United States General Accounting Office

GAO

Testimony

Before the Subcommittee on Department Operations, Nutrition, and Foreign Agriculture, Committee on Agriculture, House of Representatives

For Release on Delivery
Expected at
9:30 a.m.
Wednesday,
May 14, 1997

USDA INFORMATION MANAGEMENT

Extensive Improvements Needed in Managing Information Technology Investments

Statement of Joel C. Willemssen
Director, Information Resources Management
Accounting and Information Management Division

GAO/T-AIMD-97-90

Mr. Chairman and Members of the Subcommittee:

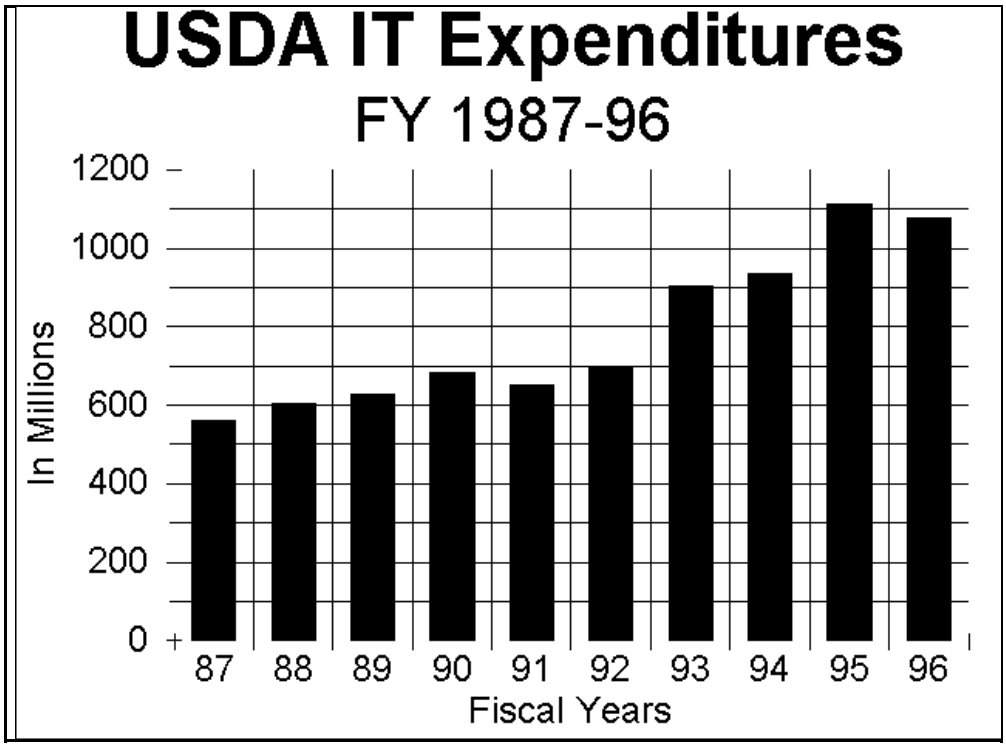
We are pleased to be here today to assist the Subcommittee in its oversight of the Department of Agriculture's (USDA) planning and management of its information technology (IT) resources; spending for IT resources currently totals over $1 billion annually. As requested, this morning I will discuss the need for USDA to address its long-standing difficulties in managing its substantial investments in information technology, and provide specific examples taken from our reports of USDA's inadequate management of information technology investments that resulted in millions of taxpayer dollars being wasted. In doing so, I will also provide a perspective on what we believe to be a major cause of these problems and discuss recommendations we have made to address these problems. I will then briefly discuss recent legislation that provides a framework for making sound IT investments in the future, which was based, in part, on practices we identified that were being followed by leading organizations that have successfully used technology to dramatically improve performance and meet strategic goals.[1] I will also touch briefly on the Department's current moratorium on information technology acquisitions.

Background

The influence of USDA on millions of Americans makes it essential that the Department plan and manage its information technology wisely. USDA's size and complexity, however, make this far from simple. The fourth largest federal agency, USDA employs over 100,000 individuals in 30 separate component agencies having multiple and sometimes disparate missions. Its responsibilities range from forests and timber to food assistance for the needy and the safety of meat and poultry products for human consumption. In fiscal year 1997 alone, USDA outlays will total about $57 billion. Over the past 10 years, USDA has reported spending about $8 billion on IT resources. During this time, as depicted below, USDA has seen its annual IT expenditures nearly double, from about $560 million to over $1 billion.

[1]Executive Guide: Improving Mission Performance Through Strategic Information Management and Technology (GAO/AIMD-94-115, May 1994).

Figure 1: USDA IT Expenditures for the Past 10 Years (Fiscal Years 1987 Through 1996)



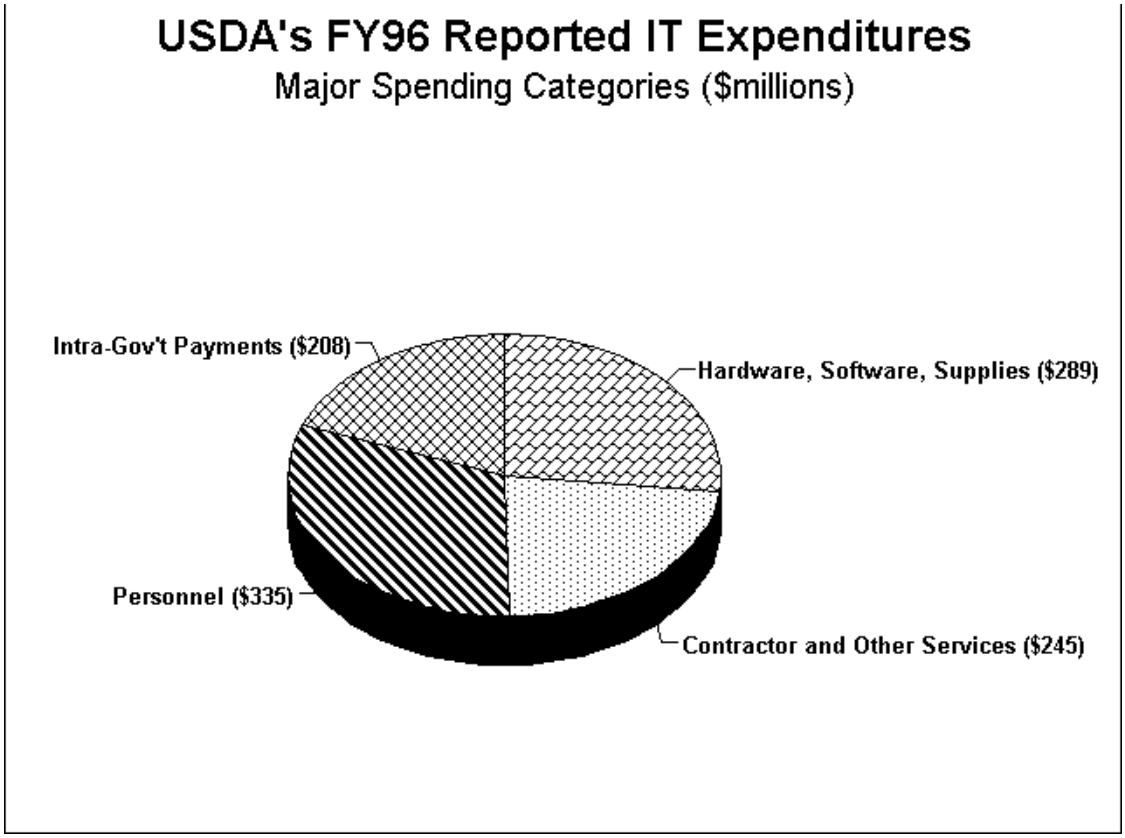
Source: The Department of Agriculture. This information has not been independently verified by GAO.

To put this figure in perspective, this $1 billion expenditure equates to spending over $2.7 million every day of the year. Besides purchases of computer hardware, software, and supplies, USDA spends a significant amount annually for services, especially those to support its information technology purchases. These include such items as contractor maintenance on systems or development of computer applications. Another major portion of USDA's IT expenditures goes toward personnel; this outlay makes up about 30 percent of the total information technology

budget. In fiscal year 1996, USDA reported having about 6,200 full-time equivalent employees in the IT resource area.

Another large portion of USDA's information technology expenditures covers intra-governmental payments, which mostly comprises payments to states for computer systems to administer the food stamp program. USDA's reported fiscal year 1996 spending for major categories is shown below in figure 2.

Figure 2: USDA's Fiscal Year 1996 IT Expenditures, by Major Category



Source: The Department of Agriculture. This information has not been independently verified by GAO.

For fiscal year 1997, USDA plans to increase its IT expenditures to about $1.1 billion, and has requested about $1.2 billion for fiscal year 1998.

USDA Does Not Effectively Plan or Manage Its Substantial Investments in Information Technology

Although USDA has reported spending nearly $8 billion on information technology resources over the past 10 years, it has not effectively planned or managed these IT investments and, as a result, has wasted millions of dollars. Mr. Chairman, I would now like to highlight a number of specific examples taken from our reports issued during this period, in which we found that USDA had not effectively planned major computer-modernization activities or managed IT resources.

- In June 1990 we reported that the Forest Service was not ready to procure a $1.2 billion geographic information system because alternatives for integrating this nationwide system into its existing operations had not been adequately analyzed, and system performance needs had not been adequately defined.[2] We concluded an unnecessary risk existed that the proposed system would not be effective and cost-beneficial in meeting the agency's mission needs. The Forest Service took actions to address our concerns and agreed to undertake a pilot program to reduce risk, which it completed last fall. The Forest Service is now preparing to move forward on this procurement.
- Later, in September 1990, we reported that ineffective project management and oversight contributed to cost growth, schedule delays, and user needs' not being met for USDA's grain and processed commodity inventory systems.[3] Cost estimates grew to almost 9 times the original estimates, from $7 million to $62 million; one system was installed 2 years later than planned, while the other was installed more than 6 years behind schedule.
- Then, in October 1991 we reported that the Farmers Home Administration faced unacceptable risks by proceeding with a $520 million project to modernize automated systems for making and collecting loans because project plans were not based on a strategic business plan that articulated how the agency would operate in the future, such as handling the impact of expected changes to loan management operations.[4] USDA canceled this procurement after issuance of our report.
- Similarly, we testified in June 1992 that restructuring the Department would affect the farm service agencies' automation plans, which included four USDA agencies planning separate information technology modernization projects; together, they planned to spend about $2 billion

[2]Geographic Information System: Forest Service Not Ready To Acquire Nationwide System (GAO/IMTEC-90-31, June 21, 1990).

[3]Information Resources: Management Improvements Essential for Key Agriculture Automated Systems (GAO/IMTEC-90-85, Sept. 12, 1990).

[4]ADP Modernization: Half-Billion Dollar FmHA Effort Lacks Adequate Planning and Oversight (GAO/IMTEC-92-9, Oct. 29, 1991)

between 1993 and 1997 on separate IT acquisitions.[5] At that time, we testified that such investments were unwise given the likelihood of some changes to the USDA field structure and new ways of doing business. The Senate Committee on Agriculture, Nutrition and Forestry agreed, and, at its urging, the Department postponed these acquisitions and later established a consolidated, multiagency program. USDA allowed the Federal Crop Insurance Corporation's (FCIC) $62 million IT modernization effort to continue on the basis that it was needed to ensure continued delivery of crop insurance to farmers.

- We reported in March 1993, however, that FCIC could not demonstrate that its nationwide project was required to meet immediate needs, and that it had not even identified what those needs were.[6] Uncertainties about FCIC's future, including the restructuring of USDA and reforms in the crop insurance program, created formidable risks for FCIC's planned nationwide computer acquisition project. We therefore recommended that FCIC cancel its nationwide acquisition, which it did, and pursue instead lower risk options to meeting immediate needs once identified. We also recommended that FCIC evaluate the possibility of incorporating its IT modernization into USDA's consolidated program, which was just getting underway and came to be known as Info Share.

However, as you know Mr. Chairman, USDA experienced more than its share of problems with the Info Share program it began in April 1993. This program was the biggest, most costly, and most challenging modernization attempt in USDA's history; it promised to improve operations and delivery of services to customers of farm service and rural development agencies by reengineering business processes and developing integrated information systems. At the time, the Secretary of Agriculture announced that customer services would be improved through "one-stop" shopping for farm services.

As we reported in August 1994, the $2.6 billion Info Share program was basically being managed as a vehicle for acquiring new technology, rather than as a true opportunity for reengineering business processes to better serve farm service customers.[7] The concept of one-stop shopping had not been clearly defined and USDA managers were not performing the key steps

[5]Department of Agriculture: Restructuring Will Impact Farm Service Agencies' Automation Plans and Programs (GAO/T-IMTEC-92-21, June 3, 1992).

[6]Crop Insurance Program: Nationwide Computer Acquisition Is Inappropriate at This Time (GAO/IMTEC-93-20, Mar. 8, 1993).

[7]USDA Restructuring: Refocus Info Share Program on Business Processes Rather Than Technology (GAO/AIMD-94-156, Aug. 5, 1994).

necessary to fundamentally improve the way these agencies do business. Therefore, we concluded that unless USDA concentrates on reengineering business processes, the Department risked spending hundreds of millions of dollars to further automate its current way of doing business and not meeting future needs.

Following our report on Info Share, the General Services Administration (GSA) canceled USDA's procurement authority for this project, and the Office of Management and Budget (OMB) placed Info Share on its list of high-risk programs that it kept at the time. However, by that time, as reported by USDA's Office of Inspector General, over $100 million had been spent on the project during fiscal years 1993 and 1994.[8] Although USDA took measures to restart the program by hiring a new program manager and setting up a program office in January 1995, the Inspector General reported 4 months later that a need for strengthened leadership and direction of Info Share at the most senior levels of the Department was clear. After millions more dollars were spent, USDA finally disbanded Info Share in December 1995 and moved the program's key objectives to the Department's service center implementation effort.

For the substantial investment made in Info Share, USDA had little to show in the way of reengineered processes or integrated information systems. Moreover, despite agreeing with our recommendations to refocus Info Share to ensure that business processes were reengineered, USDA continued to request additional funds to acquire new computer systems without determining how to best deliver services to its customers.

USDA has continued the objectives of Info Share under its service center implementation program; its goal is to restructure operations at 3,700 locations to create a network of about 2,500 "one-stop" centers. Unfortunately, even though USDA hopes to have all of these service centers fully operational by the end of this year, the Department has yet to articulate a clear vision of how services are to be delivered in these centers and exactly what "one-stop" service entails. While the names of the projects have changed, two facts have remained constant: (1) USDA still has not reengineered business processes or established integrated information systems and (2) it continues to spend additional millions of dollars on IT.

The need to streamline and consolidate systems also applies to the Department's financial information. As we reported in September 1995,

[8]Monitoring of the Info Share Program (USDA/OIG Report 50530-1HQ, May 4, 1995).

many of USDA's financial management systems problems would remain unresolved until the Department's systems were brought into compliance with USDA's financial standards.[9] Further, absent from the Department's Financial Information Systems Vision and Strategy was any mention of eliminating or consolidating over 100 separate USDA financial management systems that perform overlapping functions or of reengineering its financial management processes. Most of these systems are managed by USDA's agencies and its National Finance Center; in fiscal year 1994, USDA spent about $187 million to operate and maintain these over-100 separate systems. To our knowledge, USDA still has not implemented our recommendations that it eliminate or consolidate redundant financial management systems across agencies.

Ineffective management of the Department's $100 million annual telecommunications investment has also resulted in wasting millions of taxpayer dollars. As we reported in April 1995, USDA has hundreds of field office sites where multiple USDA agencies, located within the same building, obtain and use separate, and often redundant, telecommunications services.[10] While USDA had identified opportunities to consolidate and optimize telecommunications resources for substantial savings, the Department had not acted on these opportunities and, as a result, at the time of our review, was wasting as much as $5 million to $10 million annually. We noted that USDA's Office of Information Resources Management, which has responsibility for managing the Department's telecommunications, had not effectively carried out its responsibility.

Unfortunately, Mr. Chairman, lax Departmentwide leadership and oversight of USDA's telecommunications investments have resulted in even further waste. In September 1995, we reported that USDA was wasting millions of dollars each year paying for unnecessary or unused telecommunications equipment and services because the Department had not cost-effectively managed its telecommunications resources.[11] For example, because of breakdowns in management controls, for several years prior to our audit, USDA was paying tens of thousands of dollars annually for leased telecommunications equipment, such as rotary telephones and outdated computer modems, that it no longer even had. In

[9]USDA Financial Systems: Additional Actions Needed To Resolve Major Problems (GAO/AIMD-95-222, Sept. 29, 1995).

[10]USDA Telecommunications: Missed Opportunities To Save Millions (GAO/AIMD-95-97, Apr. 24, 1995).

[11]USDA Telecommunications: Better Management and Network Planning Could Save Millions (GAO/AIMD-95-203, Sept. 22, 1995) and USDA Telecommunications (GAO/AIMD-95-219R, Sept. 5, 1995).

but one of the many cases we identified, a USDA agency had paid a total of about $84,000 over 8 years to lease 16 modems that agency staff told us were long outdated and likely disposed of years earlier. Another USDA agency continued to pay about $500 a month for telecommunications services for an office that had been closed for more than a year, and had paid as much as $6,200 for these services at the time we reported this.

Mr. Chairman, we are convinced that without our reports on these problems, USDA would have continued paying tens of thousands of dollars annually for telephone equipment and services that it no longer needed or could not even locate. Given these serious management weaknesses, we recommended that the Secretary report the Department's management of telecommunications as a material internal control weakness under the Federal Managers' Financial Integrity Act and take other corrective actions, including stopping payments for the unnecessary services and leased equipment.

Unfortunately, USDA problems managing telecommunications do not end there. In April 1996, after we uncovered hundreds of cases of telephone abuse and fraud at the Department, we also reported that USDA lacked adequate controls over the millions of dollars it spends each year on commercial telephone services.[12] Many of these cases involved inappropriate collect calls made from individuals in 18 correctional institutions, accepted and paid for by USDA, and then possibly transferred to other USDA long-distance lines.

We have made numerous recommendations in our reports to address and help USDA correct the problems it has encountered. However, the Department has not yet fully implemented several of our recommendations, especially those we made over the last 3 years on Info Share, telecommunications, and financial systems. While some actions are underway, we cannot at this time be sure they will fully address all our concerns. In the case of Info Share, for instance, USDA last fall initiated four reengineering efforts for the farm service agencies, but in doing so did not implement our 1994 recommendations to require top-level managers to be directly and personally involved and responsible for directing the activity, or that the Department designate a senior manager to be responsible for managing these efforts.

[12]USDA Telecommunications: More Effort Needed to Address Telephone Abuse and Fraud (GAO/AIMD-96-59, Apr. 16, 1996).

Perspective on a Major Cause of USDA's Information Technology Problems

In light of these numerous examples, you can see Mr. Chairman, that USDA has had a history of IT problems dating back to the 1980s. While many factors have contributed to this, a major cause that often surfaced is a lack of strong information resources management (IRM) leadership, accountability, and oversight of the acquisition and use of Departmental IT investments. Let me quote from one of our reports:

> "USDA needs to better manage its computer and information resources if it is to meet the demands of its users. Restructuring its ADP [automated data processing] organization under a senior official with strengthened authority is a must if USDA is to deal with the many information resources problems it faces. . . . The existing ADP organization does not provide adequate planning, control, direction, and accountability. . . [and] it has no authority over agency in-house development efforts. . . . For several years problems have been identified in USDA's management and use of information resources. Yet, little has been done to solve these problems."

This was taken from our June 1981 report on USDA's management leadership over information resources.[13] Unfortunately, many of these statements still apply. While the senior officials at USDA responsible for the Department's IT resources have changed over the past 16 years, recurring problems in planning and managing information technology have not, and these problems continue to plague the Department.

Our management review of USDA in 1989 also highlighted the need for strong leadership from top management to overcome serious, long-standing organizational weaknesses.[14] Specifically, while USDA's Office of Information Resources Management had responsibility for Departmentwide planning and management of information technology, it lacked the authority necessary to overcome the problems caused by USDA's traditional approach to managing information resources: Its agencies are independent and their interests parochial in terms of managing these resources. In this 1989 report, we also noted that the budget remained a creature of the individual agencies' priorities and missions, where hundreds of appropriations accounts exist, limiting considerably the Secretary's flexibility.

In July 1991, continuing our series of management reviews at USDA, we noted once again that the agencies within USDA have always defined their

[13] Department of Agriculture Needs Leadership in Managing Its Information Resources (GAO/CED-81-116, June 19, 1981).

[14] U.S. Department of Agriculture: Interim Report on Ways To Enhance Management (GAO/RCED-90-19, Oct. 26, 1989).

own requirements and then planned and implemented systems, with little Departmental oversight or accountability.[15] Because of this, we highlighted numerous examples of faulty information systems being developed that did not allow data sharing or provide managers with the information they needed to effectively manage their programs. To overcome these problems, we again recommended that USDA exercise stronger central leadership and oversight to ensure effective systems planning and provide for better accountability over agency expenditures for information technology.

Other oversight agencies have also reported on these problems. For example, the GSA's fiscal year 1994 Information Resources Procurement and Management Review of USDA highlighted the need for the Department to overcome many of the same barriers we have pointed out over the years.[16] Specifically, GSA discussed the need for strong, sustained executive leadership in IT planning to overcome the Department's stovepipe approach and for managers at all levels to be accountable for prudent IT investing. Likewise, reports issued by USDA's Office of Inspector General, including one in March 1993, also discuss serious problems in planning major IT acquisitions because of ineffective and weak central oversight of these activities by the Department.[17]

Because of the lack of strong IRM leadership, accountability, and oversight, USDA agencies have continued to plan, acquire, and develop separate systems, independently, without considering opportunities to integrate systems and share data. Consequently, over time, the Department has invested hundreds of millions of dollars in hundreds of stovepipe systems—many poorly planned. These are systems that are not interoperable with other agency systems, and actually inhibit the use and sharing of information. In fact, data are often inaccessible and underutilized outside of, and even within, USDA's agencies for identifying problems, analyzing trends, or assessing crosscutting programmatic and policy issues. Even after the Congress passed the 1990 Farm Bill that specifically required USDA to integrate various databases that relate to agriculture program data, USDA did not do so, and its agencies continue to

[15]U.S. Department of Agriculture: Strengthening Management Systems To Support Secretarial Goals (GAO/RCED-91-49, July 31, 1991).

[16]Information Resources Procurement and Management Review: Department of Agriculture (GSA, FY94).

[17]Office of Information Resources Management Departmental Controls Over Major IRM Acquisitions (USDA/OIG Report 58001-1-FM, Mar. 31, 1993).

have separate databases that are not integrated and do not share information.

As a result of this stovepipe approach to planning and managing IT, we see the Department as data-rich but information-poor. For example, in the fall of 1991, when the Ranking Minority Member of the Senate Agriculture Committee asked three questions on where staff reside under the current structure, how much of the taxpayer dollars are they spending, and what work they perform, the Department could not give accurate information in a timely fashion. Similarly, in 1993 when we requested basic information on major systems under development at USDA, the Department did not have the data readily available, and it took 2 months before USDA supplied the information, after making a special request to the agencies.[18]

This situation still exists, as we found when preparing for this testimony. Specifically, when we asked the Department for the total number of contracting officers at USDA, the headquarters office responsible for ensuring that these officers are certified did not know either the number of officers or who they were, noting that they delegated these responsibilities to USDA component agencies.[19]

Recent Legislation Aims to Strengthen Leadership and Improve Investment Decision-making

After a decade of poor information technology planning and program management by federal agencies, as just described for USDA, the Congress enacted the Clinger-Cohen Act of 1996, which, in part, seeks to strengthen executive leadership in information management and institute sound capital investment decision-making to maximize the return on information systems investments. It is important to note that just as technology is most effective when it supports defined business needs and objectives, Clinger-Cohen will be more powerful if it can be integrated with the objectives of broader governmentwide management reform legislation that USDA is also required to implement.

One such reform is the Paperwork Reduction Act of 1995 (PRA), which emphasizes the need for an overall information resources management strategic planning framework, with IT decisions linked directly to mission needs and practices. Another reform is the Chief Financial Officers Act of

[18]Information Resources: USDA Lacks Data on Major Computer Systems (GAO/AIMD-94-31, Oct. 21, 1993).

[19]However, in our February 1997 report on USDA's contracting activities we obtained information on contracting personnel at a number of the component agencies. See USDA Procurement: Information on Activities During Fiscal Year 1996 (GAO/RCED-97-61R, Feb. 18, 1997).

1990, which requires that sound financial management practices and systems essential for tracking program costs and expenditures be in place. Still another reform is the 1993 Government Performance and Results Act (GPRA), which focuses on defining mission goals and objectives, measuring and evaluating performance, and reporting results. Together, Clinger-Cohen and these other laws provide a powerful framework under which federal agencies, such as USDA, have the best opportunity to improve the management and acquisition of information technology.

A USDA that works better and costs less in the 21st century must have efficient and effective information systems. We believe that if properly and fully implemented, the requirements of Clinger-Cohen and PRA should help the Department make real change and improve the way it acquires IT and manages these investments. These acts emphasize

- involving senior executives in information management decisions,
- establishing senior-level chief information officers (CIO),
- tightening controls over technology spending,
- redesigning inefficient work processes, and
- using performance measures to assess technology's contributions to achieving mission-related results.

As we have long recognized in many of our past reports on USDA, executive leadership is critical for improving the management of technology, and both PRA and Clinger-Cohen make agency heads directly responsible for

- establishing goals for using information technology to improve the effectiveness of agency operations and services to the public,
- measuring the actual performance and contribution of technology in supporting agency programs, and
- including with their agencies' budget submissions to OMB a report on their progress in meeting operational improvement goals through technology.

USDA has begun taking steps toward meeting the Clinger-Cohen mandates. As I will discuss, however, much remains to be done by USDA to fully implement the act's various provisions. The Department still has not developed a project plan outlining critical tasks, resource needs, and specific time frames and milestones for full implementation; this will be an important step in guiding the Department's effort to implement the Clinger-Cohen provisions, as the actions that remain will be neither easy nor quick. They will require a significant amount of time and commitment by many at the Department, particularly USDA's most senior managers.

I would now like to briefly discuss the specific provisions of the Clinger-Cohen Act and the steps that USDA has taken to start meeting the provisions of the act; I will then provide our observations on the implementation challenges facing the Department.

Capital Planning and Investment Control

Under this section of the Clinger-Cohen Act, USDA is required to design and implement a process for maximizing the value and assessing and managing the risks of information technology acquisitions. This process is supposed to be integrated with the processes for making budgetary, financial, and program management decisions, and include criteria to be applied in considering whether to undertake a particular investment in information systems. Moreover, the process is to provide for (1) identifying information systems investments that would result in shared benefits or reduced costs for other government agencies, (2) identifying quantifiable measurements of benefits and risks of proposed investments, and (3) the means for senior management to obtain information on the progress of information systems investments.

While USDA has begun to act in this area, it is still designing the specific elements and criteria for its capital planning and investment control process. In light of this, and because no specific time frames or milestones yet exist, it is unclear at this time precisely how the Department's process will operate, or when the Department will be ready to fully implement it.

Part of USDA's overall capital planning and investment control process will include its Executive Information Technology Investment Review Board, which the Secretary authorized last July. It was given responsibility for selecting, monitoring, and evaluating Departmentwide technology investments; members include the Department's most senior program officials. The board first met this past January and has met several times since then, but has not yet adopted specific operating procedures, including how and to what extent it will be involved in evaluating and approving ongoing and planned IT programs.

This past February, we issued a comprehensive guide for agencies such as USDA to use in assessing how well they are selecting and managing their information technology resources.[20] This guide, based on best practices used by public and private organizations, can be instrumental in helping USDA identify specific areas for improving its investment process to

[20]Assessing Risks and Returns: A Guide for Evaluating Federal Agencies' IT Investment Decision-making (GAO/AIMD-10.1.13, February 1997).

maximize the returns on technology spending while better controlling systems development risks. Officials in USDA's office of the CIO told us that they are using GAO's guide along with other guidance in developing their capital planning and investment control process.

Performance-Based and Results-Based Management

Under this section of Clinger-Cohen, to implement performance and results-based management for information technology, USDA is required to establish goals for improving the efficiency and effectiveness of agency operations through the effective use of information technology, and to report to the Congress on its progress in achieving these goals. USDA is also required to revise mission-related and administrative processes before making significant investments in information technology, and to ensure that performance measures are prescribed for gauging how well the technology supports USDA programs.

USDA is also in the early stages of addressing these requirements, and it is still unclear at this time how the Department will fully implement all of them. From our perspective, these requirements may be the most difficult and time-consuming to implement and will demand full commitment and involvement from senior managers for USDA's mission areas.

In establishing the mission-based goals and performance measures for IT investments, USDA will need to make sure that these are aligned with the long-term strategic goals and performance measures it is currently developing under GPRA. In a February 1997 report to the House Agriculture Committee, we discussed the status of USDA's actions to meet the GPRA requirements and noted that it planned to consult with the Congress some time this spring after its draft Departmentwide strategic plan has been reviewed by OMB and the Secretary.[21]

Revising mission-related processes can achieve dramatic changes in overall performance and customer satisfaction when the processes are fundamentally redesigned to achieve more effective and efficient program results. It is a formidable undertaking and entails difficult, strenuous work because it requires an organization's managers and employees to change how they think and work. Historically, however, USDA has not been successful in obtaining the necessary commitment and involvement from senior managers in revising mission-related processes. For example, as previously mentioned, despite the importance of senior management involvement to fundamentally improve the way the agencies do business,

[21] USDA Management: Progress in Meeting GPRA's Requirements (GAO/RCED-97-65R, Feb. 26, 1997).

Departmental managers were not directly and personally involved and responsible under Info Share. Now, 2 and a half years after our report, USDA is starting to move forward with its first projects to revise farm service agency processes; if done right, the Department can make dramatic changes and achieve significant cost savings in how it will operate in the 21st century as it establishes one-stop service centers.

Agency Chief Information Officer

Under this section, to help USDA carry out the new responsibilities discussed in the previous two sections, the Secretary of Agriculture is required to designate a chief information officer. The CIO is to be much more than a senior technology manager. As a top-level executive reporting directly to the agency head, the CIO is supposed to be responsible for achieving mission results through technology by working with senior managers on effective management to achieve the agency's strategic performance goals. Moreover, the CIO is to promote improvements in work processes and develop and implement an integrated, agencywide technology architecture. The CIO is also required to monitor and evaluate the performance of information technology programs, and advise the head of the agency whether to continue, modify, or terminate a program or project. Further, the CIO is responsible for strengthening the agency's knowledge, skills, and capabilities to effectively manage information resources.

USDA has taken steps to begin implementing requirements in this area. In August 1996 the Secretary established a CIO position and designated an acting CIO, who reports to the Secretary. The CIO has been given responsibility for supervising and coordinating the design, acquisition, maintenance, use, and disposal of information technology by USDA agencies, and for monitoring the performance of USDA's information technology programs and activities. However, the Department still has not established specific time frames or milestones for developing policies and procedures describing how the CIO's office will carry out these responsibilities, or specified what the CIO's authorities are for carrying out the mandates of Clinger-Cohen and PRA.

It is to soon to tell whether USDA's CIO will be able to effectively implement the Clinger-Cohen and PRA requirements and direct how various USDA component agencies, which control their own IT budgets, will make IT investments and carry out their IT programs, as well as reengineer business processes before acquiring new technology. The leadership demonstrated by the CIO and the support this official receives from the Secretary will be

critical for success. It will be equally important for the Secretary to hold the CIO accountable for the many improvements the Clinger-Cohen Act aims to deliver.

So far, the CIO's office has developed an initial draft version of a high-level information technology architecture. The acting CIO presented this initial version to the review board in February 1997, and the board is still considering it. USDA has still not yet established a specific time frame or milestones for completing its architecture.

In our view, in order to complete a sound and integrated architecture, substantial progress must first be seen in the performance and results-based management area. Without first revising mission-related processes, at least conceptually, USDA risks developing an information systems technology architecture that supports the Department's outdated processes rather than one consistent with any future approach.

Revising mission-related processes may alter the architecture components and severely affect information technology investment decisions. A case in point is the revision of a mission-related loan servicing process at USDA. After our October 1991 report, USDA canceled its $520 million Farmers Home Administration effort to modernize automated systems for its highly decentralized process for making and collecting single-family housing loans. Since then, with pressure from the Congress, USDA has developed and is implementing a new process for servicing these loans centrally, known as the Dedicated Loan Origination and Servicing System. By moving from a highly decentralized system to a centralized system, USDA expects to reduce the number of offices necessary for carrying out this process by about two-thirds—from about 2,200 in 1991 to about 800. Revising the loan-servicing process significantly affected the Department's information technology investment decisions, since fewer and different computers and telecommunications equipment were needed for centralized servicing.

Once USDA is ready to implement its architecture, another critical component will be establishing a systematic process for making necessary adjustments to the architecture to reflect internal and external changes. These changes may include elements such as the impact that the fiscal year 1998 budget will have on information technology investment decisions. This is especially true at USDA's Farm Service Agency, since the Department's fiscal year 1998 budget request points out that by the end of 1999, a maximum of 2,000 field office service centers will exist, compared

with more than 2,500 today. Other changes will include those opportunities identified through an independent external examination of operational efficiencies and cost savings from further coordinating Farm Service Agency and Natural Resources Conservation Service activities that USDA expects to undertake later this fiscal year. These include alternative means of program delivery, such as centralizing servicing for Agriculture Transition Marketing Act payments. Completing the architecture and keeping it current is especially critical if it is to represent a sound and integrated tool for guiding USDA's investment decisions.

Full and effective implementation of this section of Clinger-Cohen also provides, among other elements, potential benefits from sharing with government entities beyond USDA. For example, USDA's initial version of its information architecture includes an illustration of candidate locations for telecommunications equipment and services based on the locations where major concentrations of USDA personnel work. At many of these locations, however, other federal agencies, such as the Department of the Interior, already have equipment and services in place that could possibly be shared. If such opportunities to share resources exist and are ignored, the chance to achieve potentially significant savings will be missed.

Constraining Information Technology Spending While Implementing Clinger-Cohen

Finally, Mr. Chairman, a word about the Department's moratorium on significant information technology investments. With the passage of Clinger-Cohen and concerns expressed in Senate and House appropriations and authorization language, the Deputy Secretary last November established a moratorium on all significant information technology investments. This was done to give the Department time to assess its existing and planned IT investments and constrain IT spending until it develops a Departmentwide information architecture and implementation process. We applaud this action and view it as a responsible beginning toward reigning in what too frequently has been ill-advised information technology spending at USDA.

The acting CIO implemented the moratorium to include IT acquisitions over $250,000 and any acquisition of telecommunications equipment regardless of cost, with certain exemptions. These exemptions included renewals of contracts for maintenance and support-services contracts for mission-critical hardware, software, and applications, including those for

year-2000 compliance.[22] (USDA plans to spend about $190 million on support services in fiscal year 1997.) We were also told that the moratorium did not include funds that were obligated just prior to its enactment. This is significant, because among others, USDA obligated about $140 million in Commodity Credit Corporation funds at the end of fiscal year 1996, which included about $70 million for telecommunications for service centers.

Then there is the question of waivers. While operating under the moratorium, as of April 23, 1997, agencies had submitted 46 requests for waivers totaling about $82 million. The CIO's office had either fully, partially, or conditionally approved 34 of these waivers, totaling about $33 million, and allowed 2 others, worth nearly $44 million for maintenance and support services, to move ahead because they were considered to be exempt. For the remaining 10 requests, only 3—requests totaling $4,400 for telecommunications equipment—were denied; 6 of the others were still in process, and another was returned because it was incomplete.

At this time, USDA's moratorium officially remains in effect. Initially, USDA planned to lift the moratorium this past February on the basis that it would have completed an information architecture. Since then, however, the Deputy Secretary has continued the moratorium on a month-to-month basis while the Department continues to work on refining the architecture and developing a new Departmental capital planning and investment control process for IT investments. While it is unclear when USDA expects to have this process fully established, the Department has been developing an interim, post-moratorium decision-making process for the agencies to follow if the moratorium is lifted before the more detailed and extensive Departmental capital planning and investment control process is established.

Further, on January 27 of this year, the acting CIO suspended telecommunications investments for the service center implementation program, with the exception of those sites implementing centralized rural housing loan servicing or having emergencies, until the Department can

[22]The year-2000 problem is rooted in the way dates are recorded and computed in many computer systems. For the past several decades, systems have typically used two digits to represent the year, such as "97" representing 1997, in order to conserve on electronic data storage and reduce operating costs. With this two-digit format, however, the year 2000 is indistinguishable from 1900, 2001 from 1901, and so on. As a result of this ambiguity, system or application programs that use dates to perform calculations, comparisons, or sorting may generate incorrect results when working with the years after 1999. Correcting the problem and achieving year-2000 compliance—defined as the ability of information systems to accurately process date data from, into, and between the 20th and the 21st centuries, including leap year calculations—will not be easy.

assess the impact of the fiscal year 1998 budget on the number of field offices USDA will have. We support this action, which also remains in effect, since it is designed to prevent USDA from acquiring telecommunications equipment for sites that may close.

At this time, USDA is still continuing to experience problems planning and managing IT investments. For example, in planning the purchase and installation of telecommunications equipment in the new service centers, USDA did not take appropriate steps to ensure that it met two of its major objectives—reducing telecommunications costs by consolidating lines and improving customer service by being able to transfer calls among agency staff at the service centers. Consequently, these major goals were not met when new telephone systems were initially installed. This past February, USDA began to take remedial action to address these problems by issuing procedures for centers to follow to reduce the number of unnecessary lines. USDA is still working out procedures for how staff will answer and transfer calls.

Summary

In summary, Mr. Chairman, a USDA that works better and costs less in the 21st century must have efficient and effective information systems. Yet USDA has a long history of poorly planning and managing IT investments with the resulting loss of taxpayer dollars. Given USDA's track record, it would be both appropriate and necessary for the Department to demonstrate to the Congress that measurable progress has been made to effectively implement Clinger-Cohen and other legislative mandates, and strengthen Departmentwide leadership, accountability, and oversight of the acquisition and use of IT investments before millions more are spent on additional investments. Until and unless USDA can do so, the Congress may wish to consider reducing or limiting USDA's IT funding to only meeting critical information technology needs required to support ongoing operations. Otherwise, USDA risks continuing its legacy of wasting taxpayer dollars on IT investments that are poorly planned and managed, and being unable to operate effectively and effectively in the next century.

Mr. Chairman, this concludes my statement. I would be happy to respond to any questions you or other members of the Subcommittee may have at this time.

Related Products

USDA Information Management: Action Needed To Address Long-Standing Deficiencies (GAO/T-AIMD-97-56, Mar. 5, 1997).

Assessing Risks and Returns: A Guide for Evaluating Federal Agencies' IT Investment Decision-making (GAO/AIMD-10.1.13, February 1997).

USDA Management: Progress in Meeting GPRA's Requirements (GAO/RCED-97-65R, Feb. 26, 1997).

USDA Telecommunications: More Effort Needed to Address Telephone Abuse and Fraud (GAO/AIMD-96-59, Apr. 16, 1996).

USDA Financial Systems: Additional Actions Needed To Resolve Major Problems (GAO/AIMD-95-222, Sept. 29, 1995).

USDA Telecommunications: Better Management and Network Planning Could Save Millions (GAO/AIMD-95-203, Sept. 22, 1995).

USDA Telecommunications (GAO/AIMD-95-219R, Sept. 5, 1995).

Monitoring of the Info Share Program (USDA/OIG Report 50530-1HQ, May 4, 1995).

USDA Telecommunications: Missed Opportunities To Save Millions (GAO/AIMD-95-97, Apr. 24, 1995).

Review of Info Share Program Expenditures for Fiscal Years 1993 and 1994 (USDA/OIG Report 50530-2-HQ, Jan. 17, 1995).

Information Resources Procurement and Management Review: Department of Agriculture (GSA, FY94)

USDA Restructuring: Refocus Info Share Program on Business Processes Rather Than Technology (GAO/AIMD-94-156, Aug. 5, 1994).

Information Resources Management in a Reconfigured U.S. Department of Agriculture (House Report 103-610), Committee on Government Operations, House of Representatives, July 19, 1994.

Executive Guide: Improving Mission Performance Through Strategic Information Management and Technology (GAO/AIMD-94-115, May 1994).

Information Resources: USDA Lacks Data on Major Computer Systems (GAO/AIMD-94-31, Oct. 21, 1993).

Revitalizing USDA: A Challenge for the 21st Century (GAO/T-RCED-93-32, Apr. 22, 1993).

Office of Information Resources Management Departmental Controls Over Major IRM Acquisitions (USDA/OIG Report 58001-1-FM, Mar. 31, 1993).

Crop Insurance Program: Nationwide Computer Acquisition Is Inappropriate at This Time (GAO/IMTEC-93-20, Mar. 8, 1993).

Department of Agriculture: Restructuring Will Impact Farm Service Agencies' Automation Plans and Programs (GAO/T-IMTEC-92-21, June 3, 1992).

Geographic Information System: Forest Service Has Resolved GAO Concerns About Its Proposed Nationwide System (GAO/T-IMTEC-92-14, Apr. 28, 1992).

ADP Modernization: Half-Billion Dollar FmHA Effort Lacks Adequate Planning and Oversight (GAO/IMTEC-92-9, Oct. 29, 1991).

Farmers Home Administration: Half-Billion Dollar ADP Modernization Lacks Adequate Planning and Oversight (GAO/T-IMTEC-92-2, Oct. 29, 1991).

U.S. Department of Agriculture: Strengthening Management Systems To Support Secretarial Goals (GAO/RCED-91-49, July 31, 1991).

Forest Service Is Making Progress in Developing a Nationwide Geographic Information System (GAO/T-IMTEC-91-11, Apr. 24, 1991).

Management Improvements Essential for Key Automated Systems at the Agriculture Stabilization and Conservation Service (GAO/T-IMTEC-90-13, Sept. 18, 1990).

Information Resources: Management Improvements Essential for Key Agriculture Automated Systems (GAO/IMTEC-90-85, Sept. 12, 1990).

Geographic Information System: Forest Service Not Ready To Acquire Nationwide System (GAO/IMTEC-90-31, June 21, 1990).

Forest Service Not Ready to Acquire a Nationwide Geographic Information System (GAO/T-IMTEC-90-10, May 2, 1990).

U.S. Department of Agriculture: Interim Report on Ways To Enhance Management (GAO/RCED-90-19, Oct. 26, 1989).

Information Management: Issues Important to Farmers Home Administration Systems Modernization (GAO/IMTEC-89-64, Aug. 21, 1989).

Department of Agriculture Needs Leadership in Managing Its Information Resources (GAO/CED-81-116, June 19, 1981).

Ordering Information

The first copy of each GAO report and testimony is free. Additional copies are $2 each. Orders should be sent to the following address, accompanied by a check or money order made out to the Superintendent of Documents, when necessary. VISA and MasterCard credit cards are accepted, also. Orders for 100 or more copies to be mailed to a single address are discounted 25 percent.

Orders by mail:

U.S. General Accounting Office
P.O. Box 6015
Gaithersburg, MD 20884-6015

or visit:

Room 1100
700 4th St. NW (corner of 4th and G Sts. NW)
U.S. General Accounting Office
Washington, DC

Orders may also be placed by calling (202) 512-6000
or by using fax number (301) 258-4066, or TDD (301) 413-0006.

Each day, GAO issues a list of newly available reports and testimony. To receive facsimile copies of the daily list or any list from the past 30 days, please call (202) 512-6000 using a touchtone phone. A recorded menu will provide information on how to obtain these lists.

For information on how to access GAO reports on the INTERNET, send an e-mail message with "info" in the body to:

info@www.gao.gov

or visit GAO's World Wide Web Home Page at:

http://www.gao.gov

PRINTED ON RECYCLED PAPER

United States
General Accounting Office
Washington, D.C. 20548-0001

Bulk Rate
Postage & Fees Paid
GAO
Permit No. G100

Official Business
Penalty for Private Use $300

Address Correction Requested