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Report to the Chairman, Subcommittee on Technology and Procurement Policy, Committee on Government Reform, House of Representatives

March 2002

DESKTOP OUTSOURCING

Positive Results Reported, but Analyses Could Be Strengthened

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GAO-02-329

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Highlights

DESKTOP OUTSOURCING
Positive Results Reported, but Analyses Could Be Strengthened

Highlights of GAO-02-329, a report to the Chairman, Subcommittee on Technology and Procurement Policy, Committee on Government Reform, House of Representatives.

Why GAO Did This Study

Since 1997, federal agencies have been engaging in an information-technology outsourcing approach for acquiring services in support of their desktop computing environment from a single source, generally known as "seat management." Among its objectives, GAO was asked to determine whether six agencies involved in seat management have realized expected costs and benefits and to identify lessons learned. GAO selected agencies that used various contract vehicles and had at least 1 year of experience with the contract.

What GAO Recommends

So that the six agencies reviewed can determine the extent to which their current seat management programs are achieving positive results, GAO recommends that they monitor actual seat management costs and benefits. Also, to help ensure that future seat management investments of these six agencies are justified, GAO recommends that when considering such investments, these agencies analyze expected costs and benefits and, to the extent feasible, implement the lessons learned in this report.

Of the six agencies that commented on a draft of this report, three agreed with its findings or recommendations, two did not indicate whether they agreed or disagreed, and one supported many of the findings, but disagreed with portions of the report.

What GAO Found

Although the six agencies reviewed reported various positive results from implementing seat management, GAO could not determine whether they were achieving expected costs and benefits because they did not perform sufficient up-front analyses or routinely monitor actual results. All were tracking elements of contractor performance, such as user satisfaction. Although not a substitute for determining whether the benefits of seat management outweigh its costs and risks, this tracking provides an indication of whether expected services are being provided.

Positive results that these agencies reported can be categorized into four general areas: improving information technology management (e.g., using a standard technology environment to eliminate incompatible hardware and software and improve information sharing across an agency); improving end-user support, such as help-desk support; enhancing mission support (e.g., staff were freed from desktop management duties to perform other mission-related duties); and more timely upgrading of technology.

However, these agencies performed limited or, in some cases, no analyses of expected costs and benefits before implementing seat management and did not routinely monitor all actual costs or benefits. These agencies and other organizations consider up-front analyses and subsequent program management critical practices for a successful implementation and have identified various lessons learned from their experiences that would benefit other agencies considering future seat management investments (see list below).

Lessons Learned

Agencies can reduce the risk of an unsuccessful implementation by

- obtaining agency commitment, especially by top management;
- completing thorough up-front preparation and planning activities;
- carefully managing solicitation and contract award activities;
- developing strong program and contract management activities, including monitoring contractor performance;
- developing partnerships between agencies and the seat management contractors in which they work toward establishing and achieving common goals; and
- establishing effective and continual communication within the agency, with the seat management contractor, and among contractors working on related activities.

This is a test for developing highlights for a GAO report. This full report, including GAO's objectives, scope, methodology, and analysis is available at www.gao.gov/cgi-bin/getrpt?GAO-02-329. For additional information about this report, contact David McClure (202-512-6257). To provide comments on this test highlights, contact Keith Fultz (202-512-3200) or e-mail HighlightsTest@gao.gov.

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Abbreviations

ATF	Bureau of Alcohol, Tobacco and Firearms
CIO	chief information officer
CMS	Centers for Medicare and Medicaid Services
DLA	Defense Logistics Agency
FSS	Federal Supply Service
GSA	General Services Administration
IT	information technology
NASA	National Aeronautics and Space Administration
ODIN	Outsourcing Desktop Initiative for NASA
OMB	Office of Management and Budget

G A O
Accountability * Integrity * Reliability

United States General Accounting Office
Washington, D.C. 20548

March 29, 2002

The Honorable Tom Davis
Chairman, Subcommittee on Technology
and Procurement Policy
Committee on Government Reform
House of Representatives

Dear Mr. Chairman:

This letter responds to your request that we review federal agencies' efforts to engage in an information technology (IT) outsourcing[1] alternative for acquiring distributed computing services (typically those pertaining to desktop management) known as "seat management." Generally speaking, under seat management, contractor-owned desktop and other computing hardware, software, and related services are bundled and provided on the basis of a fixed price per unit (or seat). Since the Department of the Treasury's Bureau of Alcohol, Tobacco and Firearms (ATF) pioneered the use of seat management in the federal government in 1997, more than a dozen other federal entities have contracted for seat management services, and still others are considering this approach.

Because more agencies have begun to use the seat management concept, you expressed interest in identifying how well this approach has worked at different entities. Accordingly, our objectives were to (1) determine agencies' rationales for awarding seat management contracts,[2] (2) assess whether estimated costs and benefits have been achieved, (3) ascertain how well agencies have managed the risks associated with seat management, and (4) identify lessons learned.

[1]IT outsourcing describes the activities associated with acquiring IT services from one or more external providers. During outsourcing, a client organization transfers responsibility for one or more IT services to one or more external providers. This responsibility is executed by controlling and managing the processes, people, and technology associated with these services.

[2]The agencies in our review used various governmentwide contracts to implement seat management. As such, they generally did not enter into contracts with the seat management vendors; instead, they used task orders, delivery orders, or blanket purchase agreements, which were placed against existing contracts. For the purposes of this report, however, we will refer to such acquisition documents as contracts.

In addition to the primary objectives, you also asked that we identify the agencies using the National Aeronautics and Space Administration's (NASA) and the General Services Administration's (GSA) seat-management governmentwide acquisition contracts. For the agencies using these contracts, you asked that we identify (1) the types of services for which the agencies contracted and (2) the expected costs and benefits associated with these services. We are providing this information in appendixes I and II for the NASA and GSA governmentwide seat management contracts, respectively.

To determine agencies' rationales for using seat management, estimated and actual costs and benefits, and risk management analyses, we reviewed how seat management was implemented at six agencies: NASA, the Centers for Medicare and Medicaid Services (CMS), Treasury's Departmental Offices and ATF, the Peace Corps, and the Defense Logistics Agency (DLA). We chose these agencies because they (1) used a variety of contracting vehicles, (2) had seat management contracts that had been awarded more than 1 year before our review, and (3) had at least 500 seats.

We reviewed the agencies' seat management contracts, analyses of costs and benefits, processes to monitor contractor performance, risk analyses, and other related documents. To obtain information on lessons learned, we interviewed officials from the six agencies and reviewed applicable documentation. We also interviewed officials from private-sector organizations, including the seat management contractors for the six agencies in our review, and reviewed research on seat management and distributed computer outsourcing published by private research firms. In addition, we interviewed and obtained applicable lessons learned and other documentation from GSA because it (1) manages one of the governmentwide seat management contracts and (2) abandoned an attempt to implement seat management internally in late 2001. Appendix III provides more information on our scope and methodology.

Results in Brief

No single overarching reason emerged regarding why agencies decided to adopt seat management to address their distributed computing needs. Instead, the six agencies in our review adopted seat management for a variety of reasons. The most common rationales pertained to improving IT management, improving user support and productivity, and obtaining or upgrading agency IT. While acknowledging the importance of cost considerations in making the seat management decisions, agency officials

generally stated that lowering the cost of their existing services was not their primary reason for choosing this approach.

All agencies in our review reported that their seat management approaches had achieved positive results, such as improving IT management (e.g., using one standard technology environment to eliminate incompatible hardware and software and improve information sharing across an agency) and improving end-user support, such as help-desk support. However, we could not determine whether any of the agencies were achieving expected costs and benefits because they did not (1) perform sufficient up-front analyses of their baseline and projected costs and benefits and (2) routinely monitor all actual seat management costs and benefits. To their credit, all six agencies tracked contractor performance against specific performance metrics in their contracts in areas such as service delivery and availability. While this type of tracking can be an indicator of whether certain types of goals are being achieved, such as improved user satisfaction, such metrics do not fully address whether the overall cost and benefit goals of seat management programs are being met.

Like any important IT effort, it is critical that agencies consider the risks associated with seat management before adopting this approach, as noted by the Office of Management and Budget (OMB) and our guidance. Four of the agencies in our review identified risks associated with seat management, such as possible cost overruns, schedule delays, or contractor performance problems. However, of these four agencies, none ranked their risks in order of priority, and only one identified actions to mitigate risks before implementing seat management. In addition, two agencies did not perform an analysis of risks at all. One area in which agencies effectively addressed a critical risk was by executing contracts that contained adequate clauses to protect the government in areas such as quality assurance and termination rights.

By applying the lessons learned by agencies that have implemented seat management initiatives, agencies considering this approach could more effectively plan their activities and reduce the risk of encountering problems experienced by others. Agencies and seat management contractors have identified important lessons learned from their implementation experiences, namely that,

- agency commitment is crucial, especially by top management;

- thorough up-front preparation and planning activities must be completed;
- solicitation and contract award activities should be carefully managed;
- program and contract management activities, including monitoring contractor performance, are key;
- partnerships between agencies and the seat management contractors, in which they work toward establishing and achieving common goals, are critical; and
- effective and continual communication within the agency, with the seat management contractor, and among contractors working on related activities, is important.

So that agencies can determine the extent to which their current seat management programs have achieved positive results, we are recommending that each of the six agencies in our review monitor all actual seat management costs and benefits. Also, to ensure that the future seat management investments of these agencies are justified, we are recommending that they establish a baseline for current costs; perform an analysis of expected costs, benefits, and risks; and consider implementing the lessons learned identified in this report.

In providing written comments on a draft of this report, three agencies agreed with our findings or recommendations; two did not indicate whether they agreed or disagreed; and NASA, while supporting many of the findings, disagreed with portions of the report. Specifically, NASA did not agree with our assessment that its up-front cost analysis was not sufficient, that it did not track its internal seat management costs, and that it did not adequately track benefits. As discussed in this report, (1) an analysis conducted by a consulting firm concluded that NASA lacked a comprehensive baseline of its pre-seat-management costs; (2) NASA tracked contractor costs and the number of internal staff involved with seat management; however, the agency did not fully track other internal costs, such as overhead; and (3) NASA tracked contractor performance, which addresses certain expected benefits, but it did not fully monitor others, such as potential increases in user efficiency and productivity. As such, NASA lacks a full picture and analysis of its seat management program.

Background

Although there is no generally accepted definition of seat management, at its core, it involves using a performance-based contract[3] to obtain equipment, software, and services from a private-sector firm to meet an agency's distributed computing requirements (typically pertaining to desktop equipment). Agencies are charged on a per-seat basis for the services provided,[4] but what constitutes a "seat" can vary substantially in terms of the type of equipment and type and level of service provided. For example, a seat can consist of a single type of service sold at a fixed price per unit or as a bundle of different services which, taken together, are also sold at a fixed price. These different views of seat management account, in part, for the different contracting vehicles for seat management in the government. Nevertheless, in its purest form, seat management turns personal computer resources into a utility or commodity in which the customer purchases the right to use the vendor's equipment and resources. The vendor remains the owner of the equipment[5] and is ultimately responsible for its upkeep.

According to Gartner, Inc., a leading private research firm, 1996 to 1998 saw a growth trend in publicly reported desktop-management outsourcing contracts in the private sector.[6] Leading organizations have identified both business- and technology-based reasons for outsourcing IT services. Business-based reasons included being able to (1) focus resources on core business competencies by transferring responsibility for IT services to an external provider and (2) respond more quickly to business and industry changes by leveraging the experience of an external provider. Technology-based reasons for outsourcing included (1) gaining quicker access to technology skills that are in high demand, (2) acquiring the flexibility to grow and shrink high-technology skills as needed, (3) gaining access to enhanced hardware and software, (4) acquiring the ability to refresh hardware and software as needed, (5) aggregating the demand for IT

[3]Performance-based service contracting is a process in which the customer agency specifies the outcome or result it desires and leaves it to the vendor to decide how best to achieve the desired outcome.

[4]In some cases, agencies used their seat management contract to obtain other IT services that were not charged on a per-seat basis.

[5]In at least one instance, an agency chose to retain ownership of the assets obtained through its seat management contract.

[6]Gartner, Inc., *Trends in Desktop Management Outsourcing Contracts, 1996-1998* (March 8, 1999).

resources from across the organization, and (6) achieving a more standardized IT environment.

A similar growth in IT service contracts occurred in the federal government. Specifically, the government's purchases of IT services have increased from $3.7 billion in fiscal year 1990 to about $13.4 billion in fiscal year 2000. In the case of distributed computing services outsourcing, ATF is generally acknowledged as the pioneering federal agency in implementing seat management since it initially outsourced its desktop and network services in late 1997. In mid-1998, NASA and GSA awarded governmentwide seat-management indefinite-delivery, indefinite-quantity contracts. First, in June 1998, NASA awarded contracts to seven prime contractors under its Outsourcing Desktop Initiative for NASA (ODIN) governmentwide contract. The next month, GSA awarded contracts to eight prime contractors under its GSA seat management contract. As of December 31, 2001, two agencies were using the NASA ODIN contract, and eight agencies were using the GSA seat management contract (see apps. I and II for additional information about these agencies). In addition, some agencies are using GSA's Federal Supply Service (FSS) Schedule 70 contracts[7] to obtain seat management services or have developed and managed their own seat management contracts.

Table 1 illustrates the different seat management approaches taken by the six agencies in our review, categorized by the contract vehicle used by each.

[7]Under the schedule program, GSA enters into indefinite-delivery, indefinite-quantity contracts with commercial firms to provide commercial goods and services governmentwide. Schedule 70 contains contracts related to general-purpose commercial IT equipment, software, and services.

Table 1: Types of Seat Management Services and Cost Data for Agencies We Reviewed

Contract/ Agency	Date of contract award[a]	Contract term	Number and types of seat management services acquired, as of July 31, 2001	Reported actual contract costs, as of July 31, 2001	Comments
GSA's seat management master contract					
Peace Corps	April 2000	3-year base period, with two 1-year option periods	683 general-purpose desktop seats 171 portable computer seats 31 server seats 127 network printer seats 39 communication device seats Additional services include off-site tape storage and application program development support.	$7,564,396	Under the terms of the master GSA seat management contract, infrastructure management (e.g., network management); user support (e.g., help desks); and asset management services are bundled as a part of a seat.
Treasury's Departmental Offices	June 1999	1-year base period, with nine 1-year option periods First two options exercised	1,642 desktop seats 700 portable computer seats (other equipment, such as servers, printers, and routers, are included in the price of these seats) Additional services include voice/telephone administration, Web-site support, training, fax support, personal digital assistant support, and the establishment of a classified network.	26,678,415	Same as above.

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Contract/ Agency	Date of contract award[a]	Contract term	Number and types of seat management services acquired, as of July 31, 2001	Reported actual contract costs, as of July 31, 2001	Comments
NASA's ODIN master contract					
NASA's Kennedy Space Center[b]	November 1998	3 years 3-year follow-on contract also awarded to incumbent contractor[c]	3,013 general-purpose desktop computing seats 421 scientific and engineering computing seats 364 maintenance-only seats 293 network-attached device seats (a desktop unit acquired from non-ODIN sources attached to the network) 57 World Wide Web seats 40 application database seats 109 file storage seats 17,615 telephone service seats 48 remote communications seats Additional services include asset management; help-desk services; catalog orders (e.g., printers); special orders (e.g., toner for network printers); and infrastructure upgrades (e.g., upgraded telephone system).	30,151,512	Under the terms of the NASA ODIN master contract, agencies may acquire one or more categories of service (such as desktop hardware and software) without other types of services (such as local- or wide-area-network services). Some associated services, such as user support and infrastructure management, are provided as a part of these seats.
CMS	June 1999	3 years	5,100 general-purpose desktop computer seats 325 portable computer seats Additional services include asset management; catalog orders; special orders (e.g., engineering services); and infrastructure upgrades (e.g., gateway servers).	20,462,675	Same as above.
GSA's FSS Schedule 70 contracts					
ATF	April 2001	3 years	6,000 desktop/laptop computer seats 300 server seats 1,143 printer/scanner seats 1,275 nonseat annual server, printer, and scanner maintenance support Additional services include centralized management, help-desk support, desk side support for key personnel, order tracking and support, network infrastructure, and installation services (which includes asset management and order tracking).	62,070,575	ATF awarded its first seat management contract on October 9, 1997. After this contract expired, ATF awarded a second 3-year contract to the incumbent contractor in April 2001. The contract costs are from the date of the original contract.

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Contract/ Agency	Date of contract award[a]	Contract term	Number and types of seat management services acquired, as of July 31, 2001	Reported actual contract costs, as of July 31, 2001	Comments
DLA[d]	April 2000	1-year base period, with four 1-year options[e] First option exercised	2,102 desktop computer seats 251 laptop computer seats 1,523 printer seats 68 server seats 4 plotter seats, 64 personal digital assistant seats Additional services include local-area-network administration and operations; technical support; desktop and server maintenance; asset and configuration management; installations, moves, additions, and changes; network monitoring; monthly service-level reporting; and help-desk support.	6,781,493	DLA has maintained ownership of the assets acquired through its seat management contract.

[a]This is the date of the resulting delivery order, task order, or blanket purchase agreement signed by the agency.

[b]NASA implemented seat management at 10 different sites. Each site had a different mix of seats and services. Since this table is for illustrative purposes, we used the Kennedy Space Center as an example of a NASA seat implementation site because we visited this site. See appendix I for further information on the other 9 NASA seat implementation sites.

[c]Instead of optional years, NASA's contract authorizes the award of sole-source follow-on contracts in which a new delivery order is negotiated and signed with the incumbent contractor.

[d]At the time of our review, DLA had implemented seat management only at its headquarters complex.

[e]DLA's base period was from October 1, 2000, through September 30, 2001, following a transition period from the date of contract award through September 30, 2000.

Source: GAO, based on documents from each of the agencies. We did not verify this information.

Rationales for Adopting Seat Management Varied

Each agency in our review cited unique reasons for implementing seat management. However, the most common ones fit into three categories: (1) improving IT management, (2) improving end-user support and productivity, and (3) obtaining new technology or upgrading current technology. In addition, although lower cost was not the primary reason that agencies chose the seat management approach, cost issues were a consideration.

- *Improving IT management*. Five of the six agencies reported that part of their rationale for implementing a seat management approach was to enhance management of IT resources, which included improvements to areas such as standardization, asset management, and IT human capital. For example, the Peace Corps implemented seat management, in part,

to improve and standardize its IT environment—which consisted of diverse, old, and incompatible computing equipment—and to obtain a reliable inventory of its IT assets. As another example, NASA wanted to shift IT asset management responsibilities for its diverse enterprises to contractors and use government personnel that were performing desktop support for other mission-related work.

- *Improving end-user support and productivity.* All six agencies reported that at least part of their rationale for implementing seat management was to improve desktop management from a user perspective. Agency officials stated that they wanted to improve user satisfaction and service levels or optimize service delivery by using commercial best practices. For example, DLA implemented seat management to address the operational impairment of the users at its headquarters complex due to problems with its distributed computing environment, including frequent and extended local-area-network downtime and remote access problems. Treasury's Departmental Offices implemented seat management, in part, to combine several services, such as help-desk support and maintenance, so that users could have a single point of contact rather than having to deal with multiple vendors.

- *Obtaining new technology or upgrading current technology.* Four agencies reported that part of their rationale for implementing seat management was to obtain technology, upgrade current software and hardware, and/or provide for periodic technology refreshment. For example, ATF wanted to provide its special agents, field inspectors, and support staff with personal computers and laptops because they could not communicate vital information with each other unless they used unsecured cellular or public telephones. Furthermore, ATF wanted to institute a technology refreshment program to upgrade or replace its equipment every 3 years. Another example is CMS, which implemented seat management in part to update its systems and to ensure that its equipment was compliant with Year 2000 requirements.

Reducing Costs Was Not the Primary Objective

Although half the agencies said that reducing costs was one of their seat management objectives and acknowledged its importance, agency officials noted that it was not the primary objective. The other agencies cited reasons other than costs for implementing seat management. For example, DLA officials indicated that the critical issue for their agency was improving its headquarters computing environment, which, among other

problems, had frequent downtimes. In addition, Peace Corps officials stated that the agency did not choose seat management to reduce the agency's budget requests associated with distributed computing and did not expect that it would. Although cost reduction may not have been a primary objective, other cost-related considerations, such as the ability to better predict and manage their costs, were cited by all of the agencies as reasons for implementing seat management.

The organizations in our November 2001 IT services outsourcing study also did not identify reducing the overall costs of the existing IT service as a reason for their decision to implement an outsourcing solution.[8] However, their reasons did include some cost considerations, namely, to reduce capital investments and to better predict operating costs by contracting for IT services using a standard unit of measure. For example, under seat management, services are priced on a per-seat basis.

Agencies Reported Positive Seat Management Results, but Costs and Benefits Were Not Adequately Assessed and Monitored

Although every agency in our review reported positive results from implementing seat management, we could not determine whether they were achieving expected costs and benefits because the agencies had not (1) conducted adequate pre-seat-management analyses and (2) tracked all actual costs and benefits. Specifically, agencies generally did not sufficiently analyze their baseline and projected costs and benefits up front and monitor actual implementation results. Without such critical information, an agency is not positioned to make well-informed decisions about seat management options or able to convincingly demonstrate real results. Although the six agencies were not monitoring overall seat management benefits, all were tracking elements of contractor performance. While it can be an important indicator of results, tracking contractor performance is not a substitute for tracking whether the overall cost and benefit goals of the seat management program are being achieved.

Agencies Reported a Variety of Seat Management Results

The six agencies in our review reported that their seat management initiatives had achieved positive results. These results relate to a wide variety of areas that can be categorized into four general areas: improving IT management, improving end-user support, enhancing mission support,

[8]U.S. General Accounting Office, *Information Technology: Leading Commercial Practices for Outsourcing of Services*, GAO-02-214 (Washington, D.C.: November 30, 2001).

and upgrading technology. Many of these reported accomplishments directly correlate with the reasons that agencies chose to implement seat management.

- *Improving IT management*. Five agencies noted improvements in areas such as asset management, security, standardization and interoperability, and/or planning for periodic technology refreshments. For example, the Peace Corps reported that before implementing seat management, the agency had a wide variety of incompatible hardware and software that made it difficult for employees to easily share information, and that managing its assets was very difficult. According to Peace Corps officials, seat management allowed the agency to implement a standard technology environment and, as a result, information is much more easily shared across the agency. Various NASA organizations also reported a myriad of IT management improvements, such as improved consistency and currency of operating systems and applications; the automated distribution of software, including computer virus protection; a better understanding of the entity's IT inventory, which resulted in the removal of obsolete equipment; and improved software license management.

- *Improving end-user support*. All six agencies reported that end-user support has improved since they implemented seat management. In particular, they generally reported improvement in the quality and timeliness of help-desk support. At DLA, for example, before seat management, customer dissatisfaction with its headquarters IT help-desk services was widespread. DLA seat management officials believe that, on the basis of the results of customer surveys, the quality and timeliness of the help-desk support improved substantially after seat management was implemented. At NASA, officials in the Office of Space Flight reported that implementing seat management has resulted in more consistent high-quality service to all users.

- *Enhancing mission support*. All six agencies stated that seat management has enhanced their mission support and productivity because, for example, the staff were assigned to other duties or were freed from desktop management duties. In one case, the Treasury assistant director responsible for seat management said that after implementing seat management, fewer agency employees were needed to support IT operations for the Departmental Offices. Therefore, Treasury was able to reassign six staff to other organizations within the department to help develop new applications software and work on

security issues. Similarly, NASA's Office of Space Flight reported that seat management helped improve the agency's asset management services by reducing the amount of work that agency staff have to perform to maintain annual inventories of government-owned property and auditing of contractors' property control procedures.

- *Upgrading of technology.* Four agencies reported that they upgraded their technology under seat management in a timely manner. For example, using the seat management contract, ATF provided over 4,000 personal and laptop computers to field agents, among others, in about 6 months. CMS reported that seat management enabled it to deploy Year 2000 compliant equipment and software throughout the agency in a little more than 3 months.

Agencies Lacked Facts on Whether Expected Costs and Benefits Were Being Achieved

We could not determine whether the agencies were achieving expected costs and benefits because they generally did not (1) sufficiently analyze their baseline and projected costs and benefits up front and (2) routinely monitor all actual seat management costs and benefits. Like any other major IT investment, seat management initiatives should be supported by a well-developed business case that evaluates the expected returns against the costs. An explicit understanding of the expected costs and benefits up front provides the basis for a sound financial and strategic decision and creates a baseline against which managers and executives can measure progress. According to OMB guidance, an analysis of the expected costs and benefits of IT investments, as well as the costs and benefits of alternatives, should be included in the justification for major investments.[9] Similarly, our guidance on IT investment management calls for agencies to identify the expected costs and benefits of proposed investments.[10] In addition, our research on leading commercial practices for acquiring IT

[9]Office of Management and Budget (OMB), Circular A-130, *Management of Federal Information Resources* (November 30, 2000) and Circular A-11, Part 3, *Planning, Budgeting, and Acquisition of Capital Assets* (July 2001). These circulars define capital assets as including IT that is used by the federal government and has an estimated useful life of 2 years or more. Such assets may be acquired in different ways, including through lease/purchase or other capital leases regardless of whether title has passed to the federal government or through an operating lease for an asset with an estimated useful life of 2 years or more.

[10]U.S. General Accounting Office, *Information Technology Investment Management: A Framework for Assessing and Improving Process Maturity*, GAO/AIMD-10.1.23, Exposure Draft (Washington, D.C.: May 2000).

services found that the optimizing and baselining of existing internal IT processes provide an organization with the information to make a sourcing decision.[11]

Although all six agencies analyzed their expected seat management costs and/or benefits or baselined their existing environment, these analyses were missing critical elements. Specifically,

- NASA and CMS estimated the costs and benefits that they expected to achieve with seat management, including an analysis of alternatives. However, internal agency costs, such as those associated with program and contract management, were not included in their estimates. Moreover, NASA and CMS's analyses did not include a thorough or reliable baseline of the costs associated with their pre-seat-management computing environments. For example, in a November 2001 postimplementation report, a private-sector firm concluded that it was not possible to determine with any degree of confidence whether NASA had saved money because of the lack of a comprehensive baseline.[12]

- While Treasury's Departmental Offices estimated the costs of seat management and an alternative, it did not estimate the benefits for either approach. In addition, the cost estimate was developed about a week before the contract award and was based on the winning bidder's proposal.

- Although DLA and the Peace Corps performed analyses of their pre-seat-management costs, they did not estimate the expected costs or benefits of seat management or any alternatives. In addition, the Peace Corps' analysis was not a true baseline for the seat management program that the agency implemented because it included (and did not distinguish between) the costs for both domestic and foreign operations, whereas it implemented seat management only for its domestic operations.

- ATF did not estimate the costs and benefits of seat management or alternatives before implementing this approach in 1997. However, in

[11]GAO-02-214.

[12]Kelly, Anderson & Associates, *ODIN Program, The Outsourcing Desktop Initiative for NASA: Post Implementation Business Case Assessment* (November 2001).

2000, when the contract was under consideration for renewal and the agency was reviewing its possible choices, a cost study was performed that identified the agency's total cost of ownership and service levels under seat management and compared them with peer organizations. However, this study did not include an analysis of non-seat-management[13] alternatives or expected benefits.

The agencies cited various reasons for not completing a thorough analysis of their existing environment and expected costs and benefits of seat management and alternatives, including that they lacked time or resources to complete the analysis, that upper-level management had mandated that outsourcing and a performance-based contract be used, and that budgetary savings was not a goal of the seat management program. However, such an approach is risky. Together with OMB, we have long held that the analysis of costs and benefits is critical to IT investment decision-making. As we noted in our 1997 IT investment guide, an IT investment process cannot operate effectively without accurate, reliable, and up-to-date data on project costs and benefits.[14] In addition, it is important that agencies consider the criticality of distributed computing to their mission, not just the size of the investment, when determining the necessary comprehensiveness of the analyses of costs and benefits.

Once an IT investment is implemented, OMB Circular A-130 and our IT investment management guide[15] recommend that agencies validate whether estimated costs and benefits are being achieved. In an outsourcing arrangement, to obtain a true picture of the cost of the investment, it is important to consider both the cost of the contract as well as the agency's internal costs to administer the program and contract. Each of the six agencies tracked contractor costs. However, while they provided us with estimates of their internal costs for managing the seat management contract and program (in some cases just providing salaries and benefits for a given month), agencies in our review did not routinely monitor all

[13]The analysis included an assessment of using the GSA seat-management contract alternative.

[14]U.S. General Accounting Office, *Assessing Risks and Returns: A Guide for Evaluating Federal Agencies' IT Investment Decision-making*, GAO/AIMD-10.1.13 (Washington D.C.: February 1997).

[15]GAO/AIMD-10.1.23.

internal agency costs associated with seat management.[16] Such costs can be substantial. For example, NASA's Kennedy Space Center reported that its salaries and benefits to manage the Office of Space Flight's four seat management implementations in July 2001 were about $146,000. If projected over the life of the original 3-year contract,[17] the center's salaries and benefit costs to manage this initiative would be about $5.3 million.

None of the agencies routinely monitored the actual overall benefits of their seat management programs. This includes the two agencies (NASA and CMS) that had estimated the quantifiable benefits that they had expected to achieve. For example, CMS estimated that it would have achieved quantifiable benefits of about $22 million between fiscal years 1999 and 2001 in increased staff productivity and the avoidance of costs associated with, for example, asset theft. However, CMS has not validated whether these benefits have been achieved. The agencies had a variety of reasons for not monitoring actual benefits, including that they lacked resources or that, because they did not baseline their costs before seat management, they did not have a basis to perform a comparison. Since agencies' rationales for adopting seat management were generally to meet certain programmatic objectives and not to achieve cost savings, it is especially important that they monitor benefits to ensure that their seat management programs are meeting these objectives.

Although the six agencies were not tracking overall seat management benefits, all of them were measuring and tracking some aspects of contractor performance, typically by reviewing contractor-provided data periodically (e.g., monthly or quarterly). The agencies have specific performance metrics within their contracts to measure contractor performance, generally including measures related to service delivery and availability and user satisfaction or help-desk performance. The agencies

[16]During exit conferences with the agencies, most acknowledged that they did not monitor all internal agency costs but stated that they could identify the number of staff associated with the management of their seat management programs. In addition, DLA provided us with several months' worth of costs, which included categories such as salaries and benefits, travel, rent, communication, and utilities. However, these costs were for the entire Technology Services and Infrastructure Support Directorate, of which the seat management office is only a part. A DLA official stated that the agency could extract the seat management costs from these amounts, but these data are not presented to management at that level of detail.

[17]In June 2001, NASA signed a 3-year follow-on contract with the incumbent Kennedy Space Center seat management contractor, with a period of performance beginning December 1, 2001.

use these measures as the basis for approving vendor payments, awarding bonuses or other incentives, and/or applying penalties.[18] For example, one agency assessed its contractor's performance against 24 service-level agreements,[19] such as server availability and customer satisfaction, to determine whether penalties were warranted (this agency's contract does not provide for incentives or bonuses). For fiscal year 2001, this agency assessed its contractor penalties totaling $30,295. In another example, NASA uses "retainage" pools in which a certain percentage (the amount of which is determined by each center's contract) of the contractor's monthly seat price is retained by the government and disbursed periodically on the basis of a review of the contractor's performance. One center retained about $893,000 between December 1998 and June 2001, of which it disbursed about $509,000.

Agency seat management contracts sometimes did not include contractor performance measures pertaining to all business goals of the seat management program. For example, one of the Peace Corps' performance goals in its September 2000 strategic plan is to pursue efforts to cut costs and improve agency productivity. Although the implementation of seat management is a part of the evaluation criteria associated with this goal, the agency's seat-management performance metrics plan does not include a performance measure for cost reductions or improvements to agency productivity. In another case, a private-sector firm's review of NASA's ODIN program noted that the agency's contracts address only portions of its program objectives. The firm recommended that NASA initiate a full review of its metrics.

Although critical to ensuring that the agency is obtaining contractually required services and an indicator that certain types of benefits are, or are not, being achieved (e.g., improved user satisfaction), measuring and tracking contractor performance does not take the place of tracking the overall benefits of seat management programs. For example, contractor performance metrics do not measure many of the types of benefits that

[18]Three of the agencies in our review have awarded incentives or applied penalties to their contractors. In addition, ATF has not finalized its service-level agreements with its seat management contractor. Agency officials stated that they are monitoring contractor performance against these interim agreements but have not finalized the penalties and incentives that will be associated with the final service-level agreements.

[19]Service-level agreements define the agency's expectations and are used to track and measure a contractor's performance.

agencies believe they are achieving or wanted to achieve, such as increased end-user productivity, improved mission support through the transfer of agency IT staff to more critical tasks, and improved standardization.

Some agencies have recognized the need to review their actual seat management costs and benefits and have obtained, or plan to obtain, independent assessments of at least some aspects of their seat management program. For example,

- NASA contracted with a private-sector firm to perform a postimplementation business case assessment. In November 2001, this firm reported that (1) over 90 percent of NASA management officials surveyed indicated that ODIN provided some benefit in areas such as improved service and standardization and (2) it was impossible to determine whether NASA is saving money because of the lack of a comprehensive pre-seat-management baseline, although there was some evidence that the agency had achieved savings due, at least in part, to seat management.

- In late 2000, CMS conducted a pilot total-cost-of-ownership study of its post-seat-management distributed computing environment using a private-sector methodology and software tool. CMS limited its data collection to readily available information and did not attempt to conduct a full-scale study.

- DLA plans to have a contractor complete a postimplementation total-cost-of-ownership study, which evaluates the current distributed computing environment of an organization, and user satisfaction benchmark survey in the spring.

- In January, Treasury signed a contract for the completion of a total-cost-of-ownership seat management study that is expected to be completed in June 2002. In responding to a draft of this report, Treasury's Departmental Offices stated that this study is expected to (1) review current costs and associated benefits and (2) allow the department to predict the expected costs of services for the future years of the contract and identify specific benefits expected to be derived from these costs.

- Peace Corps officials stated that the agency intends to issue a contract for a total-cost-of-ownership review by the end of this fiscal year to help it identify seat management results. In addition, the Peace Corps

contracted for an independent review of user satisfaction, and it expects to receive the final report pertaining to this review by the end of March. In commenting on a draft of this report, the Peace Corps stated that it expects that these analyses will address agency productivity and cost-reduction performance indicators.

For postimplementation reviews to be most effective, it is critical that agencies have an established baseline before implementation so that there could be a basis of comparison for determining progress. However, because most of the six agencies did not have a full or reliable baseline of their costs before implementing seat management, it would be difficult to validate whether any cost savings had been achieved. For example, the CMS seat management program manager told us that it would be difficult to determine whether expected cost savings are being achieved because the agency lacks comparable information on its costs before implementing seat management.

Risks Were Identified, but Analyses Were Incomplete or Not Timely

Although four agencies identified a variety of risks, these analyses were incomplete or not performed in a timely manner. OMB and our guidance note that agencies should address potential risks, such as investment, organizational, funding, and technical risks, when considering new IT investments.[20] Not identifying risks or developing strategies to resolve them can be problematic since most IT investments require a constant focus on interim results and successful risk management strategies to effectively address existing or emerging factors that influence implementation results. Nevertheless, of the four agencies that identified seat management risks, none ranked their risks and only one identified actions to mitigate risks before implementing seat management. In addition, two agencies did not assess risks at all. One important risk area associated with outsourcing—ensuring that contracts contain clauses that protect the government's interests—was adequately addressed by the six agencies for (1) quality assurance, (2) termination rights, and (3) the government's rights to supplied hardware and software at the end of contract performance.

Of the six agencies we reviewed, four identified risks associated with their seat management implementations. In particular, consistent with OMB and

[20]Office of Management and Budget, Circular A-11, Part 3 Supplement, *Capital Programming Guide*, and GAO's IT investment management guidance, GAO/AIMD-10.1.23, and GAO/AIMD-10.1.13.

our guidance, which specifies a variety of risks for agencies to consider,[21] these four agencies identified risks relating to costs, time frames for implementation, contractor performance, and technical issues as well as other risks. Examples of risks identified in these categories are discussed below:

- *Costs*. All four agencies identified cost as a risk. For example, Treasury determined that its cost risk was low because multiple vendors would be bidding.

- *Time frames for implementation*. Three agencies identified possible delays as a risk. For example, CMS identified implementation as a risk that it would mitigate by developing milestones and providing contract incentives.

- *Contractor performance*. Three agencies identified contractor performance issues as a risk area. For example, NASA identified contractor performance as a manageable risk, but was concerned that if it were to become a problem, mission effectiveness might be compromised because the agency would have limited staff available to correct the deficiencies. The agency planned to address this risk by, for example, limiting the contract to 3 years and having a pool of vendors from which to choose.

- *Technical issues*. Three agencies identified technical issues as a risk area. For example, CMS was concerned about the suitability of the hardware and software to be provided by its seat management contractor. CMS addressed this risk by requiring testing of equipment proposed by firms competing for the seat-management contract award, requiring postaward testing of initial equipment installations, and using an independent contractor to test the capabilities of systems proposed for the refreshment cycle.

- *Other risks*. Two agencies identified other risks. For example, NASA identified the need for coordination between ODIN-related desktop and intracenter communication architectures and other major agency initiatives, including its Integrated Financial Management Program, and vendors providing non-ODIN computing and communication services.

[21]See footnote 20.

NASA's plans for addressing these risks included extensive internal communication and the development of program interface agreements.

Even though four agencies identified the risks associated with seat management, these analyses were incomplete and/or not timely. Specifically,

- None of the analyses ranked risks in order of their potential impacts on agency operations. OMB's guidance provides examples of how risks can be characterized by the likelihood of their occurrence and the severity of potential consequences and then ranked according to their importance.[22]

- Only CMS identified actions, before implementing seat management, to mitigate risks. NASA also identified actions to mitigate risks, but this analysis was conducted over a year after award of the ODIN master contract. The other two agencies did not identify planned mitigation actions. OMB's *Capital Programming Guide* states that agencies should determine how best to mitigate the impact of each risk that they identify.[23] Developing preventive measures and countermeasures to successfully deal with problems as they develop is critical.

Two of the agencies in our review, ATF and the Peace Corps, did not assess their seat management risks at all. According to ATF officials, the agency did not assess the risks of its seat management initiative because it was ordering equipment and services from the FSS schedule and chose to rely on maintaining a close relationship with its contractor to ensure quality services. However, this approach is not a substitute for a well-thought-out assessment of risks that includes mechanisms to mitigate identified risks. As for the Peace Corps, agency officials stated that they lacked the resources to conduct a risk assessment.

[22]Office of Management and Budget, *Evaluating Information Technology Investments: A Practical Guide* (November 1, 1995) and Circular A-11. One ranking process included assigning a score ranging from 1 to 10 to each risk and then multiplying each score by a percentage weight reflecting the relative importance of each factor in the agency's decision processes.

[23]Mitigation approaches include transferring, avoiding, reducing, assuming, and sharing the potential for an event that could produce an adverse consequence, or for the adverse consequence itself.

Because seat management relies on the use of contractors to perform critical IT services, it is essential that the contract contain certain clauses that reduce the government's risks. In particular, the Federal Acquisition Regulation requires that contracting officers include in contracts, including seat management contracts, appropriate quality requirements. The type and extent of contract quality requirements needed depend on the particular acquisition and may range from inspection at the time of acceptance to requiring that the contractor implement a comprehensive program for controlling quality. In addition, seat management contracts, as government contracts, should include provisions for termination for the convenience of the government and termination for default. Finally, seat management contracts should include some provision for the disposition of contractor-supplied property (hardware and software) at the end of contract performance to ensure agency operations continue uninterrupted.

All of the agencies' contracts adequately addressed the issues of quality assurance, termination rights, and rights to supplied hardware and software at the end of contract performance.[24] In general, the contracts making use of the GSA and NASA master contracts—the Peace Corps, Treasury's Departmental Offices, NASA, and CMS—tended to be more comprehensive in dealing with these issues than the contracts making use of GSA schedule contracts—DLA and ATF. The GSA and NASA master contracts were more likely to include specific provisions, especially regarding the disposition of hardware and software, than the GSA schedule contracts, which more typically relied on standard government contract clauses.

Lessons Learned Can Help Other Agencies More Effectively Implement Seat Management

By incorporating lessons learned from those who have implemented seat management, agencies considering this approach could more effectively plan their activities and reduce the risk that they will encounter problems experienced by others. Moreover, incorporating lessons learned from peers who have engaged in similar sourcing decisions is a leading commercial practice for acquiring IT services. The numerous lessons identified by agencies, their contractors, and private-sector research firms generally fall into six categories: (1) agency commitment, (2) preparation and planning, (3) solicitation and contract award, (4) program and contract management,

[24]The DLA seat management contract did not specifically address disposition of contractor-supplied hardware and software. DLA advised us that it bought and maintained ownership of all contract assets.

(5) agency/contractor partnership, and (6) communication. These lessons are generally consistent with our report issued last year on the leading commercial practices for acquiring IT services.[25] In addition, these lessons are often interrelated and build on one another. For example, if an agency's preparation and planning are lacking, developing an effective solicitation and contract award process could be difficult.

Agency Commitment Is Crucial

Moving to outsourcing solutions such as seat management can involve a cultural change for government organizations because it may require a change to an agency's operating model, such as using a contractor to provide IT services using a performance-based contract. In the past, an agency's IT services may have been provided by government staff, in which case it is important that the agency consider the impact of outsourcing on these employees. In addition, the agency may not be familiar with outsourcing or the use of performance-based contracts, in which the customer agency specifies the outcome or result it desires and allows the vendor to decide how best to achieve the desired outcome. As a result, it is crucial that agencies demonstrate a commitment to change. Without such a commitment, success is more difficult to ensure. For example, according to the GSA Federal Technology Service's chief information officer (CIO), GSA's decision to implement seat management was driven, in part, by the desire to show the agency's support for its seat-management governmentwide acquisition contract.[26] He asserted that GSA's seat management implementation did not succeed because the agency's culture did not support the change, and seat management was not implemented in a consistent manner throughout the agency. GSA's FSS CIO provided a similar assessment of the agency's seat management implementation.

One way that an agency can demonstrate a commitment to seat management is through the involvement of top agency officials. Our wide-ranging work on federal management issues has shown that perhaps the single most important element of successful management improvement

[25]GAO-02-214.

[26]In the exit conference with GSA, agency officials noted that while the timing of the decision to implement seat management may have been driven by the desire to show the agency's support for the concept, the agency also implemented seat management to achieve other goals, such as increased standardization and decreased costs per seat.

initiatives is the demonstrated commitment of top leaders to change.[27] Moreover, our research has shown that executive leadership is a critical success factor for outsourcing IT services in the commercial world. The applicability of this principle to seat management was echoed by federal agencies and private-sector organizations alike. For example, (1) Treasury's seat management program manager stated that for seat management to succeed, agency executives need to understand and support it; (2) NASA's ODIN delivery order contracting officer representative at the Goddard Space Flight Center noted that outsourcing is extremely difficult unless there is a clear mandate from the top of the organization; (3) a NASA consultant's report stressed that unequivocal senior management support of ODIN is vital to its success; and (4) a member of the Industry Advisory Council's Managed Services Shared Interest Group[28] stated that top agency officials, including the CIO, chief operating officer, and chief financial officer must "buy in" to seat management and be committed and involved.

To address the culture change sometimes imposed on an agency implementing seat management, the Managed Services Shared Interest Group and GSA's Federal Technology Service noted that *change management processes* can help address this issue. In addition, our research of leading practices associated with the outsourcing of IT services provided examples of actions that entities can take to demonstrate executive leadership, namely the following:

- *keep the entire organization informed* throughout the outsourcing initiative;
- *conduct regular peer-to-peer meetings* at each level in the organization;
- *secure key executive support* before eliciting organizational support; and
- *establish a communications team* to promote the idea of outsourcing.

[27]U.S. General Accounting Office, *Management Reform: Elements of Successful Improvement Initiatives*, GAO/T-GGD-00-26 (Washington, D.C.: October 15, 1999).

[28]The Industry Advisory Council is an organization of IT professionals representing more than 270 companies nationwide that provide products and services to the public. The mission of its Managed Services Shared Interest Group is to facilitate information flow; foster dialog about best practices; and influence the future of managed services (which includes seat management) to the mutual benefit of government, industry, and end users.

Preparation and Planning Are Critical

Success in implementing seat management rests in large part on thorough preparation and planning both before and after the contract is awarded. For preaward planning, it is vital that an organization optimize and baseline its internal IT processes to provide it with essential information to make a sourcing decision.[29] Another important preaward planning process is developing a business case that evaluates the expected returns against the costs and focuses on strategic objectives that are agreed on by key stakeholders. Moreover, it is critical that agencies gather as much data as possible regarding, for example, inventories, transaction volumes, and service requirements. Finally, according to Gartner, the most positive desktop outsourcing outcomes should be expected when the outsourcing organization's desktop environment is already under control (including having good standards, established processes, and predictable service levels) and effort is expended to define and maintain an effective relationship between the affected parties.[30]

Without such preaward preparation and planning, agencies could encounter significant problems during implementation. For example, Peace Corps officials reported that the agency had file conversion problems during its seat management transition because it did not know the size and number of files involved and greatly underestimated the time that it would take to complete the conversion. Peace Corps seat-management contractor officials estimated that solving the file conversion problem required the vendor to add five staff members over a 2-month period. One of the contractor officials added that the vendor did not pass these costs on to the Peace Corps because the vendor wanted to demonstrate its commitment to the contract.

[29]GAO-02-214.

[30]Gartner, Inc., *Desktop Management Outsourcing: Do's and Don'ts*, Research Note DF-14-0931 (October 2, 2001).

Postcontract award planning is equally important. In particular, agencies in our review, as well as private-sector organizations,[31] repeatedly cited the importance of the transition period between awarding the contract and reaching a "steady state." In addition, GSA's seat-management program office noted that one of the most difficult aspects for both the agency and the contractor is learning the existing infrastructure during the transition period. Officials from two agencies stated that they should have allowed for more time to complete the transition period. One of these officials asserted that the agency should have doubled the amount of time for transition because the 3-month period that it had used did not allow adequate time to set up help-desk procedures or define how to monitor the network. The seat management contractor for this agency also acknowledged that the transition period was ill-defined and did not adequately lay out the parallel operations with the incumbent contractor. Continuous planning after the transition period is also important. For example, officials at Treasury and NASA noted the importance of planning ahead for technology refreshments and future IT requirements, respectively.

Examples of practices that agencies and/or private-sector organizations implemented, or suggested should be implemented, in the planning area are as follows:

- *Solidly track and measure the existing IT organization.* A leading research firm, the Giga Information Group, Inc., suggested that an entity employ solid tracking and measurement of its IT organization before outsourcing because only then would it be able to determine whether the arrangement has been successful.[32] In addition, this firm noted that constructing payments and incentives accurately is extremely difficult, if not impossible, unless the entity has already established measurements for the functions being outsourced.

- *Consider using a total-cost-of-ownership study.* Officials from the Managed Services Shared Interest Group, the Peace Corps, DLA, and GSA cited the value of total-cost-of-ownership studies, which evaluate

[31]The private-sector organizations referred to in this section include the seat management contractors for the six agencies and GSA; Gartner, and Giga Information Group, Inc. (private research firms); and members of the Managed Services Shared Interest Group.

[32]Giga Information Group, Inc., *Payment and Incentives for Outsourcing Management* (July 27, 2000).

the current distributed computing environment of the organization. For example, a member of the shared interest group stated that meaningful data must be collected to put the agency's current environment and its associated costs in perspective. Officials from DLA and the Peace Corps also suggested outsourcing the total-cost-of-ownership studies. For example, DLA officials believed that the agency's use of an objective consulting firm to help develop a total-cost-of-ownership study and other analyses worked well because the agency was able to take advantage of the firm's seat management expertise.

- *Develop a transition plan*. Among the most important lessons learned identified by a GSA-supported, seat-management lessons-learned workshop was to develop a detailed project/transition plan. In addition, a leading commercial practice for the outsourcing of IT services is developing a transition plan, which can help make the move from internal to external IT services a smooth one. The clear definition of responsibilities and the careful consideration of employees' needs matched against the organization's needs enable both the client and the provider to focus on responsibilities that they can execute successfully.[33] In addition, officials from DLA suggested that agencies establish a governance structure for monitoring contractor performance before the transition period begins.

- *Implement the program in phases*. ATF and NASA's Office of Space Flight suggested that seat management be implemented in phases. For example, ATF's CIO touted the agency's development of an installation "cookbook" that was used as a repeatable process for other locations and refined as seat management was implemented at these other locations. NASA's Office of Space Flight suggested that an organization new to seat management begin with core requirements and add new services after the contractor has stabilized operations.

[33]In cases in which the seat management contractor is assuming responsibility for functions previously performed by federal employees, it is especially important that the organization address internal staff issues. This can include, when appropriate and consistent with organizational objectives, (1) encouraging the transition of staff to the seat management contractor; (2) assisting employees who do not want to transfer in finding other jobs, either within the organization or at another organization; and (3) developing employee retention programs to keep key people.

Solicitation and Contract Award Should Be Carefully Managed

Agencies emphasized the importance of carefully managing the contract solicitation and award process. This involves using a solicitation and award process that (1) includes a solicitation document that is based on the goals and requirements of the agency; (2) encourages contractors to bid; (3) effectively evaluates the suitability of bidding contractors; (4) results in a winning vendor that best suits the organization's needs; and (5) produces a contract with fair pricing and with specific, relevant, and measurable performance requirements geared toward outcomes. In particular, at the beginning of the process, it is important that the agency understand its needs and convey this in the solicitation document. For example, according to Gartner, to develop valid pricing estimates, the contractor needs as much information as possible regarding hardware and software inventories, current transaction volumes, expected levels of service, and customization requirements.[34]

Gartner also encourages organizations to use the vendor selection process to gain an understanding of the experience of the bidding contractors and their relationships with subcontractors and to match the contractors' services to user requirements and the specific account team assigned.[35] If this is not done, an agency may overestimate the contractor's experience and capabilities. For example, officials from one agency told us that because the winning bidder was a "world class organization," it assumed that the contractor had "world class" expertise in areas such as testing. The agency later found that this was not always the case.

Once the winning bidder is chosen, it is important to negotiate a contract that provides a solid foundation for the working relationship between the agency and its contractor by setting the expectations of service levels, delivery of essential services, and continuous improvement. This includes establishing appropriate performance metrics to measure and reward or penalize contractor performance. Defining appropriate metrics and related penalties and incentives can be challenging. For example, NASA and Treasury have reassessed or are in the process of reassessing the performance metrics in their seat management contracts because of concerns regarding their adequacy. In particular, four NASA organizations

[34]Gartner, Inc., *Is Your Organization Ready for Seat Management?*, Research Note #DF-09-2729 (October 4, 1999).

[35]Gartner, Inc., *Seat Management: Look Beyond the Prime Vendors*, Research Note #DF-07-9093 (May 10, 1999).

reported that the metrics in the ODIN contract were inadequate, incomplete, and/or did not provide sufficient incentive to the contractor. One organization stated that the metrics were complex and cumbersome, whereas another noted that metrics applicable to e-mail and other enterprise services were not adequate to ensure acceptable service performance and adequate capacity for service growth. NASA has recognized these problems and has made changes in its follow-on seat management contracts pertaining to the payment provisions associated with achieving the performance metrics. However, the private-sector firm that performed a postimplementation review of the NASA ODIN program recommended that the agency take additional action, including initiating a full review of the metrics in the contract.

The following are examples of practices that agencies and/or private-sector organizations implemented, or suggested should be implemented, in the solicitation and contract award area:

- *Provide potential bidders with critical requirements information.* Agencies and private-sector organizations made various suggestions related to providing information to prospective bidders. For example, the Peace Corps, DLA, and a contractor stated that issuing draft requirements to obtain comments and questions proved useful. Moreover, this contractor stated that the agency's decision to provide the service levels that specified the required levels and types of service to the bidders before awarding the contract allowed them to structure and price their offers to satisfy these levels. In another case, the Peace Corps and its contractor both agreed that the preaward site visits that the agency sponsored helped potential vendors better understand the environment in which they would be working.

- *Consider requiring oral presentations*. DLA and the Peace Corps noted that requiring competing contractors to provide oral presentations clarified the bidders' written material and allowed the agency to better understand the bidders' management approach, respectively. DLA also videotaped these sessions, which it later used to confirm contractor representations.

- *Use relevant performance metrics and related incentives and penalties in contracts*. Agencies and private-sector organizations alike reported that the structuring of the performance metrics and related incentives and penalties in the contract was critical. For example, the Managed Services Shared Interest Group stated that the performance

requirements should define the work in measurable, mission-related terms and that the performance standards should be tied to the requirements. The Giga Information Group provided the following examples of areas in which bonus payments can be structured in desktop outsourcing: (1) procurement, in which the contractor is provided incentives to reduce the purchase price of equipment that are tied to its overall repair history to avoid situations in which inferior equipment is chosen; (2) uptime or meantime between failure, in which incentive payments are tied directly to service costs or service quality; and (3) service-level improvement, in which incentives are used to motivate the contractor to invest in methodologies, technologies, and processes that improve the services provided to the end user without substantially increasing the associated costs.[36] In addition, the Giga Information Group noted that companies should consider penalties structured around these same areas. Our November 2001 report on the outsourcing of IT services also provides specific examples of leading commercial practices related to performance requirements.[37]

- *Consider incentives related to the transition period.* The master ODIN contract provides for the payment of bonuses related to contractor performance during the transition period. Officials from another agency that did not include transition bonuses in its seat management contract stated that they wished they had included an incentive related to the transition period in its contract.

Strong Program and Contract Management Is Key to Success

Since the agency is ultimately responsible for ensuring that services are provided and users' needs are met, a key to the successful implementation of seat management is program and contract management. While much of this responsibility is defined by the terms of the contract, market conditions may change, and an arrangement that was once advantageous may become less so over time. Therefore, it is important for an organization to monitor service levels internally as well as to maintain an external view of the performance of other providers in its peer group. Gartner recommends having a person or group manage the contractor in a

[36]See footnote 32.

[37]GAO-02-214.

way that fits seamlessly into the overall IT service model.[38] Specifically, according to Gartner, designated staff members, including representatives from IT operations, business units, and procurement, need to be assigned to manage the contractor and establish service-level metrics. The need for dedicated federal personnel to manage the program and contractor was also cited as important by NASA, GSA, ATF, and DLA officials. Also important is that an agency implement a process to validate the information being provided by the contractor to ensure that it is accurate. For example, the contracting officer for the Department of State's seat management contract stated that she rejected an inventory report issued by the agency's contractor because it contained names of nonexistent users and duplicate records.

The necessity for strong program and contract management was demonstrated by GSA's decision not to continue with its seat management implementation. In this case, according to the Federal Technology Service's CIO, GSA attempted to manage its seat management program centrally while also allowing each of its services and field locations to develop different service-level agreements and define drastically different desktop requirements. As a result, according to GSA and contractor officials, the contract terms did not match the actual agency implementation. In addition, GSA did not adhere to the implementation schedule or the service-level mix it had agreed upon with its contractor. Moreover, even though the contractor was responsible for asset management under the GSA seat management contract, the agency's Federal Technology Service's CIO stated that GSA had difficulty obtaining accurate information from the contractor in terms of the number, type, and costs of these assets when arranging to transfer ownership of these assets from the contractor to GSA. According to the project manager for the GSA contractor, this was due, at least in part, to actions by users, such as moving equipment without authorization.

Examples of practices that agencies and/or private-sector organizations implemented, or suggested should be implemented, in the program and contract management area are as follows:

- *Benchmark contractor performance.* NASA and CMS used an independent contractor to perform market surveys quarterly or biannually and to test original equipment manufacturers' products in

[38]See footnote 30.

order to benchmark the IT equipment proposed by the seat management contractor. In addition, DLA plans to annually benchmark its users' satisfaction level through the use of surveys. Agency use of benchmarking is consistent with our research of leading commercial practices for outsourcing of IT services, which found that periodic benchmarking allows an organization to ascertain whether it is still obtaining good value from its provider.

- *Use service-level agreements*. The use of service-level agreements was cited as a critical practice by both agencies and contractors. For example, a contractor noted that its service-level agreements with Treasury's Departmental Offices were a critical success factor because they established a specific understanding between the contractor and the agency in which customer expectations were realistic and in concert with the IT and support services the contractor must deliver. In addition, Treasury, two contractors, and the Managed Services Shared Interest Group noted that it is important to periodically review the service-level agreements to ensure that they are still appropriate.

- *Ensure that services are provided*. In January 2001, NASA's Office of Space Flight issued a plan outlining a strategy for managing its four ODIN contracts, including (1) observing contractor processes and procedures; (2) sampling items for review (such as desktop hardware and software and trouble tickets); (3) conducting audits using checklists; and (4) assessing contractor-generated data (such as asset tracking and performance-related data).

Agency/Contractor Partnerships Are Vital to Success

Agencies and contractors often noted that it is vital that seat management be approached as a partnership, which can be realized by working to establish and achieve common goals. In addition, they cited the importance of establishing an environment of mutual trust so that issues and potential conflicts can be resolved more easily. For example, CMS emphasized the importance of an agency's developing a strong working relationship with its seat management contractor that involves mutual trust, noting that flexibility and shared goals are keys to success. The need for agency/contractor partnerships is consistent with our research of commercial practices, which found that aligning client and provider objectives in a partnership is key to building consensus and is imperative to establishing early trust among all stakeholders. For this alignment to occur, the client and provider must work together to establish common project goals beyond objectives stated in the request for proposal. Both sides must

recognize and understand each other's underlying motives and strive to achieve established expectations. Developing a productive agency/contractor relationship is not always easy. For example, even though the ODIN master contract has been in place since mid-1998, in November 2001, a NASA consultant noted that a true partnership between the agency and its contractors had not been realized, although some progress had been made. NASA has since established a working group that comprises both agency and contractor representatives to address this matter.

The following are examples of practices that agencies and/or private-sector organizations implemented, or suggested should be implemented, to develop and nurture agency/contractor partnerships:

- *Develop a trusting relationship with the seat management contractor.* A NASA consultant's recommendation to the Goddard Space Flight Center was that the center and its vendor build institutional and personal relationships and develop a formal conflict-resolution process using government and contractor staff. In responding to a draft of this report, NASA noted that the Goddard Space Flight Center had established a partnering arrangement with its seat management contractor and developed a conflict resolution process.

- *Consider including the contractor in agency IT planning.* One agency suggested including the contractor in strategic and tactical planning, such as enabling the contractor to provide input into future standards and policies.

- *Hold agency/contractor meetings.* A seat management contractor recommended the approach taken by one agency of holding periodic off-site meetings to discuss issues and establish mutually agreed-upon priorities.

Establishing Effective Communication Among Various Entities Is Critical

When the IT service provider is outside of the entity, as it is in the case of seat management, disconnects between organizations are more likely; thus, processes to facilitate good communication are critical. Indeed, most of the entities we reviewed cited communication among the seat management contractor, the agency program office, users, and/or other agency contractors as critical to the success of seat management. For example, (1) the Managed Services Shared Interest Group stated that stakeholders and executives should be kept informed of progress "early and often," (2)

various NASA centers and two contractors emphasized the need to provide proactive user outreach and manage user expectations, and (3) three agencies and one contractor noted the importance of communication among the various contractors that an agency might use for related services. Continuous communication throughout the seat-management life cycle is also important. For example, according to Gartner, communication is a critical part of both the evaluation and implementation processes of seat management.[39]

Without effective communication, an agency's seat management initiative can encounter problems. For example, GSA's Federal Technology Service's CIO noted that the agency did not take enough steps to market the seat management program throughout the agency; consequently, users of desktop services neither understood nor liked the changes that this approach entailed. Inadequate user outreach was also cited as a problem at NASA. For example, a consultant to the Goddard Space Flight Center noted that customer satisfaction requires a high degree of openness and cooperation among ODIN representatives, the ODIN project office, and the vendor, which was not occurring. Indeed, the consultant found that among users there was a perception that "no one listens or cares."

Examples of practices that agencies and/or private-sector organizations implemented, or suggested should be implemented, in the communications area are as follows:

- *Market seat management within the agency.* Various approaches to marketing seat management to users were cited, including the sponsorship of "town hall meetings" and technology days or the distribution of written materials. In terms of the type of information to be provided to users, GSA's seat management program office noted that it is important that users be educated about the benefits of seat management, the changes they may expect, and the procedures for using the new service.

- *Consider the seat management contractor's relationship to other service providers*. A NASA consultant recommended that the Goddard Space Flight Center identify all service providers that interface with or whose activities or responsibilities overlap with the seat management contractor and define how they will work together. Similarly, four

[39]See footnote 34.

agencies, a contractor, and the participants in a GSA-supported seat-management lessons learned workshop suggested that the seat management contractor establish formal agreements with other agency contractors. The contractor noted that such an agreement is especially important when the other agency contractor can affect the seat management vendor's ability to meet the service-level agreements. In addition, within about 3 months of contract award, CMS signed a memorandum of understanding with its seat management contractor and facilities contractor that set forth the responsibilities of all three organizations.

Conclusions

The agencies we reviewed implemented seat management for a variety of reasons, including to (1) improve their IT management, (2) improve end-user support and productivity, and (3) obtain new or upgrade current technology. In addition, these agencies reported a variety of accomplishments resulting from implementing seat management, such as improved asset management and end-user support. However, they have not performed the analyses necessary to validate the overall results of this approach. Specifically, the agencies performed limited or, in some cases, no analyses of costs and benefits before implementing seat management and have not routinely monitored all actual costs or benefits. As a result, these agencies lack vital data to demonstrate actual investment results. Without these data, it is difficult to determine whether the benefits of seat management outweigh its costs and risks. Moreover, this lack of monitoring could impair the agencies' ability to justify and implement future seat management investments. These agencies, and others considering future seat management investments, could benefit from the myriad lessons learned by organizations that have implemented seat management, such as the need for thorough preparation and planning, agency commitment, program and contract management, and continual communication. By applying the lessons learned in these critical areas and others, agencies considering seat management could more effectively plan their activities and reduce the risks associated with implementing such a relatively new concept.

Recommendations

To determine to what extent their current seat management programs have achieved positive results, we recommend that the secretary of the treasury; administrators for the National Aeronautics and Space Administration and Centers for Medicare and Medicaid Services; and directors of the Peace

Corps, Bureau of Alcohol, Tobacco and Firearms, and Defense Logistics Agency each routinely monitor all actual seat management costs and benefits.

To provide for adequate justification of any future seat management investments, we recommend that the secretary of the treasury; administrators for the National Aeronautics and Space Administration and Centers for Medicare and Medicaid Services; and directors of the Peace Corps, Bureau of Alcohol, Tobacco and Firearms, and Defense Logistics Agency each ensure that existing federal policy and guidance for information technology investments be followed when considering investments in information-technology-service outsourcing. Specifically, for future seat management investments, we recommend that these agencies

- baseline the current costs of the service being outsourced, including the cost of internal agency operations;
- perform an analysis of expected costs and benefits;
- perform an analysis of risks, including developing plans to mitigate risks identified;
- monitor actual costs and benefits as a basis for results accountability; and
- implement, to the extent feasible, the lessons learned that were identified in this report.

Agency Comments and Our Evaluation

We received written comments on a draft of this report from Treasury's Departmental Offices and ATF, the Peace Corps, the Department of Defense, GSA, and NASA. Three agencies agreed with the findings or recommendations in the report, two did not indicate whether they agreed or disagreed, and NASA supported many of the findings but disagreed with portions of the report. We also requested comments from the Centers for Medicare and Medicaid Services, but none were provided.

The comments provided by Treasury's Departmental Offices and ATF, the Peace Corps, Defense, and GSA varied in scope and detail. Specifically,

- Treasury's acting director, Customer Service Infrastructure and Operations, Office of the Chief Information Officer, stated that Treasury's Departmental Offices has implemented, or is in the process of implementing, our recommendations. Treasury also offered clarifying comments that we incorporated into the report, as appropriate. The comments from Treasury are reproduced in appendix IV.

- The director of ATF stated that its Office of Science and Technology had reviewed the report and had no comments at this time. ATF's written response is reproduced in appendix V.

- The director of the Peace Corps did not address whether the agency agreed or disagreed with the findings or recommendations in the report, but offered clarifying comments that we incorporated into the report, as appropriate. The comments from the Peace Corps are reproduced in appendix VI.

- Defense's deputy assistant secretary of defense (deputy CIO) stated that the department generally concurs with the recommendations in the report. Defense also included technical corrections that we incorporated into the report, as appropriate. The comments from Defense are reproduced in appendix VII.

- GSA's chief information officer concurred with the findings in the report. The comments from GSA are reproduced in appendix VIII.

Although NASA supported many of the findings, it disagreed with portions of the report. Specifically, NASA did not agree with our assessment that (1) its up-front cost analysis was not sufficient; (2) it did not track its internal seat management costs, citing its tracking of the full-time-equivalents associated with seat management; and (3) it did not adequately track benefits.

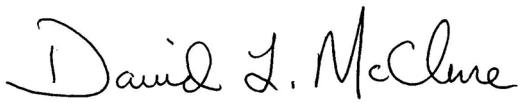
We disagree with these NASA comments. First, the problems with NASA's up-front cost analysis were cited by the contractor the agency employed to conduct a postimplementation review. The report prepared by the contractor asserted that it was impossible to determine whether the agency is saving money with seat management because of the lack of a comprehensive pre-seat-management baseline. Second, while important, monitoring of full-time-equivalents does not provide the agency with a complete picture of internal costs associated with the implementation of seat management. As NASA officials acknowledged during the exit

conference, the agency does not track the full costs of seat management, which would include internal cost items such as overhead and salaries and benefits. Finally, NASA's efforts to track program benefits are not complete. Specifically, while NASA's quarterly reports and postimplementation review address some of the agency's expected seat management benefits, other expected benefits, such as potential improved staff productivity and efficiency, were not addressed. NASA also provided technical comments that we have incorporated in this report, as appropriate. NASA's written comments, along with our responses, are reproduced in appendix IX.

As agreed with your office, unless you publicly announce its contents earlier, we plan no further distribution of this report for 30 days from the date of this letter. At that time, we will send copies to the chairman and ranking minority member, Senate Committee on Governmental Affairs; chairman and ranking minority member, House Committee on Government Reform, ranking minority member, Subcommittee on Technology and Procurement Policy, House Committee on Government Reform; and other interested congressional committees. We are also sending copies to the secretary of the treasury; administrators for the National Aeronautics and Space Administration and Centers for Medicare and Medicaid Services; and directors of the Peace Corps, Bureau of Alcohol, Tobacco and Firearms, Defense Logistics Agency, and the Office of Management and Budget; and other interested parties. We will also make copies available to others upon request.

If you have any questions on matters discussed in this report, please contact me at (202) 512-6257 or by e-mail at mcclured@gao.gov. Other contacts and key contributors to this report are listed in appendix X.

Sincerely yours,



David L. McClure
Director, Information Technology Management

Information on Seat Management Contracts as of December 31, 2001, Awarded under the NASA ODIN Master Contract

Dollars in thousands

Agency/ Location	Services identified in the contracts[a]	Reported estimated contract amount[b]	Estimated benefits
National Aeronautics and Space Administration's (NASA)/ Ames Research Center	Application/Database, file storage, general-purpose desktop, maintenance only, scientific and engineering desktop, and World Wide Web seats	$16,014	Estimated benefits are the same for all contracts awarded by NASA's centers and are described in the original business case for Outsourcing Desktop Initiative for NASA (ODIN), as follows: • divesting the day-to-day management of noncore information technology (IT) functions; • improved management of assets and their configuration; • improved technology refreshment; • improved interoperability; • improved standardization; • a consistent agencywide desktop strategy; • simplified procurement, contractor, and budget management processes; • transfer risk from the government to the commercial sector; • potential increases in user efficiency and productivity; • better use of civil service personnel previously employed in desktop support; and • access to greater information technology expertise.
NASA/ Dryden Research Center	Application/Database, file storage, general-purpose desktop, maintenance only, scientific and engineering desktop, and World Wide Web seats	21,216	Same as above.
NASA/ Glenn Research Center	Application/Database, file storage, general-purpose desktop, maintenance only, scientific and engineering desktop, and World Wide Web seats	44,074	Same as above.
NASA/ Langley Research Center	Application/Database, cellular phone, facsimile, file storage, general-purpose desktop, local-area network, local video, maintenance only, network-attached device, remote communications, scientific and engineering desktop, telephone, and World Wide Web seats	51,083	Same as above.

(Continued From Previous Page)

Dollars in thousands

Agency/ Location	Services identified in the contracts[a]	Reported estimated contract amount[b]	Estimated benefits
NASA/ Goddard Space Flight Center	Application/Database, facsimile, file storage, general-purpose desktop, local-area network, scientific and engineering computer, maintenance only, network attached device, and World Wide Web and remote communications seats	20,005[c]	Same as above.
NASA/ Headquarters	Administrative radio, application/database, cellular phone, computational server, facsimile, file storage, general-purpose desktop, local-area network, local video, maintenance only, meeting place conferencing, public address, remote communications, scientific and engineering desktop, telephone, and World Wide Web seats	20,190	Same as above.
NASA/ Johnson Space Center	Application/Database, cellular phone, facsimile, general-purpose desktop, local video, remote communications, scientific and engineering desktop, telephone, and World Wide Web seats	180,721	Same as above.
NASA/ Kennedy Space Center	Application/Database, cellular phone, facsimile, general-purpose desktop, local video, remote communications, scientific and engineering desktop, telephone, and World Wide Web seats	65,170	Same as above.
NASA/ Marshall Space Flight Center	Application/Database, cellular phone, facsimile, general-purpose desktop, local video, remote communications, scientific and engineering desktop, telephone, and World Wide Web seats	100,187	Same as above.
NASA/ Stennis Space Center	Application/Database, cellular phone, facsimile, general-purpose desktop, local video, remote communications, scientific and engineering desktop, telephone, and World Wide Web seats	30,396	Same as above.

(Continued From Previous Page)

Dollars in thousands

Agency/ Location	Services identified in the contracts[a]	Reported estimated contract amount[b]	Estimated benefits
Centers for Medicare and Medicaid Services (CMS)	General-purpose desktop seats, asset management, and engineering services	25,647	• Avoidance of costs incurred from theft or loss of desktop computing assets. • Reduced costs of license compliance. • Avoidance of costs for duplicate computer equipment. • Cost savings over purchased equipment. • Cost savings from consolidation of contracts. • Improved user productivity. • Improved responsiveness at the user level. • Increased end-user satisfaction. • Compliance with Year 2000 requirements. • Improved mission effectiveness. • Reduced risks associated with Year 2000 readiness. • Improved morale. • Redirected staffing responsibilities.

[a]In addition to the individual categories of seat services acquired by each of the NASA implementing entities and CMS, the NASA ODIN contract allows for acquiring other hardware, software, and services through a catalog service offered by the seat management contractors as well as a special order process.

[b]We asked the agencies to provide us with the total estimated costs through the completion date of the current delivery order.

[c]The reported estimated contract amount for the Goddard Space Flight Center reflects the amount estimated through the end of its original delivery order. As of January 30, Goddard had not signed a follow-on delivery order. According to the Goddard delivery-order contracting officer, until this follow-on delivery order is signed, Goddard has agreed to pay the contractor the amount of the monthly invoice (generally about $600,000) plus 30 percent.

Source: GAO, based on information provided by the agencies. We did not verify this information.

Information on Seat Management Contracts as of December 31, 2001, Awarded under the GSA Seat Management Master Contract

Dollars in thousands

Agency	Services identified in the contracts[a]	Reported estimated contract amount[b]	Estimated benefits
Department of the Treasury's Departmental Offices	Asset management, commercial information services management, desktop/portable computers, help desk, local- and wide-area-network servers, network printers, and voice/telephone administration	$114,732	• Ensure the continued reliability and availability of existing and planned IT systems, equipment, services, and data. • Provide for access to private-sector technical expertise, staff support, management experience, and corporate capabilities. • Acquire an operational IT platform that results in a positive return on investment. • Provide for a single point of contact for IT operations. • Increase user satisfaction with IT solutions.
U.S. Air Force Special Operations Forces/ Aeronautical System Center System Program Office at Wright-Patterson Air Force Base	Asset management, desktop/portable computer, help desk, local- and wide-area-network servers, network printing, peripheral device, and software (including custom applications) services	7,266	• Ability to establish and sustain effective and efficient life-cycle support for IT operations. • Single point of contact. • Access to private-sector expertise regarding the latest available technologies. • Migration to a self-contained network. • Paperless acquisition office environment. • Cost savings from potential future expansion of seat management. • Ability of staff to focus efforts on mission needs.
Department of State/Office of Foreign Building Operations	Asset management, classified network, desktop/portable computers, local-area-network servers, and network printers	48,139	• Ability to establish and sustain effective and efficient managed life-cycle support of the office's distributed computing environment with a single point of contact.
Federal Highway Administration	Asset management, desktop/portable computer, help desk, local-area-network server, network printing, programming, software/software maintenance, and infrastructure management services	150,000	• Ability to establish and sustain effective and efficient managed life-cycle support of a pilot project on distributed computing with a single point of contact. • Achieving high-quality, reliable, and responsive levels of service. • More easily achieving agencywide technology transfers through an integrated and uniform processing environment. • Obtaining technology upgrades at regular intervals. • Reduced asset maintenance and management responsibilities. • Achieving greater contracting efficiency. • Consolidation of diverse product and support service requirements. • More efficient use of resources resulting from a consolidated internal infrastructure and support environment.

(Continued From Previous Page)

Dollars in thousands

Agency	Services identified in the contracts[a]	Reported estimated contract amount[b]	Estimated benefits
U.S. Army/Center for Substance Abuse Programs	Asset management, desktop/portable computer, help desk, Internet, local-area-network servers, network printing, and World Wide Web management services	3,058	• Implementation of comprehensive and integrated desktop and local-area-network management services. • Freeing agency personnel from the burden of maintaining and updating desktop resources, services, and training so that they can refocus their efforts on the core mission. • Having a single point of contact. • Achieving the goal of acquiring distributed computing services seamlessly and efficiently.
Department of Housing and Urban Development/ Office of Inspector General	Asset management, desktop/portable computers, help desk, local- and wide-area-network servers, network printers, and virtual private network services	48,300	• Obtain a secure network. • Acquire applications to support the agency's audit and investigation missions. • Easier technology transfers through an integrated and uniform processing environment. • Technology upgrades at regular intervals so the agency can benefit from new and improved technological improvements. • Freedom from maintaining and managing capital assets and refocusing staff on the office's mission. • Greater contracting efficiency through consolidation of diverse requirements. • More efficient use of resources resulting from a consolidated internal infrastructure and support environment.
Peace Corps	Asset management, desktop/portable computer, help desk, local- and wide-area-network servers, network printing, off-site storage, and training services	30,045	• Migration to a different technology environment. • Easier technology transfers through an integrated and uniform processing environment. • Technology upgrades at regular intervals. • Freedom from having to maintain and manage capital assets. • Greater contracting efficiency and a decrease in contract management functions by consolidating diverse product and support service requirements. • More efficient use of resources through a consolidated internal infrastructure and support environment.
Nuclear Regulatory Commission	Integrated infrastructure management, asset management, help desk, maintenance, development/ integration, and contingency operations	80,288	• Desktop and network refreshment to reduce maintenance costs and maintain a high level of service availability. • Streamlined integrated desktop refreshment strategy. • A single focal point for distributed computing support. • Obtain a single operating system. • Enhanced help-desk support through access to subject-matter experts. • Defined and managed level of service delivery. • High level of customer satisfaction. • Quicker and more efficient access for the purchase of peripheral equipment and software through the use of an on-line catalog. • Cost avoidance.

Note: Two other organizations—the General Services Administration (GSA) and the District of Columbia Housing Authority—issued task orders under the GSA seat-management master contract, which they let expire.

[a]In addition to the bundled seat management services shown, the GSA seat-management master contract allows agencies to purchase catalog orders.

[b]We asked the agencies to provide us with the total estimated costs through the completion date of the current task order. Accordingly, the amounts provided assumed that all option years would be exercised.

Source: GAO, based on information provided by the agencies. We did not verify this information.

Scope and Methodology

To evaluate agencies' approaches to the seat-management outsourcing concept, we selected six agencies for review. Specifically, as agreed with your office, we chose two agencies each that were using the General Services Administration's (GSA) seat management contract, NASA's ODIN contract, and GSA's Federal Supply Service (FSS) Schedule 70 contracts. In selecting the agencies, we chose those whose seat management contract had been awarded more than 1 year before our review to ensure that the agencies had time to adjust to the use of seat management and whose contract included at least 500 seats. Accordingly, we selected the Department of the Treasury's Departmental Offices and the Peace Corps, which use the GSA seat-management master contract; NASA and CMS, which use the NASA ODIN master contract; and the Defense Logistics Agency (DLA) and Treasury's Bureau of Alcohol, Tobacco and Firearms (ATF), which use GSA's FSS Schedule 70 contracts.

To determine these agencies' rationales for using the seat management alternative, whether they achieved estimated costs and benefits, and how well they managed associated risks, we reviewed and analyzed documents related to each agency's decision to implement seat management and how it managed the program. For example, we reviewed business cases; program and implementation plans; and analyses of costs, benefits, and risks. We also assessed whether these documents followed Office of Management and Budget (OMB)[40] and our[41] guidelines. In addition, to determine whether the six agencies had implemented contracts that protect the government, we evaluated their seat management contracts to determine whether they adequately addressed the issues of (1) quality assurance, (2) termination rights, and (3) rights to supplied hardware and software at the end of contract performance. We also interviewed agency officials, including chief information officers (CIO) and seat-management program and contract officials.

[40]Office of Management and Budget, Circular A-130, *Management of Federal Information Resources* (November 30, 2000); Circular A-11, Part 3, *Planning, Budgeting, and Acquisition of Capital Assets* (July 2001); and *Evaluating Information Technology Investments: A Practical Guide* (November 1, 1995).

[41]U.S. General Accounting Office, *Information Technology Investment Management: A Framework for Assessing and Improving Process Maturity*, GAO/AIMD-10.1.23, Exposure Draft (Washington, D.C.: May 2000) and *Assessing Risks and Returns: A Guide for Evaluating Federal Agencies' IT Investment Decision-making*, GAO/AIMD-10.1.13 (Washington, D.C.: February 1997).

To identify lessons learned, we reviewed applicable documentation and interviewed officials from the six agencies and their contractors, and reviewed applicable external and internal studies. We also conducted interviews with GSA officials, including the agency CIO and the CIOs for FSS and the Federal Technology Service, and the program manager for the governmentwide seat management contract. We also reviewed documents relating to GSA's decision not to exercise the option to extend its seat management contract. In addition, we obtained lessons learned from other organizations, such as the Industry Advisory Council's Managed Services Shared Interest Group and leading private research firms Gartner, Inc., and the Giga Information Group, Inc.

To identify the agencies using the GSA and NASA governmentwide seat management contracts, we obtained a list of these agencies from GSA and NASA. We contacted each of these agencies to obtain the services being provided, the estimated contract amounts, and estimated benefits. We also reviewed contracts and other documents provided by each of the agencies but did not verify the data provided.

We performed our work at the headquarters offices of ATF, GSA, NASA, the Peace Corps, and the Department of the Treasury located in Washington, D.C.; at DLA headquarters in Ft. Belvoir, Va.; at CMS headquarters in Baltimore, Md.; at the GSA offices located in Falls Church, Va.; and at NASA's Kennedy Space Center in Cape Canaveral, Fla. We conducted our review between April 2001 and January 2002 in accordance with generally accepted government auditing standards.

Comments from the Department of the Treasury's Departmental Offices

DEPARTMENT OF THE TREASURY
WASHINGTON, D.C. 20220

February 28, 2002

Mr. David L. McClure
Director
Information Technology Management Issues
General Accounting Office
441 G Street, NW
Washington, DC 20548

Dear Mr. McClure:

The Department of the Treasury, Departmental Offices (DO), is pleased to provide an agency response and comments to the General Accounting Office (GAO) draft report, GAO-02-329, entitled, "Information Technology: Desktop Outsourcing Management Approaches, Costs, Benefits, and Risks Vary."

If you have any further questions on DO's response, please contact Rory Schultz on (202) 622-2829, or via e-mail at rory.schultz@do.treas.gov.

Sincerely,

Patrick N. Hargett
Acting Director
Customer Service Infrastructure
and Operations
Office of the Chief Information Officer

Enclosure

Department of the Treasury
Departmental Offices
Response/Comments to GAO-02-329

The Department of the Treasury, Departmental Offices (DO), has reviewed the Draft Report of the General Accounting Office (GAO) regarding Desktop Outsourcing Management and offers the following response to GAO's recommendations:

Treasury DO has been one of the leaders in the areas of outsourcing desktop management, specifically in using the General Services Administration (GSA) Seat Management Government Wide Acquisition Contract (GWAC). After GSA, Treasury DO was the next agency to successfully implement a Seat Management contract in June 1999. Treasury DO continues to refine its contract and service levels provided to our customers, as well as add services to the base contract.

The GAO report on outsourcing desktop management includes specific recommendations which are quoted below:

"*To determine to what extent their current seat management programs have achieved positive results, we recommend that the Secretary of the Treasury, administrators for the National Aeronautics and Space Administration and Center for Medicare and Medicaid Services, and directors of the Peace Corps, Bureau of Alcohol, Tobacco, and Firearms, and Defense Logistics Agency each routinely monitor all actual seat management costs and benefits.*

"To provide for adequate justification of any future seat management investments, we recommend that the Secretary of the Treasury, administrators for the National Aeronautics and Space Administration and Center for Medicare and Medicaid Services, and directors of the Peace Corps, Bureau of Alcohol, Tobacco, and Firearms, and Defense Logistics Agency each ensure that existing federal policy and guidance for information technology investments be followed when considering investments in information technology-service outsourcing. Specifically we recommend that these agencies

- *Baseline the current costs of the service being outsourced, including the cost of internal agency operations*
- *Perform an analysis of expected costs and benefits*
- *Perform an analysis of risks, including developing plans to mitigate risks identified*
- *Monitor actual costs and benefits as a basis for results accountability; and*
- *Implement, to the extent feasible, the lessons learned identified in this report.*"

A number of these recommendations have been addressed by Treasury DO during its ongoing process of self-review and evaluation of the contract. In January 2002, we identified funding to perform a Total Cost of Ownership (TCO) study that includes an Outsourcing Financial Assessment (OFA), as well as a Distributed Computing Assessment (DCA). A contract was awarded to the Gartner Group, IT industry leader in research, and one of the sources cited by the GAO in its report as a contributor. Work began on this effort in February 2002 and is expected to continue through June 2002.

As part of the TCO study, Treasury DO will receive a baseline of all seat costs, including "soft" or internal agency costs. Due to time constraints in awarding the original SEAT Management

contract, we were not able to perform the TCO function prior to award. This current TCO study will allow Treasury DO to now establish a new baseline for all future requests for additional services and will allow us to compare our seat costs with similar organizations within government and private industry. Treasury DO intends to periodically review the TCO of the contract over its life cycle by awarding follow-on contracts to industry experts, such as Gartner.
The OFA and DCA components of the TCO study will allow Treasury DO to predict expected costs of services for the future years of the contract. Such an analysis will allow us to also identify specific benefits to be derived from these projected costs, as well as review current costs and associated benefits derived therefrom. The periodic TCO reviews will allow us to keep these analyses current and in line with customer expectations.

Treasury DO considered Seat Management to be a low risk endeavor prior to contract award. Experience over the past three years has verified that this assumption was correct. Nonetheless, we recognize the fact that an ongoing assessment of potential risks is crucial to maintaining a responsive contract and protecting the government's interests. The Seat Management Program Office (SMPO) has formalized contract review by conducting weekly meetings with contracting officials, the program office, and the contractor to ensure that risk remains at an acceptable level. In addition, the SMPO has a formalized monthly program review that includes senior representatives from all major policy offices, CIO management, and the Office of Information Systems Security (OISS). These vehicles allow us to continue to keep any identified risk low and acceptable. The SMPO is working closely with OISS to finalize a formal risk identification and mitigation strategy that will be included as part of a DO Information Systems Security Manual.

Treasury DO agrees with the recommendation that actual costs and benefits should be monitored on a regular basis. The current methodology for this review is the weekly program office meeting and the monthly program review by senior management. In addition, we are reviewing other IT industry and government best practices, such as the balanced scorecard to improve our accountability. We will implement such best practices where applicable within our program.

Treasury DO is one of the leaders in implementing lessons learned in the outsourcing environment. Many of the lessons learned cited in the GAO report are, in fact, a result of our experiences with Seat Management. We maintain regular contact with GSA and other agencies that have implemented Seat Management and are continually applying lessons learned to our program to make it more responsive to our customers and accountable to our stakeholders.

In summary, Treasury DO has implemented, or is in the process of implementing, all of GAO's recommendations for continued successful execution of our outsourcing contract. We are committed to a continual process of review and improvement of services to our customers. We remain one of the leaders in the federal government in implementing Seat Management.

Comments from the Bureau of Alcohol, Tobacco and Firearms

DEPARTMENT OF THE TREASURY
BUREAU OF ALCOHOL, TOBACCO AND FIREARMS
WASHINGTON, D.C. 20226

DIRECTOR

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Mr. David L. McClure
Director
Information Technology Management Issues
United States General Accounting Office
441 G Street, N.W.
Washington, DC 20548

Dear Mr. McClure:

This is in response to your request for written or oral comments on the proposed report entitled "Information Technology: Desktop Outsourcing Management Approaches, Cost, Benefits, and Risk Vary" (GAO-02-329). The Office of Science and Technology has reviewed the document and has no comments at this time. We appreciate the opportunity to review the draft report before it is issued in final form.

If you have any questions or need additional information, please do not hesitate to contact Ms. Kimberly T. Sanchez, Division Systems Operations Officer at (202) 927-7870.

Sincerely yours,

Bradley A. Buckles
Director

Comments from the Peace Corps

THE DIRECTOR OF THE PEACE CORPS
WASHINGTON, D.C.

March 1, 2002

Mr. David L. McClure
Director
Information Technology Management Issues
U.S. General Accounting Office
Washington, DC 20548

Dear Mr. McClure:

Thank you for the opportunity to review and comment on the General Accounting Office's (GAO) draft report on INFORMATION TECHNOLOGY entitled Desktop Outsourcing Management Approaches, Costs, Benefits and Risks Vary. The Peace Corps welcomes the opportunity to contribute to this review of the government-wide approach to this relatively new mechanism for supporting a distributed computing environment. We hope that the feedback and exchange of information proves beneficial through sharing of lessons learned and improving the use of managed services.

Our interest in providing this response is to ensure that the information in this study is complete and accurate in its depiction of the Peace Corps approach concerning the move to a managed services contract. Further, the Peace Corps is pleased to offer its perspective on the report's chief purpose, i.e., to answer the question "How well is seat management working?". In the case of the Peace Corps, we believe the answer to be "very well." The benefits have been very positive, with a high level of customer satisfaction and substantial gains in employee productivity.

Accordingly, the following points reflect our clarifying comments on statements contained in the draft GAO report:

1) Reference page 10: "In addition, Peace Corps officials stated that the agency did not choose seat management to reduce the agency's budget requests associated with distributed computing and did not expect that it would."

The Peace Corps did not anticipate reduction in its budget associated with distributed computing because we saw seat management as an upgrade. We knew that buying more timely and comprehensive services and equipment would cost more in this one budget category. The Peace Corps was certain, however, that there would be a reduction in soft costs and increases in productivity across the agency based on the assessment of these costs through a Total Cost of Ownership (TCO) Study. We believe this to be true.

2) Reference page 14: "The agencies cited various reasons for not completing a thorough analysis of existing and expected costs and benefits of seat management and alternatives, including that they lacked time to complete the analysis…."

The Peace Corps did not complete a more comprehensive analysis because it had insufficient fiscal and staff resources. The Peace Corps anticipated and defined requirements, assessed costs based on pre-award research, and budgeted accordingly. Most importantly, the Peace Corps was certain of improved service delivery and reduction of soft costs relative to its existing environment. And, in fact, savings were realized. With additional resources, more analysis could have been

Mr. David McClure
March 1, 2002
Page 2

accomplished either in-house or through outsourcing and the amount of savings could be better quantified and documented.

3) Reference page 17: "Agency seat management contracts sometimes did not include contractor performance measures pertaining to all business goals of the seat management program. For example, one of the Peace Corps' performance goals in its September 2000 strategic plan is to pursue efforts to cut costs and improve agency productivity. Although the implementation of seat management is a part of the evaluation criteria associated with this goal, the agency's seat management performance metrics plan does not include a performance measure for cost reductions or improvements to agency productivity."

Again, although the quantitative analysis has not been completed, we believe soft costs are down and productivity is up. The Peace Corps believes that performance metrics used to evaluate contractor performance do not inherently correlate with improved agency productivity and cost reductions. However, the performance metrics do speak to system availability and responsiveness of the help desk functions. Further, we believe that indicators relative to both agency productivity and cost reductions will be documented in our Customer Satisfaction Survey currently in progress and in the TCO study, which will be undertaken later this summer.

4) Reference page 17: "For example, contractor performance metrics do not measure many of the types of benefits agencies believe that they are achieving or wanted to achieve, such as increased end-user productivity, improved mission support through transfer of agency staff to more critical tasks, and improved standardization."

The Peace Corps acknowledges that the metrics do not speak to the agency strategic plan. However, implementation of seat management has afforded the Peace Corps improved mission support as follows: Staffing related to domestic infrastructure support was transferred to overseas IT support functions; the agency has standardized software and hardware; asset management is greatly improved; and under seat management IT security far exceeds that which existed in our previous environment.

5) Reference page 21: "Two of the agencies in our review, ATF and the Peace Corps, did not assess their seat management risks at all.....As for the Peace Corps, agency officials stated that they lacked the staff to conduct a risk assessment."

The Peace Corps agrees that risk assessment is important. But even more important is the fact that seat management has reduced soft costs and increased productivity. The Peace Corps believes that in the course of discussions with the GAO we actually stated that we lacked the "resources" at the time of award to conduct a formal risk assessment. Resources have been planned for in our current strategic planning and budget process where risk management is integrated into the IT security plan.

6) Reference page 25: "For example, Peace Corps officials reported that it had file conversion problems during its seat management transition because it did not know the size and number of files involved and greatly underestimated the time it would take to complete the conversion."

The Peace Corps would like to clarify this statement. Because all files were stored locally on individual hard drives and not on the network it was difficult to fully capture the number and size of graphic, video, and audio files. We agree that while very time consuming and labor intensive, it would have been greatly beneficial to capture this information.

Mr. David McClure
March 1, 2002
Page 3

In closing, let me take this opportunity to thank the GAO team for their desire to fully understand our unique operations and for their constructive comments, which will be helpful to the new Peace Corps management team. If you have any further questions regarding these comments please contact Judy Van Rest at (202) 692-1102.

Sincerely,

Gaddi Vasquez
Director

Comments from the Department of Defense

DEPARTMENT OF DEFENSE
6000 DEFENSE PENTAGON
WASHINGTON, DC 20301-6000
March 7, 2002

CHIEF INFORMATION OFFICER

Mr. David L. McClure
Director, Information Technology Management Issues
U.S. General Accounting Office
Washington, D.C. 20548

Dear Mr. McClure:

This is the Department of Defense (DoD) response to the GAO draft report, "INFORMATION TECHNOLOGY: Desktop Outsourcing Management Approaches, Costs, Benefits, and Risks Vary" dated February 5, 2002 (GAO Code 310414).

The Department has reviewed the draft report as it addresses on going seat management efforts at the Headquarters, Defense Logistics Agency (DLA), and generally concurs with the recommendations. The Department's specific responses to the recommendations are found in Attachment 1.

In addition, we request that your report be modified to reflect that your review specifically focused on implementation of seat management at DLA's Headquarters Complex in Fort Belvoir, VA. Without this change, it could be easily misconstrued that your review focused on seat management at the DLA enterprise level, rather than on this one segment of DLA. The suggested modifications are found in Attachment 2. Please note that DLA fully intends to integrate the improvements contained in your recommendations into its process of implementing seat management throughout DLA.

We appreciate the opportunity to comment on your report. The Department's point of contact for this effort is Leo Milanowski , who can be reached at (703) 602-0980 X115 or by e-mail: leo.milanowski@ osd.mil.

Priscilla E. Guthrie
Deputy Assistant Secretary of Defense
(Deputy CIO)

2 Attachments:
As stated

ATTACHMENT 1
GAO DRAFT REPORT DATED FEBRUARY 5, 2002
(GAO CODE 310414)

"INFORMATION TECHNOLOGY: DESKTOP OUTSOURCING MANAGEMENT APPROACHES, COSTS, BENEFITS, AND RISKS VARY"

DEPARTMENT OF DEFENSE COMMENTS TO THE GAO RECOMMENDATIONS

RECOMMENDATION 1: The GAO recommended that the Defense Logistics Agency routinely monitor all actual seat management costs and benefits to determine to what extent its current seat management programs have achieved positive results. (p. 36/GAO Draft Report)

DLA RESPONSE: Concur – DOD has added information on internal costs specific to the seat management contract to the monthly review process that monitors contractor costs and performance.

RECOMMENDATION 2: To provide for adequate justification of any future seat management investments, the GAO recommended that the Defense Logistics Agency ensure that existing federal policy and guidance for information technology investments be followed when considering investments in information-technology-service outsourcing. Specifically, for future seat management investments, the GAO recommended that the Defense Logistics Agency:

- baseline the current costs of the service being outsourced, including the cost of internal agency operations;
- perform an analysis of expected costs and benefits;
- perform an analysis of risks, including developing plans to mitigate risks identified;
- monitor actual costs and benefits as a basis for results accountability; and
- implement, to the extent feasible, the lessons learned identified in this GAO report. (pp. 36-37/GAO Draft Report)

DLA RESPONSE: Concur – DLA will continue to baseline all service costs when considering additional implementations of Seat Management. In addition, DLA will make an analysis of expected costs and benefits a part of the Seat Management expansion process. This process will also include procedures for risk analysis and risk mitigation plan development, and the addition of data representing the actual costs and benefits of the new Seat Management implementation to the monthly review currently used to monitor Agency IT performance. The expansion process will be completed prior to any further Seat Management implementations, and will include consideration of all lessons learned, including those identified in the GAO report.

ATTACHMENT 2
GAO DRAFT REPORT DATED FEBRUARY 5, 2002
(GAO CODE 310414)

"INFORMATION TECHNOLOGY: DESKTOP OUTSOURCING MANAGEMENT APPROACHES, COSTS, BENEFITS, AND RISKS VARY"

Specific technical recommendations are as follows:

1. Page 9, Paragraph 3, Sentence 3. Recommend changing "…DLA implemented seat management to address the operational impairment of its users…" to "…DLA implemented seat management to address the operational impairment of its Headquarters Complex users…"
Justification: The statement as written in the GAO report implies that seat management was implemented to address Agency-wide computing environment problems. The initial implementation of seat management within DLA effectively addressed problems that were limited to the DLA Headquarters Complex in Fort Belvoir, VA. The recommended change more accurately describes the problems as Headquarters Complex issues.

2. Page 10, Paragraph 2, Sentence 3. Recommend changing "…the critical issue for their agency was improving its distributed computing environment, which among other problems had frequent downtimes…" to "…the critical issue for their agency was improving its Headquarters computing environment, which among other problems had frequent downtimes…"
Justification: The statement as written in the GAO report implies that the critical issue involved problems and frequent downtimes across the Agency-wide distributed computing environment. Although seat management may indeed be used to improve the Agency-wide distributed computing environment with future implementations, the critical issue driving the initial implementation of seat management in the Headquarters Complex involved problems and frequent downtimes at that location. The recommended change clarifies the scope of the problems driving DLA's initial seat management implementation.

3. Page 12, Paragraph 2, Sentence 3. Recommend changing "…before seat management, customer dissatisfaction with its IT help desk services was widespread…" to "…before seat management, customer dissatisfaction with its Headquarters IT help desk services was widespread…"
Justification: The statement as written in the GAO report implies that customers Agency-wide were dissatisfied with their IT help desk services. Although DLA may move to a single Agency-wide IT help desk in the future, the implementation of seat management addressed the dissatisfaction of Headquarters Complex IT help desk users. The recommended change clarifies the scope of the IT help desk dissatisfaction addressed by seat management.

Comments from the General Services Administration

GSA

GSA Office of the Chief Information Officer

March 5, 2002

Mr. David L. McClure
Director, Information Technology Issues
General Accounting Office
441 G Street NW
Room 4075
Washington, DC 20548

Dear Mr. McClure:

This letter is in response to your draft report titled, "INFORMATION TECHNOLOGY: Desktop Outsourcing Management Approaches, Costs, Benefits, and Risks Vary," GAO-02-329. The report was received in my office on Wednesday, February 6, 2002 via electronic mail.

My staff has reviewed the draft report cited above. They have coordinated this response with the other principals relevant to this report. I concur with the findings as stipulated in your report. We do note one correction in spelling that should be made in the paragraph at the top of page 22 of the draft. Please correct the following sentence to read: "Finally, seat management *contracts (not contacts)* should…."

Thank you for the opportunity to review and comment on this draft report. Should you or members of your staff have any questions, please contact L. Diane Savoy, Director, Office of Policy and Plans, on (202) 501-3535.

Sincerely,

Susan Chu

for Michael W. Carleton
Chief Information Officer

U.S. General Services Administration
1800 F Street, NW
Washington, DC 20405-0002
www.gsa.gov

Comments from the National Aeronautics and Space Administration

Note: GAO comments supplementing those in the report text appear at the end of this appendix.

National Aeronautics and
Space Administration
Office of the Administrator
Washington, DC 20546-0001

February 28, 2002

Mr. David L. McClure
Director, Information Technology Team
U.S. General Accounting Office
441 G Street, NW
Washington, DC 20548-0002

Dear Mr. McClure:

This letter is in response to your request for comments on the GAO report GAO-02-329 dealing with desktop outsourcing management approaches, costs, benefits, and risks. As a pioneer in the outsourcing of desktop computing at NASA, we applaud GAO in their thoughtful analysis in this area. We support many of the findings in the report. After 3 years of outsourcing experience, NASA continues to believe that the benefits of outsourcing have met many of our original goals.

See comment 1.

NASA believes that GAO's finding that NASA did not perform sufficient up-front cost analysis is not accurate. NASA is further troubled by the methodology for evaluating effectiveness using cost as the main basis for GAO's conclusion. Base-lining the cost of NASA's Outsourcing Desktop Initiative for NASA (ODIN) seat management initiative was unusually difficult because of the very heterogeneous nature of the pre-ODIN desktop inventory. NASA's desktop environment is extremely diverse because of its various range of R&D missions. The conclusion by GAO that NASA did not perform a full cost analysis is incorrect. NASA performed a full business case analysis that included a cost analysis before the ODIN acquisition phase. A re-examination of achieved benefits from ODIN was performed 3 years after the acquisition phase and the analysis concluded that the current costs for ODIN seats are a good value compared to industry standards.

See comment 2.

Another issue raised by GAO is that NASA has not been tracking its internal cost. This is incorrect. Besides ODIN services and contracts and procurement costs, NASA also tracks the number of internal FTE's associated with management of the various seat types. GAO was provided a copy NASA's submission to OMB of its Exhibit 300 Capital Asset Planning Report and the NASA Performance Plan which documents those internal FTE values.

See comment 3.

GAO has the impression that NASA is not tracking benefits. Actually, NASA tracks benefits both qualitatively and quantitatively as shown in ODIN's post-implementation review. The CIO's quarterly status reports provide evidence of benefits tracking.

2

Detailed comments on the GAO report are as follows:

See comment 4.

1. Table 1, pages 7 and 8: For the KSC and CMS delivery orders, the comment, "Under the terms of the master NASA ODIN contract, each type of service is sold separately." is misleading. All the services required to support a seat are bundled in the fixed monthly seat price. These services include asset management, help desk services, software upgrades, network services including management, hardware refreshment, etc. Upgrades to the infrastructure are typically paid for as a separate line item as are catalog items, though the cost of providing a catalog is probably bundled into the seat prices.

See comment 5.

2. Page 16, First full paragraph, first 2 sentences: The NASA ODIN Program Manager reports benefits realized and status to the NASA CIO quarterly. This information is based on monthly reports submitted to the PM by the Center ODIN Project Managers.

See comment 6.

3. Page 33, Agency/Contractor Partnerships are Vital to Success: It should be noted that the report states that in November of 2001, a NASA consultant pointed out there was no true partnership between the Agency and the ODIN contractors. On the next page, the report quotes a NASA consultant's recommendation that Goddard Space Flight Center (GSFC) and its vendor begin to build institutional and personal relationships. They also quote the same consultant as saying GSFC and its vendor develop a conflict resolution process. That consultant's recommendation came from a December 2000 report. Nowhere does the GAO report mention that GSFC went into a partnering arrangement with its ODIN contractor during the summer of 2000, and at that time developed a conflict resolution process. At the last ODIN workshop, GSFC led, and continues to lead the Agency in the partnering effort.

Should you or your staff wish to discuss this report, please Richard Brozen, Deputy CIO for Management, at 358-2240.

Cordially yours,

Lee Holcomb
Chief Information Officer

cc:
AA/C. Stadd
AB/M. Christensen
AI/D. Mulville

The following are GAO's comments on the National Aeronautics and Space Administration's letter dated February 28, 2002.

GAO Comments

1. We disagree that our characterization of NASA's up-front cost analysis is not accurate. For reasons discussed in this report, we do not agree that NASA performed sufficient up-front cost analysis. A thorough understanding of existing agency IT assets and functions is critical to an agency's ability to select appropriately among alternative ways to meet its distributed computing needs, and to ensure the effective management of contracts awarded to acquire these services. While we acknowledge that performing such an analysis can be challenging, the consequences of not doing so are nontrivial. This is clearly illustrated by the inability of a contractor employed by NASA to determine whether the agency is saving money with seat management because of the lack of a comprehensive pre-seat-management baseline. Also, as discussed in this report and our IT investment management guidance to agencies,[42] we agree that cost represents only one element of a complete preinvestment analysis. Other considerations include an evaluation of expected benefits and risks.

2. We disagree that our characterization of NASA's tracking of internal seat costs is incorrect. We note in this report that NASA tracks contractor costs and the number of staff associated with the management of its seat management program. While important, the monitoring of full-time-equivalents does not provide the agency with a complete picture of internal costs associated with the implementation of seat management. Moreover, as NASA officials acknowledged during the exit conference, the agency does not track the full internal costs of seat management, which would include cost items such as overhead and salaries and benefits. This is critical since the internal costs to manage seat management can be substantial. For example, NASA's Kennedy Space Center reported that its salaries and benefits to manage the Office of Space Flight's four seat-management implementations in July 2001 were about $146,000.

[42]U.S. General Accounting Office, *Information Technology Investment Management: A Framework for Assessing and Improving Process Maturity*, GAO/AIMD-10.1.23, Exposure Draft (Washington, D.C.: May 2000) and *Assessing Risks and Returns: A Guide for Evaluating Federal Agencies' IT Investment Decision-making*, GAO/AIMD-10.1.13 (Washington, D.C.: February 1997).

3. We do not agree that NASA routinely monitors the actual overall benefits of its seat management program. Tracking of actual benefits is a critical aspect of accountability in that it answers the question of whether expected cost savings and other qualitative and quantitative benefits are being achieved. NASA's seat management business case documented 11 program goals, but neither the agency's quarterly reporting process nor the ODIN postimplementation review fully addresses whether these goals have been achieved. In particular, the performance measures included in the quarterly reports focus on certain contractor performance metrics (e.g., service delivery and availability) and the average seat costs for general-purpose desktop computing seats. As we noted in this report, while this type of tracking can be an indicator of whether certain types of benefits are being achieved, such metrics do not fully address whether the overall costs and benefits of the seat management program are being met. NASA's quarterly reports do not contain performance measures that address estimated benefits such as potential increases in user efficiency and productivity and improved staff focus on mission-related activities. With respect to NASA's postimplementation review, the contractor that performed the review addressed whether NASA achieved certain types of benefits, such as cost savings and standardization, but did not address other *expected* program benefits, such as potential increases in user productivity and efficiency. Nevertheless, we agree that this postimplementation review was a good first step, which, if followed up by subsequent reviews that address all expected benefits of the NASA seat management program, would address our concerns in this area.

4. We modified our report to clarify the terms of the NASA master contract.

5. See comment 3.

6. We modified our report to recognize NASA's initiatives.

GAO Contact and Staff Acknowledgments

GAO Contact

Linda J. Lambert, (202) 512-9556

Acknowledgments

Harold Brumm, Peggy A. Hegg, James C. Houtz, Barbarol J. James, and Frank Maguire made key contributions to this report.

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