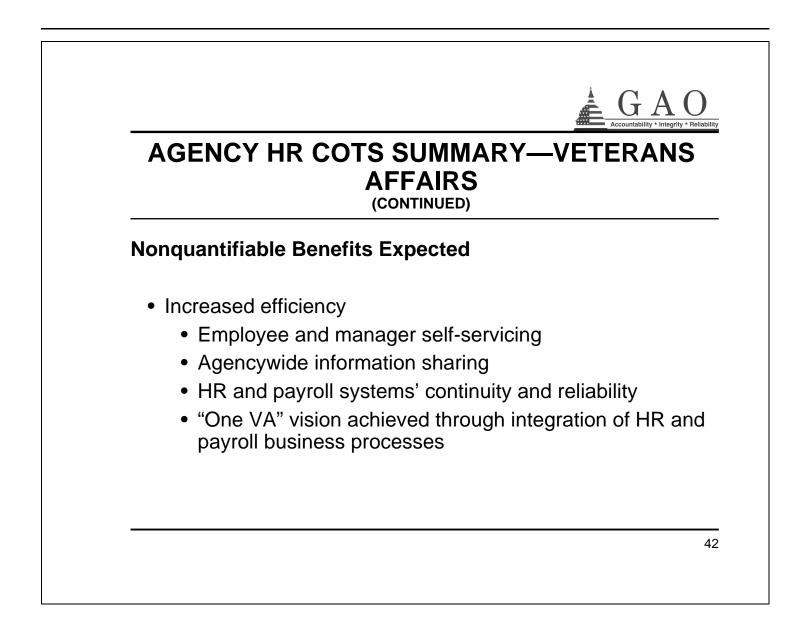


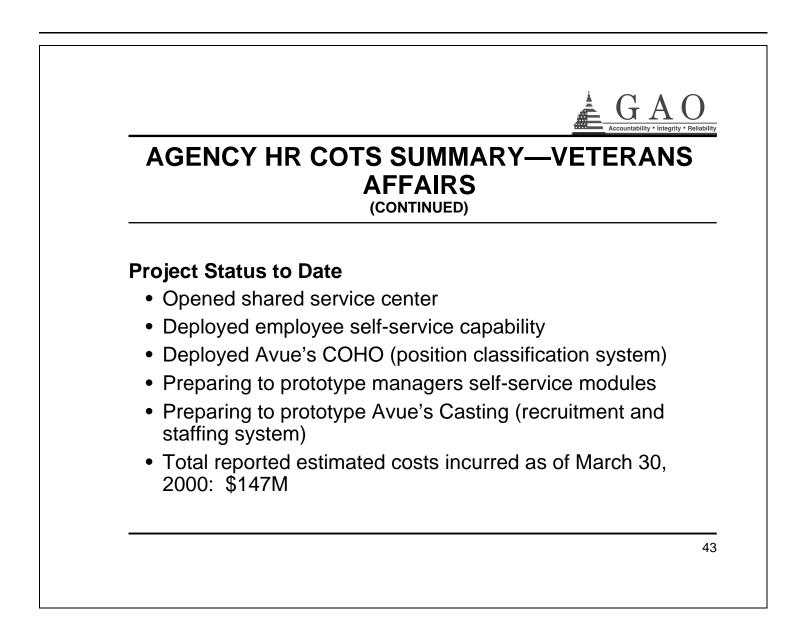
AGENCY HR COTS SUMMARY—VETERA AFFAIRS (CONTINUED)				
Reported E	Estimated Cost	cs, Benefits, N	lilestone:	
System life (years)	12	12		
Milestones Initiation Deployment	Oct 1994 Sept 1999	Oct 1994 Sept 2001	2 years	
	\$170M	\$417M	\$247M	
Cost	·			

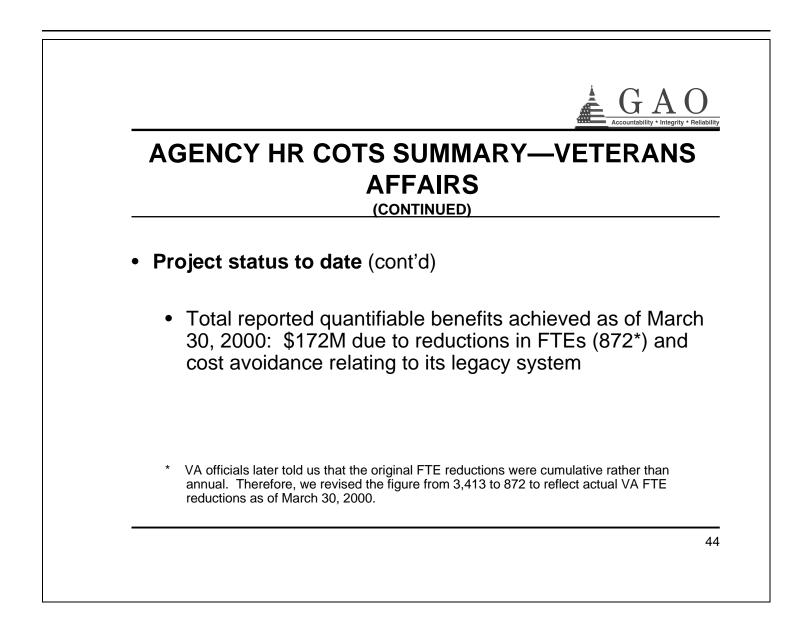












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