United States General Accounting Office

GAO

Report to Congressional Requesters

June 1999

TAX SYSTEMS MODERNIZATION

Results of Review of IRS' Initial Expenditure Plan

GAO

Accountability * Integrity * Reliability

GAO/AIMD/GGD-99-206

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

Accounting and Information
Management Division

B-282877.1

June 15, 1999

The Honorable Ben Nighthorse Campbell
Chairman
The Honorable Byron L. Dorgan
Ranking Minority Member
Subcommittee on Treasury and
General Government
Committee on Appropriations
United States Senate

The Honorable Jim Kolbe
Chairman
The Honorable Steny H. Hoyer
Ranking Minority Member
Subcommittee on Treasury,
Postal Service, and General Government
Committee on Appropriations
House of Representatives

This report provides the results of our review of the Internal Revenue Service's (IRS) initial Information Technology Investments Account (ITIA) expenditure plan pursuant to the fiscal year 1998 Treasury and General Government Appropriations Act (Public Law 105-61) and the fiscal year 1999 Omnibus Consolidated and Emergency Supplemental Appropriations Act (Public Law 105-277). In these acts, the Congress limited IRS' ability to obligate ITIA funds until the service and the Department of the Treasury submit to the Congress for approval an expenditure plan that as stated in the acts, (1) implements the IRS Modernization Blueprint,[1] (2) meets Office of Management and Budget (OMB) investment guidelines for information systems, (3) is reviewed and approved by IRS' Investment Review Board,[2] OMB, and Treasury's IRS Management Board and is reviewed by GAO,

[1]In the conference report accompanying the fiscal year 1997 Omnibus Appropriations Act (Public Law 104-208), the Congress directed Treasury to, among other things, develop a blueprint to define, direct, and control future tax systems modernization efforts. Treasury submitted the IRS Modernization Blueprint to the Congress on May 15, 1997.

[2]According to IRS, the investment review board has been replaced by the Core Business Systems Executive Steering Committee, which is chaired by IRS' Commissioner.

(4) meets the requirements of IRS system life cycle management program,[3] and (5) is in compliance with acquisition rules, requirements, guidelines, and system acquisition management practices of the federal government. These conditions are consistent with recommendations on IRS' tax systems modernization that we have made over the past 5 years.

IRS provided us a copy of the expenditure plan that it submitted to the Congress. As agreed with your offices, we reviewed this plan to determine whether (1) the plan satisfies the conditions specified in IRS' fiscal year 1998 and 1999 appropriations acts, (2) the plan is consistent with our past recommendations on IRS' systems modernization, and (3) we have any other observations on the modernization efforts. The results of this review are based on our ongoing monitoring of IRS' modernization efforts that is being performed at the request of your offices. Our work was performed from January 1999 through May 1999 in accordance with generally accepted government auditing standards. (See appendix I for details on our scope and methodology.) The Commissioner provided us with written comments, which are discussed in the "Agency Comments" section of this report and are reprinted in appendix II.

Results in Brief

IRS' initial expenditure plan is the first in a series of incremental expenditure plans that IRS plans to prepare over the life of the modernization. As such, the initial plan specifies IRS' modernization initiatives through October 31, 1999, or about the next 5 months, and it seeks approval to obligate about $35 million to complete these initiatives. Such an incremental approach to investing in systems modernization efforts is a recognized "best practice" that leading public and private sector organizations use to mitigate the risk of program failure on large, complex, multiyear modernization programs. Further, both the Clinger-Cohen Act of 1996[4] and OMB policy[5] endorse such an incremental investment management approach.

[3] This program includes the policies, processes, and products for managing information technology investments from conception, development, and deployment through maintenance and support.

[4] Public Law 104-106, February 10, 1996.

[5] Evaluating Information Technology Investments, A Practical Guide, Version 1.0 (Executive Office of the President, OMB, November 1995) and OMB Memorandum M-97-02, Funding Information Systems Investments (October 1996), informally referred to as the "Raines Rules."

IRS' initial expenditure plan is an appropriate first step toward successful systems modernization and, with regard to the $35 million being requested for this increment, satisfies the conditions that the Congress placed on the use of ITIA funds. Moreover, the plan is consistent with our past recommendations. To illustrate, the initial expenditure plan provides for, among other things, additional blueprint precision and specificity, such as validation of selected business requirements, definition of selected systems design specifications, and development of selected system business case justifications. Additionally, it provides for definition of system infrastructure specifications and a revised plan for sequencing the introduction of the new technology needed to achieve the target systems architecture over the next 3 to 5 years. These initiatives are consistent with our past recommendations for completing the blueprint and collectively they represent the first steps needed to satisfy the legislative condition to implement the blueprint.

To further illustrate, the initial expenditure plan provides for definition and targeted implementation of an "Enterprise Life Cycle," which is consistent with our past recommendations for instituting project management rigor, software process maturity, and investment management discipline. If implemented properly, this effort should satisfy the legislative condition for an IRS system life cycle and investment management program that meets OMB guidelines.

Building on its initial expenditure plan, IRS plans to define in subsequent expenditure plans the follow-on efforts and funding requirements needed (1) to continue to incrementally add needed architectural precision and project-specific management discipline and (2) to incrementally implement, in accordance with its revised sequencing plan, its Enterprise Life Cycle, and its target systems architecture. If IRS effectively implements the initiatives described in its initial expenditure plan and fulfills its commitment to incrementally request and expend future modernization funds, IRS would be acting in a manner that is consistent with the legislative conditions and our past modernization recommendations.

IRS could strengthen its approach to incrementally investing in modernized information technology by including in subsequent expenditure plans its progress against the previous expenditure plan's goals and deliverables and the benefits realized to date from the funds expended. Measuring and tracking on these items are critical to successful implementation of incremental investment management, and thus should be disclosed to the Congress to facilitate its deliberations on future expenditure plans.

Background

In 1995, we reported on management and technical weaknesses with IRS' tax systems modernization that jeopardized its successful completion and made over a dozen recommendations to correct the weaknesses.[6] Because of the seriousness of the weaknesses, we placed the modernization on our 1995 list of high-risk federal programs.[7] In June 1996, we reported that IRS had made progress in implementing our recommendations.[8] However, to minimize the risk of IRS investing in systems before the recommendations were fully implemented, we suggested that the Congress limit IRS' information technology (IT) spending to certain cost-effective categories. These spending categories were those that (1) support ongoing operations and maintenance, (2) correct pervasive management and technical weaknesses, such as a lack of requisite systems life cycle discipline, (3) are small, represent low technical risk, and can be delivered in a relatively short time frame, or (4) involve deploying already developed systems that have been fully tested, are not premature given the lack of a complete systems architecture, and produce a proven, verifiable business value. The act providing IRS' fiscal year 1997 appropriations[9] limited IRS' IT spending to efforts consistent with these categories.

In 1997, we again included the modernization on our high-risk list because IRS had not yet implemented our recommendations.[10] However, we also reported that IRS had made progress on the recommendations. For example, in May 1997, IRS issued its modernization blueprint. This blueprint consisted of four principal components: (1) a systems life cycle,

[6] Tax Systems Modernization: Management and Technical Weaknesses Must Be Corrected If Modernization Is To Succeed (GAO/AIMD-95-156, July 26, 1995).

[7] High-Risk Series: An Overview (GAO/HR-95-1, February 1995).

[8] Tax Systems Modernization: Actions Underway But IRS Has NotYet Corrected Management and Technical Weaknesses (GAO/AIMD-96-106, June 7, 1996).

[9] Public Law 104-208, September 30, 1996.

[10] High-Risk Series: Information Management and Technology (GAO/HR-97-9, February 1997).

(2) business requirements, (3) functional and technical architectures,[11] and (4) a sequencing plan.[12] We briefed IRS appropriations and authorizing committees on the results of our assessment of IRS' Modernization Blueprint in September 1997. In those briefings and in a subsequent report,[13] we concluded that the Modernization Blueprint was a good first step that provided a solid foundation from which to define the level of detail and precision needed to effectively and efficiently build a modernized system of interrelated systems. However, we also noted that the blueprint was not yet complete and did not provide enough detail for building and acquiring new systems. As a result, IRS' fiscal year 1998 appropriations act again limited IRS' fiscal year spending to efforts that were consistent with the aforementioned spending categories. The act providing IRS' fiscal year 1999 appropriations continued these spending limitations.[14]

In its fiscal year 1998 and 1999 budget requests, IRS requested over $1 billion for its ITIA account, and the Congress provided $506 million for the account. Specifically, it appropriated $325 million in fiscal year 1998, $30 million of which was rescinded in May 1998 for urgent Year 2000 requirements. The Congress also provided $211 million in fiscal year 1999. In providing these sums, the Congress limited IRS' ability to obligate them until IRS and the Treasury submitted to the Congress for approval an expenditure plan that, as stated in the law, (1) implements the IRS Modernization Blueprint, (2) meets OMB investment guidelines, (3) is reviewed and approved by IRS' Investment Review Board, OMB, and Treasury's IRS Management Board and is reviewed by GAO, (4) meets requirements of IRS' life cycle program, and (5) is in compliance with acquisition rules, requirements, guidelines, and systems acquisition management practices of the federal government. IRS is not requesting any ITIA funds for fiscal year 2000 but is asking for $325 million for fiscal year 2001. In our April 1999 testimony, we reported this request was not

[11]A system architecture defines the critical attributes of an agency's collection of information systems in both business/functional and technical/physical terms.

[12]A sequencing plan defines the actions that must be taken, and their schedules along with costs, to cost effectively evolve from the current to the future systems operating environment.

[13]Tax Systems Modernization: Blueprint Is a Good Start But Not Yet Sufficiently Complete to Build or Acquire Systems (GAO/AIMD/GGD-98-54, February 24, 1998).

[14]Public Law 105-277, October 21, 1998.

adequately justified and suggested that the Congress not provide the funds until IRS provided the support.[15]

In December 1998, IRS awarded its Prime Systems Integration Services (PRIME) contract for systems modernization. According to IRS, it planned to "partner" with the PRIME contractor, among other things, to (1) complete the modernization blueprint, as we recommended, and (2) account for changes in systems requirements and priorities caused by IRS' organizational restructuring, new technology, and IRS Restructuring and Reform Act of 1998 requirements. In addition, IRS stated that it planned to establish disciplined life cycle management processes and structures and mature software development and acquisition capabilities before it begins building modernized systems. Because of the modernization's high cost and importance, we continued in 1999 to categorize it as a high-risk federal program.[16]

IRS Plans to Submit a Series of Expenditure Plans to Incrementally Justify Modernization Initiatives

To comply with its statutory mandate to submit an expenditure plan to the Congress before obligating ITIA funds, IRS has developed a strategy where, in lieu of a single plan, it intends to develop and provide to the Congress a series of expenditure plans over the life of the modernization. This expenditure plan strategy is a by-product of the Commissioner's overall approach to the modernization, which is to incrementally invest in modernized systems in accordance with (1) rigorous systems and software life cycle management processes and (2) a revised sequencing plan for migrating from IRS' legacy systems and master file environment to the target systems and relational database environment specified in the blueprint.

The initial plan requests $35 million for IRS modernization initiatives to be delivered by October 31, 1999. This plan proposes three categories of modernization investments that IRS calls (1) supporting business goals, (2) building management capability, and (3) planning a modern infrastructure, and is requesting for each category $17 million, $11.6 million, and $6.5 million, respectively. The supporting business goals initiatives include the early phases of selected systems development efforts

[15] Tax Administration: IRS' Fiscal Year 2000 Budget Request and 1999 Tax Filing Season (GAO/T-GGD/AIMD-99-140, April 13, 1999).

[16] High-Risk Series: An Update (GAO/HR-99-1, January 1999).

that are intended to improve taxpayer service by the year 2001 tax filing season. The building management capability initiatives provide for defining and beginning the institutionalization of mature modernization management and systems engineering processes that are to permit effective blueprint implementation. The planning modern infrastructure initiatives refer to the first steps in establishing the technology foundation (e.g., networks, operating platforms, system security, etc.) upon which to build, interconnect, and operate modernized system applications.

IRS' stated intention is to submit to the Congress a series of expenditure plans in the future, the next being in October 1999. According to IRS, the October 1999 plan will define follow-on modernization initiatives, deliverables, and funding requirements into the year 2000.

Leading public and private sector organizations use an incremental approach to investing in systems modernization efforts. In addition, the Clinger-Cohen Act and OMB policy endorse this approach to funding large system development investments. Using this approach, organizations take large, complex modernization efforts and break them into projects that are narrow in scope and brief in duration.[17] This enables organizations to determine whether a project delivers promised benefits within cost and risk limitations and allows them to correct problems before significant dollars are expended, which in turn mitigates the risk of program failure.[18]

Initial Expenditure Plan Is an Appropriate First Step and Meets Legislative Requirements

IRS' initial expenditure plan is an appropriate first step to successful systems modernization and, with regard to the $35 million being requested for this increment, satisfies the conditions that the Congress placed on the use of ITIA funds. The key to IRS' success is now to effectively implement the initiatives described in its initial expenditure plan and fulfill its commitment to incrementally request and expend future modernization funds.

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

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

Condition 1: Implements the Modernization Blueprint

IRS' initial expenditure plan lays the foundation for blueprint implementation on an incremental basis and begins the implementation process for selected modernization initiatives. For example, the expenditure plan only requests funds to establish and selectively implement an Enterprise Life Cycle (ELC). This ELC is to provide IRS with a disciplined and institutional approach for managing its IT investments throughout their life cycle--from conception, development, and deployment through maintenance and operation. This ELC is to be an adaptation of the PRIME contractor's commercially available and proven systems life cycle management approach and associated automated tools, incorporating IRS-unique needs such as key investment decision points.[19] Once in place at IRS, the service plans to begin implementing the ELC on its ongoing modernization initiatives. According to IRS, future expenditure plans will provide for ELC implementation on all future project initiatives.

As another example, the initial expenditure plan requests funds to add missing system architecture precision and detail to selected system initiatives. In our February 1998 report,[20] we concluded that while the architecture in IRS' May 15, 1997, blueprint provided a solid foundation from which to build a complete architecture, it did not provide sufficient detail and precision for building or acquiring new systems. For example, the architecture did not allocate business requirements to specific configuration items (i.e., actual hardware and software components). As part of its initial expenditure plan, however, IRS plans to validate existing business requirements and develop preliminary hardware and software design specifications for IRS' ongoing projects. Additionally, IRS intends for future expenditure plans to incrementally provide for architectural specificity for future system initiatives.

The initial expenditure plan also requests funds for IRS to perform business system planning, which is to result in a revised modernization sequencing plan by October 31, 1999. This initiative is necessary because the May 15, 1997, blueprint sequencing plan does not recognize, for example, the need to introduce electronic tax administration technologies and capabilities early in the modernization to respond to the electronic filing requirements in the IRS Restructuring and Reform Act of 1998. This revised sequencing

[19]The key decision milestones are referred to by IRS as project definition, preliminary business case, and final business case.

[20]GAO/AIMD/GGD-98-54, February 24, 1998.

plan is to define the general timing, costs, and benefits of future modernization projects, and is to be incrementally updated in future expenditure plans with more specific cost and benefit information as projects are initiated and business case justifications are developed.

Condition 2: Meets OMB Information Systems Investment Guidelines

If properly implemented, the ELC that IRS' initial expenditure plan is to establish and selectively implement, should meet OMB information system investment guidelines.[21] These guidelines call for agencies to adopt a data-driven, analytically based approach to selecting, controlling, and evaluating investments in information technology. The overriding objective is to ensure that investment decisions are made in a disciplined and rigorous manner on the basis of established criteria, such as return-on-investment and architectural compliance, and that system investments be broken into a series of increments. Consistent with these guidelines, IRS' ELC is to include processes for identifying alternative solutions, calculating their projected returns-on-investment, and requiring that selected solutions be architecturally compliant. Through its ELC, IRS also plans to require that systems be acquired and implemented in phased segments that are narrow in scope and brief in duration. According to IRS, system initiatives in future expenditure plans will be conducted in accordance with the ELC.

Condition 3: Meets the Requirements of IRS' Life Cycle Program

IRS' blueprint included a high-level system life cycle framework that could be used to define a disciplined set of processes for managing modernization investments. In lieu of using the system life cycle overview contained in the blueprint as the framework for developing life cycle management processes, IRS' initial expenditure plan provides for establishing the aforementioned ELC. IRS decided to do this because it concluded that adapting the PRIME contractor's commercially available methodology to meet its needs would be less costly and faster than completing its own unique system life cycle contained in its May 15, 1997, blueprint. IRS officials also stated that the PRIME contractor's methodology offered more capability than the blueprint system life cycle overview, such as processes for managing business process reengineering.

[21] Evaluating Information Technology Investments, A Practical Guide, Version 1.0 (Executive Office of the President, OMB, November 1995) and OMB Memorandum M-97-02, Funding Information Systems Investments (October 1996).

We reviewed the PRIME contractor's commercially available methodology, and found that it both meets the requirements specified in the blueprint's system life cycle overview and is consistent with the approaches that successful private and public sector organizations use to manage large IT investments. If implemented correctly, it should provide IRS with effective processes and tools for, among other things, planning, controlling, developing, and deploying information systems based on defined activities, events, milestones, reviews, and products. As described above, the initial expenditure plan provides for implementing the ELC on ongoing projects, and, according to IRS officials, future expenditure plans will provide for implementing it on follow-on projects.

Condition 4: Approved by IRS, Treasury's IRS Management Board, and OMB and Reviewed by GAO

IRS' Core Business Systems Executive Steering Committee, which replaced IRS' Investment Review Board, approved the $35 million expenditure plan on April 20, 1999. Treasury's IRS Management Board and OMB approved the plan on June 9, 1999, and June 10, 1999, respectively. On May 13, 1999, IRS provided us with a copy of its initial expenditure plan it submitted to the Congress, and the results of our review are contained in this report.

Condition 5: Complies With Federal Acquisition Rules, Requirements, Guidelines, and Management Practices

As described in its expenditure plan, IRS plans to establish, through its ELC, the life cycle management processes and practices for acquiring modernized systems. If implemented effectively, these processes should meet federal acquisition rules and management practices. According to federal acquisition laws, rules, and regulations,[22] agencies should, among other things, use disciplined, decision-making processes for planning, managing, and controlling the acquisition of IT. By doing so, agencies mitigate the risks of acquiring systems that are not delivered on time and on budget and do not work as intended. IRS' expenditure plan requests funds to continue IRS' efforts to strengthen its capability to effectively manage its contractors. For example, as part of its building management capability initiatives, IRS plans to implement mature software/systems acquisition management practices within the IRS organization responsible for managing the PRIME contractor and other modernization contractors. IRS intends to build the capability in accordance with the Software Engineering Institute's (SEI) software/system acquisition capability maturity model requirements, and plans to have this capability in place by

[22]For example, see the Clinger-Cohen Act of 1996, OMB Circular A-109, and the Federal Acquisition Regulation.

October 31, 1999.[23] Among these maturity models' requirements are disciplined and rigorous processes and approaches for measuring and tracking progress of contracts and acting to correct problems quickly, which will be a key to IRS' ability to effectively manage the PRIME contractor and successfully modernize.

Initial Expenditure Plan Is Consistent With GAO's Past Recommendations

In 1995, we first made recommendations to correct serious and pervasive modernization management and technical weaknesses. Since then, IRS has taken actions to address our recommendations. We have monitored these actions and have made follow-up recommendations that recognize IRS' progress and define the residual steps that IRS needs to take to ensure that it is ready and capable to effectively modernize its systems. Currently, our open recommendations fall into three categories: (1) completing the modernization blueprint, (2) developing the management and engineering capability to effectively modernize systems, and (3) until the first two recommendations are implemented, limiting modernization spending to certain small, cost-effective, low-risk efforts.

IRS' initial expenditure plan is consistent with these recommendations. Specifically, of the $35.1 million being requested, IRS plans to use approximately $14.6 million for initiatives relating to completing the blueprint. For example, IRS plans to develop a 5-year "core business systems" modernization strategy that leverages new IT and recognizes IRS' recent organizational restructuring and business process reengineering efforts prompted by the IRS Restructuring and Reform Act of 1998.[24] The result is intended to be a revised, business risk-based sequencing plan that defines the general timing, cost, and benefits of new modernization projects over the next 3 to 5 years.

In addition, IRS plans to spend about $11.6 million to develop the management and engineering capability to build and implement modernized systems. Specifically, IRS has designated about $2.2 million for PRIME and other contractor support to help IRS implement mature program management practices that are to (1) strengthen IRS' ability to manage and control modernization initiatives and (2) ready IRS for an

[23]A model developed by the SEI at Carnegie Mellon University to evaluate an organization's software development or acquisition capability.

[24]Public Law 105-206, July 22, 1998.

evaluation by SEI against relevant software/system acquisition capability maturity model requirements. IRS has earmarked $9.4 million for defining, documenting, and implementing its ELC, including training staff in its use, on ongoing modernization projects.

Last, IRS plans to spend the remaining $8.9 million on selected relatively small, low-risk efforts. For example, IRS is seeking $5.1 million to, among other things, validate system requirements and update cost-effectiveness (i.e., business case) justifications for two ongoing projects intended to provide near-term customer service improvements via better routing of taxpayers telephone inquiries. In addition, IRS seeks to spend $3.2 million on defining the network and platform technology infrastructure needed to support the above two customer service initiatives and to provide the foundation for secure future electronic commerce between employees, tax practitioners, and taxpayers.

Other Observations on IRS' Modernization Efforts

Our review disclosed several additional relevant items concerning IRS' management of the modernization. First, IRS has established a modernization "governance" structure that provides for extensive involvement by IRS' top executives, including the Commissioner. This structure is an effective way to mitigate the risks associated with the various modernization initiatives that IRS has underway and planned. Second, although IRS plans to do so by July 1999, it has yet to adequately define respective systems modernization roles and responsibilities for itself, the PRIME contractor, and other support contractors. Given that IRS' modernization approach provides for an unprecedented "partnership" with its contractors, ensuring that these roles and responsibilities are defined, understood, and enforced is of particular importance. Last, IRS can strengthen its incremental approach to investing in modernized systems by regularly disclosing to the Congress in its planned future expenditure plans IRS' progress against the modernization expectations that it defined in the preceding expenditure plan.

IRS' Top Executives Are Directly Engaged in Ongoing Modernization Initiatives

IRS has established a governance structure for managing its modernization initiatives and providing its top executives, including the Commissioner, direct and frequent visibility into and control over all initiatives/projects. This organizational structure is headed by the Core Business Systems Executive Steering Committee, which is chaired by IRS' Commissioner and includes Treasury's Assistant Secretary for Management and Chief Financial Officer, IRS' Chief Information Officer, the Chief Operating

Officer, key operating division heads, the PRIME contractor, and other key business officials. The Executive Steering Committee meets at least monthly to review modernization progress and direct future work. Under this process, projects are not initiated and do not progress to the next phase without the Steering Committee's approval, thus mitigating the risk of modernization missteps and failures.

IRS Has Yet to Adequately Define Modernization "Partnership" Roles and Responsibilities

Effective program/project and contract management requires a clear delineation of the respective roles and responsibilities of the agency management team and the contractors supporting the agency. In the case of IRS and its tax systems modernization program, this is particularly important because IRS' stated intention in its solicitation and award documentation is to "partner" with the PRIME contractor and the supporting contractors. However, the nature of such a "partnership" is not defined in federal acquisition regulations, and thus is an ambiguous concept to implement and requires clear definition by IRS.

In its efforts to date, however, IRS has yet to adequately define the respective roles of the service and its contractors. In January 1999, IRS tasked the PRIME contractor with (1) defining the roles and responsibilities of IRS, itself, and the other contractors and (2) explaining the structure and processes for managing the "partnership" between the service and itself. This task was to be completed by April 30, 1999. According to IRS officials, this task was not adequately completed for several reasons. First, the PRIME contractor's tasking was not adequately defined and thus resulted in a deliverable that was too narrow in scope. Second, IRS subsequently became concerned that the PRIME contractor was not sufficiently independent enough to be defining roles and responsibilities for itself and IRS. Last, funding for the PRIME contractor began to run low. Consequently, IRS recently tasked one of its other support contractors to develop a "Concept of Operations document by July 1999 that defines the roles, responsibilities, authorities, structure, and rules of engagement for the PRIME contractor, IRS, and other IRS support contractors."

IRS Should Disclose Progress and Results in Subsequent Expenditure Plans

When employing an incremental approach to investing in systems modernization efforts, leading public and private sector organizations track and monitor whether each increment is producing promised benefits and meeting cost and schedule baselines, and report this information to executive decisionmakers. By doing so, these organizations can address variances from expectations incrementally, before significant dollars are expended. This is a proven way to effectively manage investment risks.

To effectively employ incremental investment management on its modernization, IRS recognizes that it needs to incrementally measure and track progress and results. Accordingly, its governance structure and its ELC provide for doing so. In particular, its ELC is to incorporate SEI process maturity model requirements that, among other things, define key processes and approaches for measurement, analysis, and verification of activities. However, IRS has yet to define whether its planned future expenditure plans will provide for disclosure of this information. Such disclosure would provide the Congress with the kind of regular and valuable information that is needed to effectively oversee IRS' modernization efforts.

Conclusions

IRS' initial expenditure plan lays the foundation for successful systems modernization; satisfies, for this $35 million increment, the conditions that the Congress placed on the use of ITIA funds; and is consistent with our past recommendations. IRS' stated intention is to fully implement this expenditure plan and to submit to the Congress for approval future expenditure plans that incrementally build on this modernization foundation. Such an incremental approach to investing in modernized systems is an effective way to minimize the inherent risk in large, complex, multiyear modernization programs. The next step for IRS is to effectively implement the plan and fulfill its commitment to incrementally request and expend future modernization funds. A key factor in implementing its plans will be IRS' success in establishing mature and disciplined measurement and tracking capabilities so that it can effectively analyze progress against incremental goals, deliverables, and benefit expectations and reliably report this information to congressional decisionmakers. By including this information in future expenditure plans submitted to the Congress, IRS can strengthen modernization management and oversight.

Recommendations

Accordingly, we recommend that the Commissioner of Internal Revenue ensure that future expenditure plans fully disclose IRS' progress against incremental goals, deliverables, and benefit expectations and that the expenditure plan that IRS plans to submit in October 1999 fully explain the nature and functioning of IRS' "partnership" with its contractors, including the respective roles and responsibilities of IRS and its contractors.

Agency Comments

In commenting on a draft of this report, IRS agreed with our findings and recommendations and stated that it would ensure that future expenditure plans would address progress against expectations established in previous requests. IRS also commented on the effectiveness of our evaluation efforts and stated that our timely observations and comments have allowed IRS to move quickly to implement our recommendations.

We are sending copies of this report to Senator Ted Stevens, Senator Robert C. Byrd, Senator William V. Roth, Jr., Senator Daniel Patrick Moynihan, Senator Orrin G. Hatch, Senator Max Baucus, Senator Fred Thompson, Senator Joseph I. Lieberman, Representative C.W. Bill Young, Representative David R. Obey, Representative Bill Archer, Representative Charles B. Rangel, Representative Amo Houghton, Representative William J. Coyne, Representative Dan Burton, Representative Henry A. Waxman, Representative Stephen Horn, and Representative Jim Turner in their capacities as Chairmen or Ranking Minority Members of Senate and House Committees and Subcommittees. We are also sending copies to Honorable Charles O. Rossotti, Commissioner of Internal Revenue, Honorable Robert E. Rubin, Secretary of the Treasury, Honorable Lawrence H. Summers, Deputy Secretary of the Treasury, and the Honorable Jacob J. Lew, Director of the Office of Management and Budget. Copies will also be made available to others upon request.

If you or your staff have any questions about this report please contact me at (202) 512-6240 or by e-mail at *hiter.aimd@gao.gov*. Other key contributors to this report are listed in appendix III.

Randolph C. Hite
Associate Director
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Abbreviations

ELC	Enterprise Life Cycle
IRS	Internal Revenue Service
IT	information technology
ITIA	Information Technology Investments Account
OMB	Office of Management and Budget
PRIME	Prime Systems Integration Services
SEI	Software Engineering Institute

Objectives, Scope, and Methodology

Pursuant to the Department of the Treasury's fiscal year 1998 and 1999 appropriations acts, the Congress limited IRS' ability to obligate ITIA funds until the service and Treasury submitted to the Congress for approval an expenditure plan that per the acts, (1) implements the IRS Modernization Blueprint, (2) meets OMB's investment guidelines for information systems, (3) is reviewed and approved by IRS' Investment Review Board, OMB, and Treasury's IRS Management Board and is reviewed by GAO, (4) meets the requirements of IRS system life cycle management program, and (5) is in compliance with acquisition rules, requirements, guidelines, and system acquisition management practices of the federal government. Accordingly, IRS provided us with the expenditure plan that it submitted to the Congress (i.e., the Senate on May 25, 1999, and the House on June 2, 1999). We reviewed the plan to determine whether (1) the plan satisfied the conditions specified in the acts, (2) the plan was consistent with our past modernization recommendations, and (3) we had any other observations on IRS' systems modernization efforts.

To determine whether IRS' expenditure plan satisfied the conditions specified in appropriations acts,[1] we first identified and reviewed the relevant IRS and federal documents referenced in the statutory conditions, such as the Modernization Blueprint, OMB information systems investment guidelines (e.g., Raines Rules), and the Federal Acquisition Regulation. We then documented IRS' completed, ongoing, and planned modernization initiatives. To do this, we reviewed IRS' ITIA Expenditure Plan; Initial Request for Funds; and other supporting documentation, such as the individual initiatives' project plans and descriptions, briefing presentations (e.g., expenditure plan briefing to IRS Management Board), the PRIME contract and associated task orders, and Executive Steering Committee agendas and decision papers proposing courses of action. We also interviewed IRS' Chief Information Officer and other service officials working on the modernization program to gain an understanding of what IRS is doing to satisfy the legislative conditions. This included receiving weekly briefings and reports on how IRS and contractor teams were progressing on ongoing initiatives, such as efforts to improve customer service, build capability to effectively acquire systems, establish a new system development life cycle methodology (i.e., ELC), and define IRS and contractor roles and responsibilities. We also reviewed the business and systems development life cycle methodology that IRS is modifying to

[1]Public Law 105-61, Treasury and General Government Appropriations Act, 1998, and Public Law 105-277, Omnibus Consolidated and Emergency Supplemental Appropriations Act, 1999.

develop its ELC and were briefed by IRS and its contractors involved in this effort. We also attended IRS' Executive Steering Committee meetings to observe how IRS top management was directing and controlling the modernization program and to understand IRS' strategic modernization approach and progress. Last, we analyzed each of IRS' modernization initiatives vis-à-vis the statutory conditions to identify any variances or inconsistencies.

To determine whether IRS' expenditure plan is consistent with our past recommendations on the tax systems modernization, we extracted from our inventory of open recommendations those pertaining to IRS' modernization and grouped them into the following three categories: (1) completing the Modernization Blueprint, (2) developing the management and engineering capability to effectively modernize systems, and (3) limiting modernization spending to certain small, cost-effective, low-risk efforts until the first two recommendations are implemented. We then compared IRS' efforts on its completed, ongoing, and planned initiatives with the intent of our open recommendations to identify any variances or inconsistencies.

To develop other observations on IRS' systems modernization efforts, we analyzed IRS' overall modernization governance structure to determine whether it provided for top management involvement and analyzed contractor deliverables against task order requirements and the December 9, 1998, contract awarded to the PRIME contractor. We also attended Executive Steering Committee meetings to observe how the Commissioner and committee members functioned with respect to established structures and processes, and to understand IRS' plans for submitting future expenditure plans. In addition, we met with and interviewed the Chief Information Officer and IRS officials responsible for the day-to-day management and control of the program and the PRIME contractor, for development of the expenditure plan, and for definition of IRS and contractor roles and responsibilities.

We performed our work at IRS headquarters in Washington, D.C., and its facility in Lanham, Maryland, from January 1999 through May 1999 in accordance with generally accepted government auditing standards.

Comments From the Internal Revenue Service

DEPARTMENT OF THE TREASURY
INTERNAL REVENUE SERVICE
WASHINGTON, D.C. 20224

COMMISSIONER

June 14, 1999

Mr. Jeffrey C. Steinhoff
Acting Assistant Comptroller General
General Accounting Office
441 G Street, N.W. Room 5067
Washington, D.C. 20548

Dear Mr. Steinhoff:

We appreciate the review (#GGD-99-206) that your staff has performed on our initial expenditure plan request for Tax Modernization Funding. We concur with your recommendations, and we will ensure that future expenditure plan requests include status and progress reports against previous expenditure requests.

Most significantly, we appreciate the time your staff has spent participating on an active basis observing the regular governance process for this program. Their timely observations and comments have enabled us to implement their recommendations in almost a real-time manner. We welcome this form of oversight as it permits open and honest communications and strengthens the trust that needs to exist between our two organizations.

Sincerely,

Charles Rossotti

Charles O. Rossotti

GAO Contact and Staff Acknowledgements

GAO Contact

Gary Mountjoy, 512-6367

Acknowledgments

In addition to the above contact, Keith Rhodes, Agnes Spruill, Karen Richey, Lorne Dold, Sherrie Russ, Charles Roney, and Frank Maguire made key contributions to this report.

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