



SOCIAL SECURITY

Office of the Inspector General

MEMORANDUM

Date: March 30, 2001

Refer To:

To: Larry G. Massanari
Acting Commissioner
of Social Security

Inspector General

Subject: Information Technology Capital Planning and Investment Control Process at the Social Security Administration (A-14-99-12004)

Attached is a copy of our final report. Our objective was to evaluate the Social Security Administration's (SSA) information technology (IT) capital planning and investment control process for compliance with the Clinger-Cohen Act of 1996 (CCA). Overall, we found that SSA's IT capital planning and investment process did not fully support a capital planning and investment control process as envisioned by the General Accounting Office and the Federal Chief Information Officer's Council for compliance with CCA.

Please comment within 60 days from the date of this memorandum on corrective action taken or planned on each recommendation. If you wish to discuss the final report, please call me or have your staff contact Steven L. Schaeffer, Assistant Inspector General for Audit, at (410) 965-9700.

A handwritten signature in black ink, appearing to read "James G. Huse, Jr." followed by a stylized surname.

James G. Huse, Jr.

Attachment

**OFFICE OF
THE INSPECTOR GENERAL**

SOCIAL SECURITY ADMINISTRATION

**INFORMATION TECHNOLOGY
CAPITAL PLANNING AND
INVESTMENT CONTROL PROCESS
AT THE SOCIAL SECURITY
ADMINISTRATION**

March 2001 A-14-99-12004

AUDIT REPORT



Mission

We improve SSA programs and operations and protect them against fraud, waste, and abuse by conducting independent and objective audits, evaluations, and investigations. We provide timely, useful, and reliable information and advice to Administration officials, the Congress, and the public.

Authority

The Inspector General Act created independent audit and investigative units, called the Office of Inspector General (OIG). The mission of the OIG, as spelled out in the Act, is to:

- Conduct and supervise independent and objective audits and investigations relating to agency programs and operations.**
- Promote economy, effectiveness, and efficiency within the agency.**
- Prevent and detect fraud, waste, and abuse in agency programs and operations.**
- Review and make recommendations regarding existing and proposed legislation and regulations relating to agency programs and operations.**
- Keep the agency head and the Congress fully and currently informed of problems in agency programs and operations.**

To ensure objectivity, the IG Act empowers the IG with:

- Independence to determine what reviews to perform.**
- Access to all information necessary for the reviews.**
- Authority to publish findings and recommendations based on the reviews.**

Vision

By conducting independent and objective audits, investigations, and evaluations, we are agents of positive change striving for continuous improvement in the Social Security Administration's programs, operations, and management and in our own office.

Executive Summary

OBJECTIVE

The objective of this audit was to evaluate the Social Security Administration's (SSA) information technology (IT) capital planning and investment control process for compliance with the Clinger-Cohen Act of 1996 (CCA).

BACKGROUND

CCA was enacted in August 1996 to promote improvements in the use of IT to support agency missions and improve agency management processes for acquiring and managing IT investments. Agency responsibilities defined in the Act include: (1) capital planning and investment control; (2) performance/results-based management and reporting requirements; (3) appointment of an agency Chief Information Officer (CIO); and (4) exception reports on major IT acquisitions that have significantly deviated from cost, performance, or scheduled goals (see Appendix A for excerpts).

In February 1997, the General Accounting Office (GAO) issued guidance to all Executive Branch agencies for evaluating IT investment decisionmaking for implementing CCA and other major legislation. While the Agency is not required to, and has not, adopted this guidance, the Federal CIO Counsel has endorsed this guidance as "best practices" for implementing CCA (see Appendix B). The guidance provides a three-phase process (Selection, Control, and Evaluation) for capital planning and IT investments.

SELECTION PHASE

The goal of the Selection phase is to assess risk/return and prioritize current and proposed IT initiatives to create an optimal portfolio of IT initiatives. One tool for assessing risk is modeling.

CONTROL PHASE

The goal of the Control phase is for project managers and initiative owners to periodically assess the individual's progress against projected costs, schedule milestones, and expected mission benefits. One feature of the Control phase is that the tracking systems must be integrated with a capital planning and investment control process.

EVALUATION PHASE

The goal of the Evaluation phase is to provide feedback that will lead to constant improvement in the organization's IT investment process. During the Evaluation phase, the organization will perform a post-implementation review to compare actual data with projected data, including life-cycle costs and life-cycle returns.

RESULTS OF REVIEW

Using the outline of the GAO guidance, we have organized our findings into three phases.

SELECTION PHASE

SSA's Strategic Planning Process did not require a risk assessment using risk modeling for proposed IT projects. Also, the Agency was not evaluating the use of decision support software (DSS) to assist in selecting the optimal portfolio of IT investments.

CONTROL PHASE

SSA's individual tracking systems were not integrated to support a capital planning and investment control process. Below are two examples of conditions demonstrating non-integration.

1. There was no IT project accountability data base (system) for capturing different types of project costs, such as internal programming costs and external software and hardware purchases.
2. SSA had not monitored in-process reviews for performance. For example, SSA did not perform variance analyses when cost and scheduling deviated from what was expected. Since SSA was not performing a variance analysis, exception reporting to management cannot be done when costs increase by 10 percent or schedules slip by 6 months.

EVALUATION PHASE

SSA has not established a post-implementation review process (policies and procedures) nor has it targeted any IT projects for post-implementation review except the review of the intelligent workstation/local area network project requested by Congress.

CONCLUSION AND RECOMMENDATIONS

We note that SSA had made noticeable progress toward implementing an IT capital planning and investment control process, as envisioned by GAO and the Federal CIO Council. SSA's strengths include:

- reviewing proposed IT projects against the Agency's mission and goals for strategic effectiveness,
- establishing a CIO, and
- requiring major IT projects to be grouped into smaller more manageable project phases before full implementation.

However, the results of our review of SSA's IT Capital Planning and Investment Control Process and interviews with SSA personnel had identified several improvements the Agency needs to consider regarding its implementation of CCA. Overall, SSA's IT capital planning and investment process did not fully support a capital planning and investment control process, as envisioned by GAO and the Federal CIO Council. SSA needs to make additional Agencywide improvements, in the Selection, Control, and Evaluation phases of its IT investment process.

We recommend SSA:

Finding 1- Selection Phase

- Develop a risk model and use it in the strategic planning process for all proposed IT projects. Selection criteria should include weighing risk for cost, benefits, schedule, technical, etc.
- Evaluate using DSS tools like Expert Choice to further assist SSA in its selection of IT projects. Expert Choice allows the user to take the intangibles of decisionmaking (experience, insight, and judgment) and weigh them against a customized set of criteria.

Finding 2 – Control Phase

- Redesign SSA's Capital Planning and Investment Control Process to incorporate the processes for making budget, financial and program management decisions within the Agency into one integrated system. SSA could implement this recommendation through the use of the Information Technology Investment Portfolio System (I-TIPS) software (see Appendix C).
- Design and implement an IT project accountability system that: (a) captures all funds spent with budgeted cost; (b) allows expanded scheduling information like expected versus actual implementation date, including milestone dates; and (c) includes performance indicators like return on investment or any other benefit measures.
- Require benefits to be quantified and performance measures to be identified for major projects in SSA's strategic planning guidance.

- Request management information on the financial accounting of each project (spent to-date and the amount remaining to be spent), milestones, and expected implementation date.
- Perform variance analysis and exception reporting on cost and scheduling time frames.

Finding 3 – Evaluation Phase

- Establish policies and procedures for conducting post-implementation reviews.
- Perform post-implementation reviews on appropriate IT projects.

AGENCY COMMENTS

In response to our draft report, SSA generally agreed to explore and/or assess our recommendations. Specifically, SSA plans to explore more systematic risk modeling procedures for proposed IT projects by:

- evaluating decision support software like Expert Choice;
- re-examining I-TIPS as a tool to collect, analyze and report IT project accountability information;
- establishing more detailed policies and procedures for conducting post-implementation reviews in 2001; and
- performing post-implementation reviews on appropriate IT projects. (See Appendix F for SSA's comments.)

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Acronyms

BCP	Budget Call Process
BEP	Budget Execution Process
BER	Budget Execution Report
CBA	Cost Benefit Analysis
CCA	Clinger-Cohen Act
CIO	Chief Information Officer
DSS	Decision Support Software
GAO	General Accounting Office
GPRA	Government Performance and Results Act
FY	Fiscal Year
IRM	Information Resource Management
IT	Information Technology
ITS	Information Technology Systems
I-TIPS	Information Technology Investment Portfolio System
ITSRS	Information Technology Systems Review Staff
IWS/LAN	Intelligent Work Station/ Local Area Network
MCAS	Managerial Cost Accountability System
OFAM	Office of Finance, Assessment and Management
OSPI	Office of Systems Planning and Integration
PIR	Post-Implementation Review
RIBS	Resources and Integration Budget System
RIMS	Risk Identification and Mitigation System
SSA	Social Security Administration
VISOR	Vital Signs and Observations Report

Introduction

OBJECTIVE

The objective of this audit was to evaluate the Social Security Administration's (SSA) Information Technology (IT) capital planning and investment control process for compliance with the Clinger-Cohen Act of 1996 (CCA).

BACKGROUND

Clinger-Cohen Act: The CCA⁴ promotes improvements in the use of IT to support agency missions and improves agency management processes for acquiring and managing IT investments. Agency responsibilities defined in CCA include: (1) capital planning and investment control; (2) performance/results-based management and reporting requirements; (3) appointment of an agency Chief Information Officer (CIO); and (4) exception reports on major IT acquisitions that have significantly deviated from cost, performance, or scheduled goals (see Appendix A for example).

General Accounting Office issued guidance: In February 1997, the General Accounting Office (GAO) issued guidance⁵ for evaluating Federal agencies' IT investment decisionmaking for implementing CCA. The GAO guidance outlines the following three-phase process for capital planning and IT investments (see Appendix B).

SELECTION PHASE

The purpose of the Selection phase is for agency executives to create an optimal portfolio of IT initiatives through assessing risk and return, which will enable an agency to better prioritize current and proposed IT initiatives. Projects being proposed for funding are initially screened to eliminate proposals that do not pass minimal acceptance criteria. Proposals that pass this screening process have their costs, benefits, and risks analyzed in-depth. Once this is accomplished, all of the projects are compared against some common decision criteria and ranked based on their relative benefits, costs and risks. Using this prioritized list as a guide, agency executives decide which projects to fund.

CONTROL PHASE

During the Control phase, agency executives should be actively engaged in tracking all of the projects in the investment portfolio. For an agency to achieve maximum benefits from a project, while minimizing risks, the agency's tracking systems should be integrated with a capital planning and investment control process. Agency executives

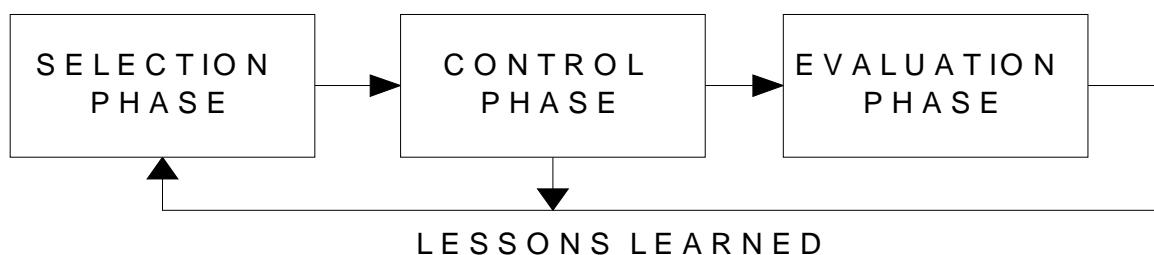
⁴ The CCA has also been referred to as the Information Technology Reform Act of 1996

⁵ *Assessing Risks and Returns: A Guide for Evaluating Federal Agencies' IT Investment Decision-making*, GAO/AIMD-10.1.13, February 1997.

should change a project's course when necessary and incorporate their lessons learned in the Selection phase to further refine and improve the process.

EVALUATION PHASE

The Evaluation phase “closes the loop” on the IT investment management process by comparing actuals against estimates to assess performance and identify areas where future decisionmaking can be enhanced. Lessons learned during the evaluation phase should be geared toward modifying future selection and control decisions. Central to this process is the post-implementation review with its evaluation of the project’s historical record.



SSA’s Capital Planning and IT Management Control Process

It should be noted that, before CCA was implemented, many of the key CCA IT management reforms had already been in place at SSA for many years. For example, SSA’s Systems Review Board was established in 1987 and chaired by SSA’s Chief Financial Officer to provide independent oversight of major IT investments.

In response to CCA, SSA streamlined the IT management process by establishing the CIO position and placing it with the Principal Deputy Commissioner.⁶ Also, SSA transformed the Systems Review Board into the CIO Core Team, which is composed of staff from key SSA components involved with IT investments and Information Resource Management (IRM) issues. SSA established a larger CIO Advisory Council composed of Executive Staff members to ensure Agencywide awareness of, and involvement in, IT/IRM issues.

SSA’s IT capital planning and investment review process starts with the Office of Strategic Management working with the CIO Core Team and the larger Executive Staff to develop the Agency’s Strategic and Business Plans and define the key initiatives required for implementation. SSA components develop resource plans for these key initiatives and identify the resources required for their implementation.

⁶ Effective October 5, 2000, the CIO position has changed and is now within the Office of the Deputy Commissioner for Social Security.

The components' resource request plans are updated annually through SSA's Budget Call Process (BCP). The BCP starts with the Office of Systems issuing instructions and guidelines for developing and submitting of resource requests for SSA's IT budget. Once the Office of Systems receives the component resource plans, it reviews and consolidates components requests, determines whether proposed IT investments comply with SSA's IT architecture, and formulates the final IT budget submission. The Deputy Commissioner for Systems submits a prioritized proposed IT budget and project justifications to the Office of Finance, Assessment and Management (OFAM).

The Information Technology Systems Review Staff (ITSRS), a component of OFAM, independently analyzes and evaluates the proposed IT budget and provides its recommendations to the CIO. Once the CIO approves the proposed IT initiative, ITSRS tracks the IT investment through the annual Budget Execution Process (BEP). The BEP consists of ITSRS' monitoring the project to ensure IT funding does not exceed the annual approved budgeted amount. When requested funding exceeds the annual budgeted amount, ITSRS makes recommendations to the CIO. The CIO must approve all funding increases that are \$100,000 over the annual budgeted amount.

SCOPE AND METHODOLOGY

The objective of this review was to evaluate SSA's IT capital planning and investment review process for compliance with the CCA of 1996. To accomplish our objective, we:

- Obtained and reviewed previous Office of the Inspector General and GAO audit reports.
- Reviewed applicable laws and guidelines. For example, the CCA; Office of Management and Budget Circulars A-94, *Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs*, and A-11, *Preparation and Submission of Budget Estimates* (Exhibits 42, 300A, and 300B); and the *Statement of Federal Financial Standards Number 10*.
- Reviewed critical documents, for example, Cost Benefit Analysis (CBA) Instructions, Strategic Planning Process, Information Technology Systems (ITS) BCP, and the Information Technology Investment Portfolio System (I-TIPS) (see Appendix C) and other documents.
- Interviewed pertinent SSA Headquarters staff within OFAM and Systems.
- Conducted phone interviews with staff from the Departments of Labor, Housing and Urban Development, and Treasury as well as the General Services and Small Business Administrations.
- Reviewed seven IT projects through SSA's IT capital planning and investment control process and evaluated the results. We selected the projects from SSA's February 9, 1999, key initiative schedule. The schedule had three different priority

levels, with level I having the highest priority. We selected four projects from level I, two projects from level II and one project from level III.

- Performed other analysis in support of our conclusions for example, SSA's 5-Year Systems Plan for missing return on investment information, etc.

We conducted our fieldwork at SSA Headquarters in Baltimore, Maryland, from January 1999 through March 2000. We conducted this audit in accordance with generally accepted government auditing standards. The entities audited were ITSRS within the OFAM and the Office of Systems Planning and Integration (OSPI) within the Office of the Deputy Commissioner for Systems.

Results of Review

The results of our testing of SSA's IT Capital Planning and Investment Control Process and interviews with SSA personnel have identified several improvements SSA needs to consider regarding its implementation of CCA. Overall, SSA's IT capital planning and investment process, does not fully support a capital planning and investment control process as envisioned by GAO and the Federal CIO Council for compliance with CCA. Improvements are needed in the Selection, Control, and Evaluation phases of the GAO model and the Federal CIO Council's recommended IT capital planning and investment control process. Using the GAO model, we have outlined our findings by phase.

SELECTION PHASE

Sections 5122(a), 5122(b)(3), and 5122(b)(5) of the CCA require proposed IT projects be ranked for risk and return. However, SSA's Strategic Planning Process does not require an assessment of risk and return for proposed IT projects. Also, SSA had not established a documented process (risk modeling) for ranking (a numerical subjective ranking) its IT projects for risk and return. Categories of risk and return would include: (1) technical risk; (2) scheduling risk; (3) benefit-cost impact (low return on investment); and (4) quality of cost estimates. Finally, SSA was not using any decision support software (DSS) to assist in its decisionmaking process.

IT projects with high risks are attributable to: (1) scope and requirements not being well defined; (2) benefits not being clearly identified; and (3) soft cost estimates that could result in significant exposure to additional cost and implementation delays. Based on our analysis of the seven IT projects, we identified three projects that we believe should have been classified as high-risk because of their complexity.

Appendix D shows the risk ranking for three projects we rated overall as being very risky (high-risk) projects.

Chart 1—Seven IT Projects Reviewed

Project Special Expense Item Number	Resource Accounting System Number	Overall Rated Risky Projects	Project Name
567	2611	Yes	Expanded Electronic Wage Reporting System
145	7871		Financial Accounting Tracking Systems
702	2590		Management Information for Intelligent Work Station/Local Area Network (IWS/LAN)
704	6412		Policy Net/Policy Repository
740	5022		Video Teleconferencing Service
529	6863	Yes	Integrated Human Resources System
Various	Various	Yes	Re-engineering Disability System

Because these three projects started before CCA's August 1996 effective date, SSA was not required to perform risk assessments. However, if SSA had performed risk assessments, it may have identified these projects as high-risk. This may have caused the Agency to re-evaluate the selection and investment made in these systems until the related risk became more manageable and returns were better quantified. In addition, we believe SSA would have been better able to anticipate the increased cost and project time delays these three projects experienced.

SSA informed us it did not perform a ranking and risk assessment because the assessment would have been subjective, and the Agency did not see much value in doing it. SSA also did not know who in the Agency would perform the assessment. SSA further added that because it usually does a pilot first, it is in effect performing a ranking and risk assessment to identify and minimize risk by determining whether it is cost-beneficial to implement the IT project. However, based on our review of SSA's IT projects, once pilot money has been spent, SSA has traditionally continued to spend money until the project is implemented. We could not find a project that had been terminated after the pilot within the last 3 years. Project sponsors and managers have viewed pilot funding as approval for implementation.

We conducted a meeting with SSA on November 15, 1999 to discuss our findings. At that meeting, SSA stated it was implementing a Risk Identification and Mitigation System (RIMS) it believed would provide an adequate assessment of risk. We reviewed RIMS guidelines, procedures and its placement in SSA's overall IT planning and investment control process and concluded RIMS is not the solution. RIMS is

intended to be used by the project manager after SSA's senior management has approved the project for development. Also, RIMS does not specifically prompt project managers to assess risk in the following categories: software, hardware, technology, cost, schedule, benefits, and resources. If SSA were to use RIMS for risk modeling, RIMS would have to be modified to require project managers to assess risk for each category. Also, RIMS would have to be moved from the Control phase to the Selection phase (strategic planning process) so senior SSA managers can assess risk before a proposed IT project is approved and funds disbursed. SSA needs to develop risk-modeling techniques in the Selection phase when making decisions about proposed IT projects, as required by CCA.

Other agencies we contacted⁴ were using DSS like "Expert Choice" to assist them in selecting the right portfolio of IT investments. Using DSS helps build consensus because decisionmakers have to assess each project's criteria, define parameters, and weigh judgments.

CONTROL PHASE

Section 5122(b)(2) of the CCA requires an integrated process (system) to support an agency's capital planning and investment control process. SSA's tracking systems were not integrated to support a comprehensive capital planning and investment control process. The *lack of systems integration* is directly attributable to the following.

- SSA had not captured all cost information for IT projects as required by section 5002(3)(B) of the CCA. SSA has not established an *IT project accountability system* to obtain all cost information.
- SSA had not continually monitored in-process reviews for performance, as required under sections 5122(b)(6) and 5125(c)(2) of the CCA. SSA has not compared its project cost and time expended in its projects to their expected amounts. Since SSA does not perform these types of variance analysis, it cannot report exceptions, when costs increase by 10 percent or when scheduled dates slip by 6 months.

⁴ Department of the Treasury, United States Customs Service, General Services Administration.

Integration

Chart 2 shows some of SSA's stand-alone tracking systems, their use, and the SSA component responsible for this system.

Chart 2—Tracking Systems

System	Use	Component
Executive Management Information System	IT project planning, GPRA strategic planning, financial information, operational statistics, etc.	Office of Systems
Procurement Tracking System	Monitoring status of IT requisitions	Office of Systems
Intranet sites like Vital Signs and Observations Report	Monitoring status of some IT projects	Office of Systems
Resource Accounting System	Reporting and analyzing time against IT projects	Office of Systems
Financial Accounting System	Identifying commitments, obligations and expenditures	Office of Finance

Each tracking system captures a portion of the overall data for IT project development. These systems are not integrated. As a result of this fragmented approach, SSA's systems do not support the capital planning and investment control process as envisioned by GAO, and the CIO Council for CCA compliance.

To address the need for an integrated system, the Federal CIO Council has recommended agencies consider using the federally funded software, I-TIPS (see Appendix C for details). I-TIPS provides a convenient, central repository (data base) for IT project-related information accessible through the Intranet. In March 1999, SSA evaluated the usefulness of I-TIPS. At that time, SSA did not recommend I-TIPS because it would neither replace SSA's systems nor provide automated links to retrieve data from these systems. Therefore, I-TIPS would result in a significant data entry workload. SSA further stated I-TIPS was designed to capture all costs associated with a project, including in-house personal costs. SSA did not routinely capture total cost information for most of its major projects. Furthermore, I-TIPS requires benefits to be quantified and performance measures identified for major projects. SSA's strategic planning guidance does not require this information to be provided for Agency key initiatives, and not having this information limits the usefulness of I-TIPS for SSA.

SSA has acknowledged its tracking systems are not integrated to fully support a capital planning and investment control process. However, SSA's position has been to take a "wait and see" attitude if other large Federal agencies have successfully implemented an integrated capital planning and investment control system. We believe SSA should re-evaluate this position now that other large agencies like the General Services Administration, Department of Energy, and Department of Agriculture have successfully implemented an integrated capital planning and investment control process using I-TIPS. I-TIPS would provide SSA the much-needed integration to support IT decisionmaking. In addition, I-TIPS would require SSA to begin the discipline of collecting the full range of information (total costs, quantified benefits, performance measures, etc.) on investments called for by CCA.

IT Project Accountability System

Ability needed to determine project cost to-date?

For each of the seven IT projects we reviewed, we asked SSA the cumulative amount it had spent on the project to-date and how much more it planned to spend. SSA said this type of information was not available in a single management information source and would require SSA to look at several individual systems and retrieve several years worth of data to obtain the answer. To readily retrieve this information, SSA needs an IT project accountability system for capturing and storing various types of cost by year (that is, internal labor, training, travel, external purchases etc.). We believe not having this type of financial information for each IT project has limited SSA's ability to monitor and evaluate performance via variance analysis and exception reporting.

We obtained information from various systems to determine the cumulative amount SSA had actually spent to-date for the seven projects we reviewed. We estimate SSA spent about \$118.3 million with external costs of \$77.3 million and internal costs of \$41 million. Appendix E shows the external and internal costs and work years as of August 14, 1999, for each of the seven projects.

The Budget Execution Report (BER) only serves as documentation of CIO approval for external cost decisions in the Information Technology Systems (ITS) budget. We could not find a similar approval document for internal costs. As a result, the CIO had not approved all IT investment cost, that is, internal cost. This would be about \$41 million (35 percent of the total estimated project cost) for the seven IT projects in our review.

ITSRS asserted that, since the CIO was also the Principal Deputy Commissioner, the CIO had approval authority over all internal IT cost budget decisions. We agree the Principal Deputy Commissioner⁵ had the authority; however, we could not find documented evidence of CIO approval for internal IT cost budget decisions similar to the BER. For example, if a project manager requests an additional \$100,000 in

⁵ Effective October 5, 2000, the CIO position has changed and is now within the Office of the Deputy Commissioner for Social Security.

contractor support (external cost) over the budgeted amount, the request would have to go through ITSRS for review, and CIO approval would be documented in the BER. However, if the same project manager were able to get the support internally, there would be no documented CIO approval for the transfer.

Another example of the importance of having a project accountability system that can capture all internal costs for CIO review and approval involved the management information system for the IWS/LAN project (Special Expense Item 702). The IWS/LAN management information project incurred internal costs five times greater than its external costs. Yet only the external costs were readily available for CIO review and approval.

The purpose of this project is to build the hardware/software infrastructure that will allow the modernization of the management information environment and the integration of management information data. The end-users, through their desktops, can query and analyze Agencywide data organized by subject matter. As of August 14, 1999, the Office of Systems' internal cost (about 85 percent of the total cost) was about \$6.8 million for 97.1 workyears with external costs of only about \$1.2 million. ITSRS has not recommended any additional external funding (for the purchase of hardware and software) until the Office of Systems provides a CBA justification. While we agree with ITSRS' position, the Office of Systems has already spent over \$6 million in internal resources on this project. If SSA had a project accountability system, internal cost information would be available to help management analyze total cost information and make informed decisions.

On November 15, 1999, we met with SSA to discuss our findings. SSA felt its proposed Managerial Cost Accountability System (MCAS) would address our concern about the lack of an IT project accountability system. We reviewed MCAS background, scope, functionality, and project status and concluded it will probably address SSA's need for an IT project accountability system. However, the implementation strategy for MCAS is complex and has four major parts. According to the latest status report, SSA has been concentrating on the first major part, which is the renovation of the Cost Analysis System. For this System, SSA has completed two of the four scheduled releases. The last 2 releases are scheduled for the second and third quarters of Fiscal Year (FY) 2001. The other three major parts are still in the planning and analysis stage. Incorporating functionality for an IT project (cost) accountability system into MCAS is probably several years in the future.

How much will be spent in the future?

We could not obtain information on SSA's anticipated spending level for each of these IT projects or when these projects are expected to be completed because SSA does not know. Historically, SSA has underestimated the final costs and target implementation dates of IT projects. We found part of the reason has been in the initial CBA's documents that justified the approval of the IT projects. The CBAs have historically been revised upward to reflect unanticipated cost by sponsors and project managers.

We attribute the unanticipated cost to IT project scopes and functionality not being well defined. Also, SSA has not held sponsors and project managers accountable for poor cost estimates.

SSA accepts the underestimated CBA cost practice because benefits have to be revised through new CBAs to justify the higher cost. We found that benefit methodology assumptions usually can be changed to justify the additional cost. For example, an internal communication on the Integrated Human Resource System suggests SSA may need to extend the system's life so additional benefits can be added to compensate for amount of the system's delay or cost overrun.

More Information for Monitoring Performance

SSA has not continually monitored in-process reviews for performance. One reason has been a general lack of target indicators. Specifically, we found the following performance monitoring information was missing.

- None of the six IT projects we reviewed contained an ITSRS analysis concerning milestone dates with specific deliverables.
- Of the seven proposed key IT initiatives presented at the Executive Planning Board Meeting on February 9, 1999, none had a quantified benefit. Only one had an estimated cost.
- For SSA's July 12, 1999 5-Year Systems Plan, 268 (about 80.7 percent) of the 332 line item tasks scheduled for completion by the end of FY 2000 had no return-on-investment information. Even the Deputy Commissioner for Systems in a February 26, 1999, memorandum to the Deputy Commissioners raised the question whether SSA should continue to work on the items in the 5-Year Systems Plan with no return-on-investment.

For the seven (multi-year) projects we reviewed, SSA had not performed cost and scheduling variance analyses from the start of the project . We noted, however, that SSA was performing cost variance analyses on selected IT projects for current year activity only (see discussion below). Variance analysis compares estimates with actuals. Gaps or differences should be analyzed and explanations documented. In connection with variance analyses, SSA has not performed any exception reporting, for example, costs increased by 10 percent or a schedule slipped by 6 months.

SSA responded it is difficult to analyze variances in cost or schedules because the expected total IT project cost (base period) and implementation schedule keep changing through revised CBAs during the life of the IT project. This is why SSA should monitor its cost and schedule variances. Lessons learned from variance analyses should be built into the criteria for the Selection and Control phases to improve the IT planning and investment control process. SSA, however, believes it is continually monitoring performance and cites the investment review process, and various

management information reports on SSA's Intranet site, such as the Vital Signs and Observations Report (VISOR)⁶, and the Resources and Integration Budget System (RIBS), as tools for monitoring performance. While we agree these are important tools, they are not always timely or do not provide information about the total performance from the start of the project to-date.

From our review of ITSRS' analysis, we do not believe ITSRS asks to see deliverables or milestone dates unless the sponsor and project manager have requested more money than planned and there is a cost overrun for the project. An investment review is only triggered when there actually is a cost overrun problem. We could not find where an investment review had been triggered for other reasons, such as the user not getting the expected functionality (performance) or significant delays in the expected implementation. SSA should be continually monitoring a project's performance and not wait until a cost overrun occurs.

Finally, we would like to recognize SSA's efforts in reporting cost variance information under RIBS. This is a good start but SSA needs to go further. Variance information is only available for current year activity (current budget to actual) and needs to be expanded to include prior year's variances to show total variance on the project to-date. Also, RIBS is only available for those IT projects that have been identified by SSA as having the highest priority. We reviewed the Agency's 30 highest priority projects for the week ending May 29, 1999. Our analysis indicated critical information missing for savings and workyear estimates:

- 4 projects were missing estimated workyears,
- 21 projects were missing savings information, and
- 4 projects had significantly inaccurate workyear estimates.

The second point and probably the most significant, is the Agency's highest priority projects only accounted for 658 (about 39 percent) of the 1,672 workyears available in FY 1998 by the Office of Systems to work on IT projects. Therefore, more than 60 percent of the workyears in FY 1998 were not controlled for cost information such as a variance analysis.

EVALUATION PHASE

Performing post-implementation reviews is a requirement under sections 5122(b)(1) and 5125(c)(2) of the CCA. SSA has not established a post-implementation review process (policies and procedures) nor has it targeted any IT projects for post-implementation review except the review of the IWS/LANs project requested by Congress. More importantly, SSA has missed an opportunity to provide feed back to improve its investment management process. Valuable lessons learned could be incorporated into

⁶ VISOR is a management advisory report being maintained by the OSPI.

the Selection and Control phases to help minimize risk and maximize benefits on future IT projects.

Specifically, lessons learned for why SSA has often historically under-estimated total IT cost should be built back into the selection criteria to help ensure greater implementation success of future projects. This was evidenced by the cost over-runs for the Electronic Wage Reporting and Integrated Human Resources Systems. Also, SSA should determine why projects, such as the Re-engineered Disability System, had to be redirected, costing SSA about \$35 million.

ITSRS has acknowledged its responsibility for performing post-implementation reviews. ITSRS, however, has not been able to obtain the staff necessary to perform this function because of budget constraints.

ITSRS further stated that through SSA's Target Investment Review Process, it felt the Agency had a post-implementation review (PIR) process established. Using GAO criteria, we evaluated SSA's one-half page of broad guidelines. The following lists some of the GAO questions we used to determine whether SSA had an established PIR process.

1. Does SSA have a defined, documented process for conducting PIRs of IT projects?
 - Is the purpose of the PIR process clearly explained and communicated?
 - Is the process clear about when PIRs are to be conducted? Are regular PIRs required to ensure completed projects are reviewed in a timely manner?
 - Does the process delineate roles, responsibilities, and authorities for people and offices involved in conducting the PIRs?
 - Does the process stipulate how conclusions and recommendations resulting from PIRs are to be communicated to and reviewed by senior management?
2. Does SSA have a standardized methodology for conducting PIRs? At a minimum, is there an assessment of customer satisfaction, mission/programmatic impact, and technical/capability?
3. What steps does SSA require to ensure PIRs are conducted independently and objectively? Are the results of the PIRs validated or verified?

We could not answer yes to any of these questions and therefore concluded that one-half page of broad SSA guidelines was not sufficient to be considered as having established PIR policies and procedures.

Conclusions and Recommendations

SSA recognizes the need to improve its IT capital planning and investment control process for compliance with the CCA. Some steps SSA has taken include:

- approving through SSA's Strategic Planning Process proposed IT projects for strategic fit against the Agency's mission and goals;
- establishing a CIO to foster Agencywide awareness of, and involvement in, IT issues; and
- requiring through SSA's BCP, that major IT projects be grouped into smaller more manageable project phases like prototyping, piloting, limited implementation before full SSA implementation.

However, results of our testing of SSA's IT capital planning and investment control process and interviews with SSA personnel have identified several improvements SSA needs to consider regarding its implementation of CCA. We found overall, SSA's IT capital planning and investment process does not fully support GAO's vision and the Federal CIO Council for compliance with CCA. Improvements are needed in the Selection, Control, and Evaluation phases of the GAO model and the Federal CIO Council's recommended IT capital planning and investment control process.

First, SSA needs to rank, select, and develop its IT projects based on a formal methodology, that considers risk and return. SSA has no such methodology and, as a result, was not able to effectively anticipate the increased costs and project time delays it encountered in all three high-risk projects we reviewed. Because these three projects began before CCA became effective, SSA was not required to complete a formal risk assessment. However, good business practice and the subsequent passage of CCA call for the use of a formal risk assessment.

In our November 15, 1999, meeting with SSA to discuss our findings, SSA stated it was implementing RIMS and believed RIMS would provide SSA with an adequate assessment of risk. Our review found RIMS is not the solution. RIMS is designed to be used by the project manager in the Control phase after the project has already been approved for funding. CCA and good business practice call for a risk assessment to be done before a project is approved for funding. Also, SSA should begin evaluating the use of DSS to assist the Agency in the selection of proposed IT projects. This would result in SSA putting more structure into its decision selection process.

Second, SSA should begin planning for an overall integration of its tracking systems into a comprehensive IT capital planning and investment control process. SSA's

management information systems, critical for planning, capturing cost and tracking progress of its systems development efforts, are incomplete and fragmented throughout its components. As a result, SSA's management responsible for approving and monitoring the development of its systems is not being provided comprehensive and complete information on which to base its decisions. This type of integrated system is a requirement under section 5122(b)(2) of the CCA. SSA, through the I-TIPS software, could effectively develop a comprehensive IT capital planning and investment control process like other agencies.

SSA's lack of systems integration has also contributed to other conditions the Agency needs to consider. Specifically, SSA has not established an IT project accountability system for capturing and analyzing all costs associated with an IT project. Also, SSA should be requesting more management information to perform variance analysis and exception reporting as ways to improve its ability to monitor IT projects. In a meeting with SSA on November 15, 1999, SSA believed its planned MCAS would address our concern of an IT project accountability system. We agree; however, incorporating an IT project accountability system into MCAS is several years in the future.

Third, SSA needs to develop policies and procedures for post-implementation reviews and become more proactive by targeting several completed IT projects for review. PIRs reviews are a requirement under sections 5122(b)(1) and 5125(c)(2) of the CCA. ITSRS recognizes its responsibility to perform these reviews; however, because of budget constraints has not been able to obtain the staff necessary to perform this function.

We recommend SSA:

Finding 1- Selection Phase

1. Develop a risk model and use it in the strategic planning process for all proposed IT projects. Selection criteria should include weighing risk for cost, benefits, schedule, technical, etc.
2. Evaluate using DSS tools like Expert Choice to further assist SSA in its selection of IT projects. Expert Choice allows the user to take the intangibles of decisionmaking (experience, insight, and judgment) and weigh them against a customized set of criteria.

Finding 2 – Control Phase

3. Redesign SSA's Capital Planning and Investment Control Process to incorporate the processes for making budget, financial and program management decisions within the Agency into one integrated system. SSA could implement this recommendation through the use of the I-TIPS software (see Appendix C).

4. Design and implement an IT project accountability system that; (a) captures all funds spent with budgeted cost; (b) allows expanded scheduling information like expected versus actual implementation date, including milestone dates; and (c) includes performance indicators like return on investment or any other benefit measures.
5. Require benefits to be quantified and performance measures to be identified for major projects in SSA's strategic planning guidance.
6. Request management information on the financial accounting of each project (spent to-date and the amount remaining to be spent), milestones, and expected implementation date.
7. Perform variance analysis and exception reporting on cost and scheduling time frames.

Finding 3 – Evaluation Phase

8. Establish policies and procedures for conducting post-implementation reviews.
9. Perform post-implementation reviews on appropriate IT projects.

AGENCY COMMENTS

In response to our draft report, SSA generally agreed to explore and/or assess our recommendations. Specifically, SSA plans to explore more systematic risk modeling procedures for proposed IT projects by:

- evaluating decision support software like Expert Choice;
- re-examining I-TIPS as a tool to collect, analyze and report IT project accountability information;
- establishing more detailed policies and procedures for conducting post-implementation reviews in 2001; and
- performing post-implementation reviews on appropriate IT projects. (See Appendix F for SSA's comments.)

However, in its response to recommendation 1, SSA stated OIG's conclusion that the Agency did not recognize the risks associated with three of its projects is incorrect. SSA believes that while a formal risk assessment was not done for these projects, the Agency was aware of the risk involved, and it considered these risks in its discussions and decision making.

OFFICE OF THE INSPECTOR GENERAL RESPONSE

We disagree with SSA's implication that it took sufficient steps assessing the risks for the three projects. We also take issue that the Agency was aware of the risks involved, and considered these risks in its discussions and decision making.

The OIG believes that a risk assessment at the beginning of these projects, as now required under CCA, would have helped SSA to better understand the risks of each project before the Agency had committed significant resources. Understanding the risks would also have enabled the Agency to better assess the projects' scope and functionality.

It is not enough that certain individuals may have been informally aware of some risks as these projects progressed. For example, the incremental investment reviews requested by the CIO were initiated several years after the projects' implementation and by then the projects were already significantly over budgeted. Furthermore, once the Agency makes a decision to proceed with the projects, the risks involved need to be formally disseminated among appropriate management and project team members. Management and project members can then take steps necessary to deal with and minimize the risks associated with each project.

Appendices

Excerpts from the Clinger-Cohen Act

SEC. 5002. DEFINITIONS

In this division:

(1) DIRECTOR—The term "Director" means the Director of the Office of Management and Budget.

(2) EXECUTIVE AGENCY—The term "executive agency" has the meaning given that term in section 4(1) of the Office of Federal Procurement Policy Act (41 U.S.C. 403(1)).

(3) INFORMATION TECHNOLOGY—(A) The term "information technology (IT)", with respect to an executive agency means any equipment or interconnected system or subsystem of equipment, that is used in the automatic acquisition, storage, manipulation, management, movement, control, display, switching, interchange, transmission, or reception of data or information by the executive agency. For purposes of the preceding sentence, equipment is used by an executive agency if the equipment is used by the executive agency directly or is used by a contractor under a contract with the executive agency which (i) requires the use of such equipment, or (ii) requires the use, to a significant extent, of such equipment in the performance of a service or the furnishing of a product.

(B) The term "IT" includes computers, ancillary equipment, software, firmware and similar procedures, services (including support services), and related resources.

(C) Notwithstanding subparagraphs (A) and (B), the term "IT" does not include any equipment that is acquired by a Federal contractor incidental to a Federal contract.

(4) INFORMATION RESOURCES—The term "information resources" has the meaning given such term in section 3502(6) of title 44, United States Code.

(5) INFORMATION RESOURCES MANAGEMENT—The term "information resources management" has the meaning given such term in section 3502(7) of title 44, United States Code

(6) INFORMATION SYSTEM—The term "information system" has the meaning given such term in section 3502(8) of title 44, United States Code.

(7) COMMERCIAL ITEM—The term "commercial item" has the meaning given that term in section 4(12) of the Office of Federal Procurement Policy Act (41 U.S.C. 403(12)).

SEC. 5122. CAPITAL PLANNING AND INVESTMENT CONTROL

- (a) DESIGN OF PROCESS—In fulfilling the responsibilities assigned under section 3506(h) of title 44, United States Code, the head of each executive agency shall design and implement in the executive agency a process for maximizing the value and assessing and managing the risks of the information technology acquisitions of the executive agency.
- (b) CONTENT OF PROCESS—The process of an executive agency shall—
- (1) provide for the selection of information technology investments to be made by the executive agency, the management of such investments, and the evaluation of the results of such investments;
 - (2) be integrated with the processes for making budget, financial, and program management decisions within the executive agency;
 - (3) include minimum criteria to be applied in considering whether to undertake a particular investment in information systems, including criteria related to the quantitatively expressed projected net, risk-adjusted return on investment and specific quantitative and qualitative criteria for comparing and prioritizing alternative information systems investment projects;
 - (4) provide for identifying information systems investments that would result in shared benefits or costs for other Federal agencies or State or local governments;
 - (5) provide for identifying for a proposed investment quantifiable measurements for determining the net benefits and risks of the investment; and
 - (6) provide the means for senior management personnel of the executive agency to obtain timely information regarding the progress of an investment in an information system, including a system of milestones for measuring progress, on an independently verifiable basis, in terms of cost, capability of the system to meet specified requirements, timeliness, and quality.

SEC. 5125. AGENCY CHIEF INFORMATION OFFICER

- (a) DESIGNATION OF CHIEF INFORMATION OFFICERS (CIO)—Section 3506 of title 44, United States Code, is amended—
- (1) in subsection (a)
 - (A) in paragraph (2)(A), by striking out "senior official" and inserting in lieu thereof "CIO";
 - (B) in paragraph (2)(B)—
 - (i) by striking out "senior officials" in the first sentence and inserting in lieu thereof "CIO";
 - (ii) by striking out "official" in the second sentence and inserting in lieu thereof "CIO"; and
 - (iii) by striking out "officials" in the second sentence and inserting in lieu thereof "CIO"; and
 - (C) in paragraphs (3) and (4), by striking out "senior official" each place it appears and inserting in lieu thereof "CIO"; and
 - (2) in subsection (c)(1), by striking out "official" in the matter preceding subparagraph (A) and inserting in lieu thereof "CIO".

(b) GENERAL RESPONSIBILITIES—The CIO of an executive agency shall be responsible for—

(1) providing advice and other assistance to the head of the executive agency and other senior management personnel of the executive agency to ensure that information technology (IT) is acquired and information resources are managed for the executive agency in a manner that implements the policies and procedures of this division, consistent with chapter 35 of title 44, United States Code, and the priorities established by the head of the executive agency;

(2) developing, maintaining, and facilitating the implementation of a sound and integrated IT architecture for the executive agency; and

(3) promoting the effective and efficient design and operation of all major information resources management processes for the executive agency, including improvements to work processes of the executive agency.

(c) DUTIES AND QUALIFICATIONS—The CIO of an agency that is listed in section 901(b) of title 31, United States Code, shall—

(1) have information resources management duties as that official's primary duty;

(2) monitor the performance of IT programs of the agency, evaluate the performance of those programs on the basis of the applicable performance measurements, and advise the head of the agency regarding whether to continue, modify, or terminate a program or project; and

(3) annually, as part of the strategic planning and performance evaluation process required (subject to section 1117 of title 31, United States Code) under section 306 of title 5, United States Code, and sections 1105(a)(29), 1115, 1116, 1117, and 9703 of title 31, United States Code—

(A) assess the requirements established for agency personnel regarding knowledge and skill in information resources management and the adequacy of such requirements for facilitating the achievement of the performance goals established for information resources management;

(B) assess the extent to which the positions and personnel at the executive level of the agency and the positions and personnel at management level of the agency below the executive level meet those requirements;

(C) in order to rectify any deficiency in meeting those requirements, develop strategies and specific plans for hiring, training, and professional development; and

(D) report to the head of the agency on the progress made in improving information resources management capability.

(d) INFORMATION TECHNOLOGY ARCHITECTURE DEFINED—In this section, the term "information technology architecture", with respect to an executive agency, means an integrated framework for evolving or maintaining existing IT and acquiring new IT to achieve the agency's strategic goals and information resources management goals.

(e) EXECUTIVE LEVEL IV—Section 5315 of title 5, United States Code, is amended by adding at the end the following:

"Chief Information Officer, Department of Agriculture.
"Chief Information Officer, Department of Commerce.
"Chief Information Officer, Department of Defense (unless the official designated as the Chief Information Officer of the Department of Defense is an official listed under section 5312, 5313, or 5314 of this title).
"Chief Information Officer, Department of Education.
"Chief Information Officer, Department of Energy.
"Chief Information Officer, Department of Health and Human Services.
"Chief Information Officer, Department of Housing and Urban Development.
"Chief Information Officer, Department of Interior.
"Chief Information Officer, Department of Justice.
"Chief Information Officer, Department of Labor.
"Chief Information Officer, Department of State.
"Chief Information Officer, Department of Transportation.
"Chief Information Officer, Department of Treasury.
"Chief Information Officer, Department of Veterans Affairs.
"Chief Information Officer, Environmental Protection Agency.
"Chief Information Officer, National Aeronautics and Space Administration.
"Chief Information Officer, Agency for International Development.
"Chief Information Officer, Federal Emergency Management Agency.
"Chief Information Officer, General Services Administration.
"Chief Information Officer, National Science Foundation.
"Chief Information Officer, Nuclear Regulatory Agency.
"Chief Information Officer, Office of Personnel Management.
"Chief Information Officer, Small Business Administration."

Appendix B

The Federal Chief Information Officer's Council

The Federal Chief Information Officer's (CIO) Council has endorsed the General Accounting Office's guidance as "best practices" for implementing the Clinger-Cohen Act of 1996. The Federal CIO Council was established under Executive Order 13011, *Federal Information Technology*. The Council serves as the principal interagency forum for executive agency CIOs to:

- develop recommendations for overall Federal information technology management policy, procedures, and standards;
- share experiences, ideas, and promising practices, including work process redesign and the development of performance measures, to improve the management of information resources; and
- identify opportunities, make recommendations for, and sponsor cooperation in using information resources.

Information Technology Investment Portfolio System

The Information Technology Investment Portfolio System (I-TIPS) is a Government owned innovative web-based decision support and project management tool for managing and tracking information technology (IT) investments. The Federal Chief Information Officer Council has recommended I-TIPS for agency heads to manage their IT investments in accordance with the Clinger-Cohen Act of 1996. The software assists managers and staff involved in IT planning to assess IT initiatives in terms of cost, risk, and expected returns, and to determine the appropriate mix of IT investments regarding these and other organizational and technological considerations. Specifically, I-TIPS will allow the user to:

- implement an effective managing and tracking process for selecting, controlling and evaluating IT investments;
- apply industry and Government best practices to its IT investment strategy;
- consolidate existing IT data bases and create a single repository for all IT investments;
- construct a cost-effective portfolio of IT investments; and
- comply with Federal laws and mandates pertaining to IT investments and the IT capital planning process.

I-TIPS is portable to a variety of operating environments and is in use at several Federal organizations.⁷ The Social Security Administration evaluated using I-TIPS in March 1999 and elected not to use this software because I-TIPS would result in a significant data entry workload for the Agency.

⁷ The Departments of Housing and Urban Development, Agriculture, and Energy, the General Services Administration, and the Small Business Administration.

Projects With High-Risk Ranking

We used General Accounting Office's⁸ risk modeling guidelines in making our risk determination. We believe that the high-risk ranking would have prevented the selection of these systems for investment until the risk became more manageable and returns better quantified.

SEI* Number/ Project Name	Organizational Risk	Cost Sensitivity Risk	Schedule Risk	Original Implement Date	Revised Implement
SEI 567 Expanded Electronic Wage Reporting	Moderate Risk	High Risk Project is complex Cost estimates not refined For example, cost increase from \$15 to \$32 million in one budget cycle	Unknown Risk	Unknown	Unknown

*SEI - Special expense item

⁸ Assessing Risks and Returns: A Guide for Evaluating Federal Agencies' IT Investment Decision-making, GAO/AIMD-10.1.13, issued February 1997 appendix II pp98-103.

SEI Number/ Project Name	Organizational Risk	Cost Sensitivity Risk	Schedule Risk	Original Implement Date	Revised Implement Date
SEI 529 IHRS*	<p>High Risk</p> <p>Significant process redesign required</p> <p>Significant personnel changes needed</p> <p>Other agencies with similar projects had unanticipated project cost increases and time delays.</p>	<p>High Risk</p> <p>Project is complex</p> <p>Cost estimates not refined</p> <p>For example, cost increase from \$9.9 million from first estimate to \$16.5 million contract award. \$16.5 million spent only 4 of 16 business functions complete</p>	<p>High Risk</p> <p>Project execution likely to slip</p> <p>Project staff is limited in size and experience</p> <p>Complex project</p>	4 phased release 10/98 4/99 3/00 9/01	1) 1/99, (still in pilot) 2) 1/00 3) dropped 4) dropped
Various SEI numbers for Reengineering Disability System	<p>High Risk</p> <p>Implementation strategy too large</p> <p>Significant process redesign required</p> <p>Significant personnel changes needed</p> <p>Require buy-in from State disability determination services</p>	<p>High Risk</p> <p>Project is complex</p> <p>Cost estimates not refined</p> <p>For example, project cost has been about \$70 million to-date and the project still in the pilot phase.</p>	<p>High Risk</p> <p>Project execution likely to slip</p> <p>Project staff is limited in size and experience</p> <p>Complex project</p>	Unknown	7 years from 1992 to 1998 RDS** not implemented as envisioned

*IHRS - Integrated Human Resource System

**RDS - Re-engineered Disability System

Appendix E

External and Internal Project Costs

The Social Security Administration (SSA) spent approximately \$118.3 million on the seven projects reviewed, of which \$77.3 million were external costs and \$41 million were internal costs. The Budget Execution Report was the source for the external costs and the Deputy Commissioner for Systems (DCS) was the source for the internally estimated costs.

Project SEI Number	RAS Number	Project Name	External Cost YTD July 1999 (\$000's omitted)	Internal Estimated Cost as of August 14, 1999	Total Cost (\$000's omitted)	Internal Cost Percent to Total	DCS Work Years as of Aug. 14, 1999
567	2611	EWRS	\$ 7,474	\$ 2,827	\$10,301	27	40.5
145	7871	FACTS	4,878	1,874	6,752	28	27.5
702	2590	MI IWS/LAN	1,228	6,845	8,073	85	97.1
704	6412	Policy Net	2,434	110	2,544	4	1.5
740	5022	Video Conf.	2,792	699	3,491	20	10.4
529	6863	IHRS	13,122 ¹	3,590 ²	16,712	21	52.7
Various	Various	RDS	45,374 ³	25,024 ⁴	70,398	36	393.3
TOTAL COSTS			\$77,302	\$40,969	\$118,271	35	623.0

SEI - Special expense item

RAS - Resource Accounting System

EWRS - Expanded Electronic Wage Reporting System

MI IWS/LAN - Management information independent work station local area network

IHRS - Integrated Human Resource System

RDS - Re-engineered Disability System

FACTS - Financial Accounting Tracking System

¹As of August 1999

²As of September 18, 1999

³As of May 3, 1999. Amount includes "other SSA labor", Non-information technology system (ITS), ITS, and disability determination services

⁴As of May 3, 1999

Appendix F

AGENCY COMMENTS



SOCIAL SECURITY

MEMORANDUM

March 5, 2001

Refer To: S1J-3

To: James G. Huse, Jr.
Inspector General

William A. Halter *WAH*
Acting Commissioner of Social Security

Subject: Office of the Inspector General (OIG) Draft Report, "Information Technology Capital Planning and Investment Control Process at the Social Security Administration" (A-14-99-12004)—
INFORMATION

Attached are our comments concerning the draft report. Staff questions may be referred to Mark Welch at extension 50374.

Attachment:
SSA Comments

**COMMENTS ON THE OFFICE OF THE INSPECTOR GENERAL'S DRAFT REPORT,
"INFORMATION TECHNOLOGY CAPITAL PLANNING AND INVESTMENT CONTROL
PROCESS AT THE SOCIAL SECURITY ADMINISTRATION"(A-14-99-12004)**

We appreciate the opportunity to comment on this draft report. As the draft report notes, many of the key Clinger-Cohen Act (CCA) information technology (IT) management reforms were already in place at the Social Security Administration (SSA) years before the passage of CCA. In particular, SSA has had an IT capital planning and investment control (CPIC) process in place for many years and is continuing to refine its CPIC process for major IT initiatives. As a result of this continuing refinement, some aspects of the CPIC process referenced in the draft report have changed. Our comments on the draft report recommendations are provided below.

Recommendation 1

Develop a risk model and use it in the strategic planning process for all proposed IT projects. Selection criteria should include weighing risk for cost, benefits, schedule, technical, etc.

Comment

As part of the refinement of its CPIC process, SSA will explore more systematic risk modeling procedures for proposed IT projects. We will investigate and document the requirements for a capital planning risk management system. As part of this effort, SSA will consider the recommendations of the CIO Council, Gartner Group, Carnegie-Mellon University's Software Engineering Institute, as well as internal experts. We will also evaluate promising commercial off-the-shelf (COTS) decision support tools with risk management capabilities, such as Expert Choice. Analysis of available risk modeling tools in conjunction with SSA component requirements will result in a recommendation to the Commissioner by the end of the calendar year concerning a comprehensive risk assessment and management strategy for IT projects.

The draft report identifies three projects (Electronic Wage Reporting System (EWRS), Integrated Human Resources System (IHRS) and Reengineered Disability System (RDS)) as having high risk. It concludes that SSA did not recognize the risks associated with these projects, but might have identified them as high-risk projects if a risk assessment using risk modeling

had been performed. However, the conclusion that SSA did not recognize the risks associated with these projects is incorrect. Although a formal risk assessment was not done for these projects, the Agency was aware of the risks involved, and it considered these risks in its discussions and decisionmaking. The Chief Information Officer (CIO) subjected each of these projects to special oversight through incremental investment reviews.

It is important to recognize that all risks cannot be anticipated and that the ability to continue and complete projects in accordance with plans can be significantly impacted by factors such as budget constraints, labor issues and political considerations that are beyond the control of an agency. Moreover, legislative mandates can have a significant impact on SSA's IT project portfolio and on planned IT project development and implementation schedules. This is because legislative mandates can result in unanticipated, high-priority, resource-intensive IT projects that must be implemented under demanding time constraints. Supporting the implementation of new legislation can require the immediate addition of new projects to SSA's IT investment portfolio, the reprioritization of projects, the reallocation of limited resources from other projects to meet legislative mandates, and delays in the planned development and implementation schedules for the projects impacted.

Recommendation 2

Evaluate using decision support software (DSS) tools like Expert Choice to further assist SSA in its selection of IT projects. Expert Choice allows the user to take the intangibles of decisionmaking (experience, insight, and judgment) and weigh them against a customized set of criteria.

Comment

As stated in the response above, SSA will assess Expert Choice and possibly other DSS tools. However, it is important to note that while a DSS tool can ensure that a customized set of evaluation criteria is used in the IT project selection phase and provide some documentation of that aspect of the CPIC process, these tools come with their own sets of constraints and limitations that may relegate their value and importance to an ancillary role in the overall process. Moreover, human decision-makers are capable of assessing project criteria,

defining parameters and weighing judgments without an automated tool.

Recommendation 3

Redesign SSA's Capital Planning and Investment Control Process to incorporate the processes for making budget, financial and program management decisions within the Agency into one integrated system. SSA could implement this recommendation through the use of the Information Technology Investment Portfolio System (I-TIPS) software.

Comment

Though an integrated system may enhance the Agency's CPIC process, Section 5122(b)(2) of the CCA requires an integrated process, rather than an integrated system.

When SSA reviewed I-TIPS in February 1999 and assessed what would be required for its implementation and the improvements I-TIPS would provide for SSA's CPIC process, I-TIPS did not provide enough benefits to warrant implementation at SSA. Since then, the product has matured and SSA is reexamining it.

SSA will assess I-TIPS as a tool to collect, analyze and report IT project accountability information and review Expert Choice, and possibly other similar COTS packages, for consideration as partnered tool(s).

Recommendation 4

Design and implement an IT project accountability system that

- (a) captures all funds spent with budgeted cost;
- (b) allows expanded scheduling information like expected versus actual implementation date, including milestone dates; and
- (c) includes performance indicators, such as return on investment or any other benefit measures.

Comment

As part of our ongoing efforts to enhance our CPIC process, we will assess the ability of I-TIPS to interface with SSA's current and planned CPIC process support systems to better track IT project costs, progress and performance and compare actual results with those planned. We may also consider other alternatives for project accountability if appropriate.

Recommendation 5

Require benefits to be quantified and performance measures to be identified for major projects in SSA's strategic planning guidance.

Comment

SSA's strategic planning guidance requires benefits to be determined for key initiatives. While the benefits and performance measures may not have been well documented for some projects, this has been due more to inconsistent performance in some cases than to lack of policy and procedures. Even in instances where documentation may appear sparse, the Agency has always considered benefits and costs in its IT project decision-making, and will place emphasis on better documenting them as part of the refinement of its CPIC process.

Recommendation 6

Request management information on the financial accounting of each project (spent to-date and the amount remaining to be spent), milestones, and expected implementation date.

Comment

Although this management information has historically been considered and will continue to be considered in decision-making on IT projects, we will evaluate whether a system, such as I-TIPS, is able to enhance our process.

Recommendation 7

Perform variance analysis and exception reporting on cost and scheduling time frames.

Comment

Our review of I-TIPS will include an assessment of its ability to collect, analyze and report IT project accountability information to better track IT project costs, progress and performance and compare actual results with those planned. Other alternatives for achieving this may be considered.

Recommendation 8

Establish policies and procedures for conducting post-implementation reviews.

Comment

SSA's target CPIC process includes post-implementation reviews. The Agency will establish more detailed policies and procedures for conducting post-implementation reviews in 2001.

Recommendation 9

Perform post-implementation reviews on appropriate IT projects.

Comment

SSA expects to perform post-implementation reviews on appropriate IT projects, in accordance with its CPIC process.

Other Comments

The chart on page 8 of the draft report identifies the EMIS and shows the "use" and "responsible component" for the system. Both should be revised as follows:

- The EMIS is used for much more than IT project planning. The scope of the data housed in the EMIS includes data and documents related to various aspects of Government Performance and Results Act (GPRA) strategic planning, GPRA strategic performance management and reporting, project management for important Agency, non-GPRA and non-IT projects, financial information and guidance, and operational statistics. It is not simply an IT project tracking system, but serves broader Agency information and data needs.
- The responsible SSA component for the EMIS is not the Office of Strategic Management; rather it is the Executive Support Staff in the Office of Systems.

Appendix G

OIG Contacts and Staff Acknowledgements

OIG Contacts

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Acknowledgments

In additions to those named above:

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Director, Financial Management and Performance Monitoring Audit Division	1
Director, Operational Audit Division	1
Director, Disability Program Audit Division	1
Director, Program Benefits Audit Division	1
Director, General Management Audit Division	1
Issue Area Team Leaders	25
Income Maintenance Branch, Office of Management and Budget	1
Chairman, Committee on Ways and Means	1
Ranking Minority Member, Committee on Ways and Means	1
Chief of Staff, Committee on Ways and Means	1
Chairman, Subcommittee on Social Security	2
Ranking Minority Member, Subcommittee on Social Security	1
Majority Staff Director, Subcommittee on Social Security	2
Minority Staff Director, Subcommittee on Social Security	2
Chairman, Subcommittee on Human Resources	1
Ranking Minority Member, Subcommittee on Human Resources	1
Chairman, Committee on Budget, House of Representatives	1
Ranking Minority Member, Committee on Budget, House of Representatives	1
Chairman, Committee on Government Reform and Oversight	1
Ranking Minority Member, Committee on Government Reform and Oversight	1
Chairman, Committee on Governmental Affairs	1
Ranking Minority Member, Committee on Governmental Affairs	1

Chairman, Committee on Appropriations, House of Representatives	1
Ranking Minority Member, Committee on Appropriations, House of Representatives	1
Chairman, Subcommittee on Labor, Health and Human Services, Education and Related Agencies, Committee on Appropriations, House of Representatives	1
Ranking Minority Member, Subcommittee on Labor, Health and Human Services, Education and Related Agencies, Committee on Appropriations, House of Representatives	1
Chairman, Committee on Appropriations, U.S. Senate	1
Ranking Minority Member, Committee on Appropriations, U.S. Senate	1
Chairman, Subcommittee on Labor, Health and Human Services, Education and Related Agencies, Committee on Appropriations, U.S. Senate	1
Ranking Minority Member, Subcommittee on Labor, Health and Human Services, Education and Related Agencies, Committee on Appropriations, U.S. Senate	1
Chairman, Committee on Finance	1
Ranking Minority Member, Committee on Finance	1
Chairman, Subcommittee on Social Security and Family Policy	1
Ranking Minority Member, Subcommittee on Social Security and Family Policy	1
Chairman, Senate Special Committee on Aging	1
Ranking Minority Member, Senate Special Committee on Aging	1
Vice Chairman, Subcommittee on Government Management Information and Technology	1
President, National Council of Social Security Management Associations, Incorporated	1
Treasurer, National Council of Social Security Management Associations, Incorporated	1
Social Security Advisory Board	1
AFGE General Committee	9
President, Federal Managers Association	1
Regional Public Affairs Officer	1
Total	97

Overview of the Office of the Inspector General

Office of Audit

The Office of Audit (OA) conducts comprehensive financial and performance audits of the Social Security Administration's (SSA) programs and makes recommendations to ensure that program objectives are achieved effectively and efficiently. Financial audits, required by the Chief Financial Officers Act of 1990, assess whether SSA's financial statements fairly present the Agency's financial position, results of operations, and cash flow. Performance audits review the economy, efficiency, and effectiveness of SSA's programs. OA also conducts short-term management and program evaluations focused on issues of concern to SSA, Congress, and the general public. Evaluations often focus on identifying and recommending ways to prevent and minimize program fraud and inefficiency.

Office of Executive Operations

OEO supports the OIG by providing information resource management; systems security; and the coordination of budget, procurement, telecommunications, facilities and equipment, and human resources. In addition, this office is the focal point for the OIG's strategic planning function and the development and implementation of performance measures required by the *Government Performance and Results Act*. OEO is also responsible for performing internal reviews to ensure that OIG offices nationwide hold themselves to the same rigorous standards that we expect from SSA, as well as conducting investigations of OIG employees, when necessary. Finally, OEO administers OIG's public affairs, media, and interagency activities, coordinates responses to Congressional requests for information, and also communicates OIG's planned and current activities and their results to the Commissioner and Congress.

Office of Investigations

The Office of Investigations (OI) conducts and coordinates investigative activity related to fraud, waste, abuse, and mismanagement of SSA programs and operations. This includes wrongdoing by applicants, beneficiaries, contractors, physicians, interpreters, representative payees, third parties, and by SSA employees in the performance of their duties. OI also conducts joint investigations with other Federal, State, and local law enforcement agencies.

Counsel to the Inspector General

The Counsel to the Inspector General provides legal advice and counsel to the Inspector General on various matters, including: 1) statutes, regulations, legislation, and policy directives governing the administration of SSA's programs; 2) investigative procedures and techniques; and 3) legal implications and conclusions to be drawn from audit and investigative material produced by the OIG. The Counsel's office also administers the civil monetary penalty program.