TREASURY INSPECTOR GENERAL FOR TAX ADMINISTRATION

Annual Assessment of the
Business Systems Modernization Program

June 24, 2008

Reference Number: 2008-20-129

**TREASURY INSPECTOR GENERAL
FOR TAX ADMINISTRATION**

June 24, 2008

MEMORANDUM FOR CHIEF INFORMATION OFFICER

FROM: Michael R. Phillips
             Deputy Inspector General for Audit

SUBJECT: Final Audit Report – Annual Assessment of the Business Systems
             Modernization Program (Audit # 200820005)

This report presents the results of our annual assessment of the Business Systems Modernization
(Modernization) Program. The overall objective of this review was to assess the progress of the
Internal Revenue Service's (IRS) Modernization Program for Fiscal Year 2008, as required by
the IRS Restructuring and Reform Act of 1998.[1]

Impact on the Taxpayer

The Modernization Program, which began in 1999, is a complex effort to modernize the IRS'
technology and related business processes. This effort involves integrating thousands of
hardware and software components and must be done while replacing outdated technology and
maintaining the current tax system. The IRS has achieved some successes in addressing these
crucial challenges, but it still must overcome significant barriers to manage the inherent risks of
modernization and deliver a level of service American taxpayers expect.

Synopsis

In December 1998, the IRS hired the Computer Sciences Corporation as its PRIME contractor[2]
for the Modernization Program. The IRS originally relied on the PRIME contractor to act as a
systems integrator to find and manage the best expertise and technical resources to achieve its
organizational goals. In January 2005, due to budget reductions and concerns about the

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[1] Pub. L. No. 105-206, 112 Stat. 685 (codified as amended in scattered sections of 2 U.S.C., 5 U.S.C. app.,
16 U.S.C., 19 U.S.C., 22 U.S.C., 23 U.S.C., 26 U.S.C., 31 U.S.C., 38 U.S.C., and 49 U.S.C.).
[2] See Appendix IX for a glossary of terms.

adequacy of the PRIME contractor's performance, the IRS began transitioning many activities from the PRIME contractor and taking over the primary role as the systems integrator for all projects.

The IRS originally estimated that the Modernization Program would last up to 15 years and incur contractor costs of approximately $8 billion. According to the IRS' original plan, the Program would be past the halfway point by Calendar Year 2008. The Program is in its 10th year and has received approximately $2.5 billion for contractor services, plus an additional $310 million for internal IRS costs. The IRS plans to spend $267 million on the Program in Fiscal Year 2008.

The IRS has achieved successes when the Modernization Program followed its systems development and management guidance. The Program has progressed more effectively with the implementation of the Enterprise Services organization's management components, and with the development of the Information Technology Modernization Vision and Strategy as a map for future development. However, the IRS and its contractors must overcome significant barriers in successfully implementing the goals of the Modernization Program. The Program and processes have not progressed enough to eliminate its material weakness designation, and further reductions in funding could jeopardize the Program's ability to deliver planned improvements.

Response

The Chief Information Officer responded that the IRS was pleased the annual assessment recognized the progress in implementing Modernization projects, validating improvements in contracting procedures affecting the Modernization Program, and documenting work to institutionalize the Information Technology Modernization Vision and Strategy. The Chief Information Officer also stated that the IRS has taken additional steps to improve Modernization Program performance including development of strategies to confront risks and issues to future system releases, efforts to address human capital challenges and succession planning, and development and implementation of a methodology for quantitatively measuring and reporting on project scope. The Chief Information Officer stated that he appreciated our continued support and the valuable assistance and guidance the audit team provides. Management's complete response to the draft report is included as Appendix X.

Copies of this report are also being sent to the IRS managers affected by the report. Please contact me at (202) 622-6510 if you have questions or Preston B. Benoit, Acting Assistant Inspector General for Audit (Information Systems Programs), at (202) 622-5894.

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Abbreviations

CADE	Customer Account Data Engine
CIO	Chief Information Officer
e-File	Electronic filing
IRS	Internal Revenue Service
MITS	Modernization and Information Technology Services
TIGTA	Treasury Inspector General for Tax Administration

Background

The Internal Revenue Service (IRS) Restructuring and Reform Act of 1998[1] requires the Treasury Inspector General for Tax Administration (TIGTA) to annually evaluate the adequacy and security of IRS information technology. This report provides our assessment of the IRS Business Systems Modernization (Modernization) Program for Fiscal Year 2008.

The Modernization Program, which began in 1999, is a complex effort to modernize the IRS' technology and related business processes. This effort involves integrating thousands of hardware and software components. All of this is being done while replacing outdated technology and maintaining the current tax system.

In December 1998, the IRS hired the Computer Sciences Corporation as its PRIME contractor[2] for the Modernization Program. The IRS originally relied on the PRIME contractor to act as a systems integrator to find and manage the best expertise and technical resources to achieve the IRS' organizational goals. In January 2005, due to budget reductions and concerns about the adequacy of the PRIME contractor's performance, the IRS began transitioning many activities from the PRIME contractor and taking over the primary role as the systems integrator for all projects. The systems integrator role is a significant operational change for the IRS, requiring new procedures, personnel, and offices. The IRS has successfully taken the first steps to transition modernization activities away from the PRIME contractor and is taking additional actions to build on these initial steps. For example, the IRS developed the Enterprise Transition Strategy, which documents the overall strategy for realizing the vision and goals of the IRS. In addition, the IRS has developed a Requirements Management Office and updated the Enterprise Life Cycle Guide[3] to include paths common to IRS modernization projects.

The IRS originally estimated that the Modernization Program effort would last up to 15 years and incur contractor costs of approximately $8 billion. According to the IRS' original plan, the Program would be past the halfway point by Calendar Year 2008. The Modernization Program is in its 10th year and has received approximately $2.5 billion for contractor services, plus an additional $310 million for internal IRS costs. The IRS plans to spend $267 million on the Program in Fiscal Year 2008. Appendix V presents an analysis of Modernization Program funding since its inception.

> *The IRS planned to complete the Modernization Program in 15 years at a cost of approximately $8 billion.*

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[1] Pub. L. No. 105-206, 112 Stat. 685 (codified as amended in scattered sections of 2 U.S.C., 5 U.S.C. app., 16 U.S.C., 19 U.S.C., 22 U.S.C., 23 U.S.C., 26 U.S.C., 31 U.S.C., 38 U.S.C., and 49 U.S.C.).
[2] See Appendix IX for a glossary of terms.
[3] Appendix IV presents an overview of the Enterprise Life Cycle.

The compilation of information for this report was conducted at the TIGTA office in Laguna Niguel, California, during the period January through March 2008. The information presented in this report is derived from TIGTA audit reports issued since July 2007,[4] and the Government Accountability Office report on the Modernization Program's Fiscal Year 2008 Expenditure Plan.[5] These previous audits and our limited analyses were conducted in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our conclusions based on our audit objective. We believe the evidence obtained provides a reasonable basis for our conclusions based on our audit objective. Detailed information on our audit objective, scope, and methodology is presented in Appendix I. Major contributors to the report are listed in Appendix II.

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[4] Appendix VIII presents the TIGTA reports used in formulating this Modernization Program assessment.
[5] *Internal Revenue Service's Fiscal Year 2008 Expenditure Plan* (GAO-08-420, dated March 2008).

Results of Review

The Modernization Program Continues to Achieve Success

The IRS has continued to improve its abilities and processes that are critical to ultimately achieving success in modernizing its business systems. Since July 2007, the IRS has implemented further capabilities and provided improvements to taxpayers and stakeholders. These successes include deploying new releases for the Customer Account Data Engine (CADE), Modernized e-File, and Account Management Services projects. The Modernization Program has also improved contract negotiations and management practices, assumed more responsibility for Program integration, expanded the Information Technology Modernization Vision and Strategy, and continued addressing organizational and Program concerns through the *Highest Priority Initiatives* process.

> *The Modernization Program has continued to deploy new project application releases and improve its program management.*

Enhanced capabilities have been added to the CADE

The CADE will provide the foundation for managing taxpayer accounts to achieve the IRS modernization vision. The CADE consists of databases and related applications that will replace the existing IRS Master File processing systems, which are the official IRS repository of taxpayer information. It is a critical building block in the IRS Modernization Program that will enable the development of subsequent modernized systems to improve customer service and compliance.

The IRS deployed CADE Release 2 for the 2007 Filing Season. Release 2 added the ability to process U.S. Individual Income Tax Returns (Form 1040) that include Itemized Deductions (Schedule A), Interest and Ordinary Dividends (Schedule B), and Credit for the Elderly or the Disabled (Schedule R); the Head of Household filing status; and capabilities to handle the Telephone Excise Tax Refund. Overall, increased volumes of tax return information were accepted and posted accurately to CADE accounts during the 2007 Filing Season. The IRS successfully posted approximately 11 million tax returns to the CADE and generated approximately $11.6 billion in refunds from March through August 2007.

CADE Release 3 introduced additional capabilities for the 2008 Filing Season. It added the ability to (1) generate notices to taxpayers about account adjustment activities due to mathematical errors on the tax return, (2) split a taxpayer's refund in any proportion and directly deposit the funds among two or three different financial institution accounts, (3) update a taxpayer's account with an address change, and (4) process Child and Dependent Care

Expenses (Form 2441) and the Earned Income Credit (Schedule EIC). The IRS reported that the CADE had posted approximately 21.1 million returns and generated approximately $32.6 billion in refunds as of March 28, 2008.

Additional tax returns have been added to the Modernized e-File project

The Modernization Program implemented Release 4 of its Modernized e-File project in January 2007. Release 4 added the U.S. Return of Partnership Income (Form 1065) and the U.S. Return of Income for Electing Large Partnerships (Form 1065-B) as well as Federal/State Single Point Filing System access for partnership returns.

Modernized e-File Release 5 expanded electronic filing (e-File) for Calendar Year 2008 with the ability to process U.S. Income Tax Return of a Foreign Corporation (1120-F). Release 5 also has the ability to process the Annual Electronic Filing Requirement for Small Exempt Organizations – Form 990-N (e-Postcard). The Pension Protection Act of 2006[6] requires charities with $25,000 or less in gross receipts to electronically file the new Form 990-N.

The first release of the Account Management Services system has been delivered

The first release of the Account Management Services system was deployed in October 2007. This release supports instant address change capability in the CADE and enables faster notice processing for taxpayers with mathematical errors on their tax returns.

The deployment of the Account Management Services system shows that the IRS can be successful when it follows its systems development and management guidance. These successes can generally be attributed to project teams implementing and adhering to Enterprise Life Cycle guidelines. The Account Management Services system project team developed required deliverables and work products, completed the detailed project release designs on time, formulated a manageable scope and realistic completion dates, and in a timely manner completed detailed release designs of a manageable scope.

Improvements have been made in contract negotiation and management practices

The IRS has further enhanced the management and capabilities of the Modernization Program by improving contract negotiation and management practices. Specifically, the Modernization and Information Technology Services (MITS) organization and the Office of Procurement have improved stakeholder involvement in pre-negotiation sessions and tracking pre-negotiation issues, obtained independent Federal Government cost estimates, improved negotiation priorities and strategies, and awarded task orders in a timely manner.

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[6] Pub. L. 109–280, 120 Stat. 780.

Efforts of the Enterprise Services organization and implementation of the Information Technology Modernization Vision and Strategy have contributed to Modernization Program success

The Modernization Program has progressed more effectively with the Enterprise Services organization assuming the role of Modernization Program integrator and with the development of the Information Technology Modernization Vision and Strategy as a map for future development.

The Enterprise Services organization provides services and functions that include both process and program areas such as governance, methodologies, requirements management, and planning for information technology portfolio investment decisions, as well as technical areas such as the enterprise architecture, technical standards, infrastructure, and systems engineering.

> ***The Enterprise Services organization provides essential cross-cutting services and functions to support the MITS organization.***

The Enterprise Services organization is divided into two component organizations. The Business Integration organization provides integrated process architectures, solutions, services, and standards at an enterprise level to enable business transformation. The Systems Integration organization develops the architecture and infrastructure strategy and standards, which includes providing engineering and architecture support to selected projects and supporting the business and information technology infrastructure modernization objectives and projects.

The Business Integration organization's Business Rules and Requirements Management office is beginning to provide benefits to the Modernization Program. The Business Rules and Requirements Management office's mission is to provide the IRS with a quality requirements baseline that reflects the needs of the business and its customers and results in the deployment of solutions that meet those needs.

The Business Rules and Requirements Management office's core services focus on delivering business redesign, rules and requirements, and business solution architecture products. It also provides Business Analysis continuity throughout the Enterprise Life Cycle, with standards and practices providing the overall foundation for all services. The Business Rules and Requirements Management office has benefited the Modernization Program by:

> ***The IRS created the Business Rules Requirements Management office to address the challenges of capturing and managing IRS business solutions requirements, and aligning those requirements with business strategy and needs.***

- Working with the Modernized e-File project to implement a full bi-directional requirements traceability model. This helps the Modernized e-File project ensure that requirements are traceable to valid requirement numbers as directed by the Enterprise Life Cycle.

- Issuing in March 2007 a series of requirements development and management standards and guidance effective for modernization projects. Having better documented and stabilized requirements helps modernization projects plan and manage development-phase acquisitions.

- Working with the CADE project team to help negotiate a reasonable scope of work for future CADE development that considers the amount and difficulty of the work and the filing season time constraints. The requirements elicitation processes are helping improve scope estimation problems.

Over the past year, the IRS has also made advances in incorporating the Information Technology Modernization Vision and Strategy into the framework of how it does business. The Information Technology Modernization Vision and Strategy supports the fulfillment of the IRS mission and strategic goals by establishing a 5-year plan that drives information technology investment decisions based on priorities around modernizing front-line tax administration and supporting technical infrastructure. The Information Technology Modernization Vision and Strategy leverages existing systems and new development to build information technology capabilities, optimize capacity, manage program costs, and deliver business value on an incremental and frequent basis.

In its second year of implementing the Information Technology Modernization Vision and Strategy, the IRS focused on expanding business scope and adding two new focus areas – Internal Management and Security and Privacy. The focus areas were further defined to address cross-cutting technical opportunities to deliver base products and services, such as end-user support, networks, and storage.

> **The Information Technology Modernization Vision and Strategy is an important component of the IRS Strategic Plan.**

In addition, the IRS established investment decision support services that provided an increased confidence level and stakeholder engagement between the business operating divisions and the MITS organization. The processes centered on developing a well-defined business capability, designing a technical solution concept, and estimating project life cycle and defining operational and maintenance costs.

The IRS is addressing program weaknesses and barriers through the Highest Priority Initiatives process

IRS executives and managers used the *Highest Priority Initiatives* process to identify and seek resolution for the most significant issues facing the Modernization Program. IRS executives and senior managers are appointed to oversee the plans to resolve each of the *Highest Priority Initiatives*, and progress is reported monthly. New initiatives are identified every 6 months. This process is in its eighth 6-month cycle and was expanded to include initiatives affecting the entire

MITS organization. From August 2005 to February 2008, the IRS resolved a total of 92 of the identified *Highest Priority Initiatives*, with 42 items currently in process.

Improvements in the management of the Modernization Program have contributed to the IRS' increased success in implementing modernization projects and in meeting cost and schedule commitments for most deliverables. Specifically, as of March 2008, reported project costs and completion dates showed that, since May 2007, 19 (95 percent) of the 20 associated project milestones that were scheduled for completion were completed within 10 percent of cost estimates, and 18 (90 percent) of the 20 milestones were delivered within 10 percent of schedule estimates. See Appendix VI for detailed project cost and schedule variance analysis.

Significant Barriers Continue to Challenge the Successful Completion of the Modernization Program

While steady progress and improvements have been made to the Modernization Program in the past year, the IRS and its contractors must still overcome significant barriers in successfully implementing Program goals. These barriers include:

- Continued reductions in funding that have forced the IRS to adjust the scope of the Modernization Program portfolio and project release schedules.

- Inconsistent adherence to established project development guidelines that has limited the effectiveness and growth of the Modernization Program.

Funding for the Modernization Program has generally decreased

As the Modernization Program has advanced, its funding has generally decreased. In Fiscal Year 2000, the Program received $414 million for contractors, plus approximately $12 million for internal IRS costs related to modernization. In Fiscal Year 2008, the Program will receive $267 million, consisting of $222 million for contractors and $45 million for IRS labor costs. The preliminary budget for Fiscal Year 2009 shows a reduction of 16.6 percent to $222.6 million, consisting of $179.2 million for contractors and $43.4 million for IRS labor costs.[7]

Early in the Modernization Program, the IRS struggled to effectively manage a large portfolio of projects. Due to weaknesses in systems development processes and management, modernization projects were continually delivered late and over budget. This prompted both the TIGTA and the Government Accountability Office to recommend reducing the scope of Modernization Program efforts to enable more effective management. The IRS agreed and reduced the scope and pace of the Program, which led to a significantly decreased modernization budget beginning in Fiscal Year 2005. Although the Program has progressed, improved overall program management, and

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[7] Appendix V presents an analysis of Modernization Program funding since its inception.

is looking to increase the scope of its projects, the budget to fund these projects has generally decreased over the past several fiscal years. See Appendix V for more details.

Budget reductions have required Modernization Program management to continually adjust the scope of the portfolio and modernization project release schedules. In some instances, management has had to defer or even forgo project capabilities because sufficient funding was not available. For example, funding shortfalls caused the IRS to forgo development of significant capabilities for the Modernized e-File Integration project. These capabilities would have allowed the IRS business operating divisions to better utilize the Modernized e-File system for enforcement activities. Because the Modernized e-File system is not being used to the extent originally planned, the intended benefits to the business operating divisions are not being achieved. As a result of the data access limitations, the Large and Mid-Size Business Division and the Tax Exempt and Government Entities Division are using their own systems to access Modernized e-File filed tax return data.[8]

A second project, the Enterprise Return Retrieval system, was subsequently planned to deliver the capabilities the Modernized e-File Integration project could not. However, this project was not funded for Fiscal Year 2008.

Modernization Program system development and management processes are not always implemented consistently

The Modernization Program could improve its effectiveness and efficiency through closer adherence to established guidelines such as the Enterprise Life Cycle guidelines and its related key processes, and the Federal Acquisition Regulation. Our audits found that the Modernization Program did not consistently implement Enterprise Life Cycle guidelines, including project management and requirements management activities.

Project management is the discipline applied to help ensure orderly and controlled initiation, planning, execution, and implementation of a project. Effective project management includes completing the requirements of the milestone processes and products before advancing through the systems development life cycle. Project management processes were not applied consistently throughout the Modernization Program. For example, the CADE project has shown a pattern of deferring project requirements to later releases and missing release deployment dates since the beginning of the project. CADE project requirements from each release have been deferred, and the project has missed target dates because the IRS and the PRIME contractor agreed to an unrealistic scope of work and did not follow the Enterprise Life Cycle Preliminary Design Phase guidelines.[9]

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[8] *Improvements to the Modernized e-File System Will Help Provide Intended Benefits to the Internal Revenue Service and Taxpayers* (Reference Number 2008-20-122, dated June 18, 2008).
[9] *Vital Decisions Must Be Made to Ensure Successful Implementation of Customer Account Data Engine Capabilities* (Reference Number 2007-20-080, dated July 13, 2007).

In contrast, the Account Management Services project's success can be attributed to the efforts of the project team following Enterprise Life Cycle guidelines, developing required work products, completing detailed release designs on time, and formulating a manageable scope.[10]

The Modernization Program has continued to struggle with requirements management processes. For example, an audit of the Modernized e-File project found that the project requirements were not traced between the System Requirements Report and the requirements traceability verification matrices.[11] The Enterprise Life Cycle directs project teams to verify that the contractor is maintaining the traceability of project requirements for applications developed throughout the project life cycle, including ensuring that each requirement is mapped to its higher level requirement. The Software Engineering Institute's Capability Maturity Model Integration provides that a project should maintain bi-directional traceability between source requirements and all product requirements. Without complete bi-directional traceability, it is difficult for the IRS to assess the adequacy of requirements development and testing activities. In addition, there is no assurance that the requirements expected and approved to be deployed are the requirements that are actually deployed.

In addition, since the beginning of the CADE project's development, we have identified a trend by the project team of deferring requirements to later releases and missing release deployment dates. For example, the Release 2 requirements were revised based on the contracted goal of processing 33 million tax returns during the 2007 Filing Season and did not consider the complexity of the programming involved for processing these returns.[12]

The Federal Acquisition Regulation was not consistently followed

The Federal Acquisition Regulation is a set of policies and procedures for procurements by and for the use of Federal Government agencies. They include solicitation and selection of contract sources, awards, financing, performance and administration, and technical and management functions.

We issued a report in May 2005[13] indicating the actions necessary for the Modernization Program to fully realize the potential of performance-based contracting. We made recommendations for improvement in the areas of (1) firm fixed-price task orders, (2) contract negotiation practices, and (3) monitoring contractor performance.

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[10] *The Account Management Services Project Is Meeting Its Development Goals* (Reference Number 2008-20-053, dated March 3, 2008).

[11] *The Modernized e-File Project Can Improve Its Management of Requirements* (Reference Number 2007-20-099, dated July 9, 2007).

[12] *Vital Decisions Must Be Made to Ensure Successful Implementation of Customer Account Data Engine Capabilities* (Reference Number 2007-20-080, dated July 13, 2007).

[13] *While Many Improvements Have Been Made, Continued Focus Is Needed to Improve Contract Negotiations and Fully Realize the Potential of Performance-Based Contracting* (Reference Number 2005-20-083, dated May 2005).

Our 2007 report[14] showed that weaknesses in implementing controls to manage contractor performance and accountability remained. For example, a review of Modernization Program contracting activities found that further improvements could be made in selecting and documenting appropriate contract types by (1) balancing risk between the IRS and its contractors, (2) ensuring that incentives and disincentives are included in task orders when appropriate, and (3) improving documentation to justify the contract type selected.

In addition, improvements could be made to contract negotiation and management practices by (1) improving the preparation and use of independent Federal Government cost estimates, (2) eliminating the use of Memoranda of Understanding, (3) consistently preparing and using pre-award timelines, and (4) monitoring contractors' performance by consistently including measurable performance standards in task orders and documenting contractors' performance against the standards.

Ineffective contract management has contributed to delays in project and release deliverables, inadequate deliverables, and increased development costs. The absence of sufficient contract negotiation and monitoring provides opportunities for contractor waste, inefficiencies, and accounting irregularities. For example, a task order audit determined that the contractor's assignment of personnel was not closely monitored by the IRS. As a result, the audit identified approximately $3.4 million in questionable contractor charges.

Without close adherence to established guidelines such as the Enterprise Life Cycle guidelines and its related key processes and the Federal Acquisition Regulation, the IRS cannot efficiently and effectively manage the Modernization Program. Because the IRS did not adhere to established guidelines, the Program has experienced delays in project completion, incurred increased development costs, and delivered projects and releases with fewer capabilities than originally planned.

The Modernization Program should continue to be designated a material weakness

The IRS continues to encounter barriers to delivering a successful modernization. To address these barriers, the IRS' corrective responses to TIGTA and Government Accountability Office recommendations are evaluated and submitted as *Highest Priority Initiatives* candidates, when appropriate, and are selected at the discretion of executive leadership. In this manner, the IRS continues to execute the *Highest Priority Initiatives* process and include Modernization Program corrective actions from TIGTA and Government Accountability Office reports.

In the past year, several *Highest Priority Initiatives* related to TIGTA recommendations were identified for action. The IRS continues to deliver monthly *Highest Priority Initiatives* reports

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[14] *While Improvements Continue in Contract Negotiation Methods and Management Practices, Inconsistencies Need to Be Addressed* (Reference Number 2007-20-123, July 27, 2007).

and plans to use this process to eventually downgrade the Modernization Program material weakness. Although this process is in place, we believe that, until the IRS is able to show consistent progress and improvement in the management of its Modernization Program and adequately address past TIGTA and Government Accountability Office recommendations, the Modernization Program should continue to be considered a material weakness.

The Federal Managers' Financial Integrity Act of 1982[15] requires each Federal Government agency to prepare for Congress and the President an annual report that identifies material weaknesses and the agency's corrective action plans and schedules. Since 1995, the IRS has identified and reported systems modernization as a material weakness. Office of Management and Budget Circular A-123[16] defines a material weakness as any condition an agency head determines to be significant enough to be reported outside the agency. To maintain the high level of attention, focus, and accountability, we believe the Modernization Program should remain a material weakness for the IRS. Appendix VII presents an analysis of recommendations from TIGTA reports related to the Modernization Program material weakness. Appendix VIII presents a summary of the TIGTA reports issued since July 2007 that assessed the performance and progress of the Modernization Program.

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[15] 31 U.S.C. Sections 1105, 1113, 3512 (2000).
[16] *Management's Responsibility for Internal Control*, dated December 2004.

Detailed Objective, Scope, and Methodology

The overall objective of this review was to assess the progress of the IRS' Modernization Program for Fiscal Year 2008, as required by the IRS Restructuring and Reform Act of 1998.[1] To accomplish this objective, we:

I.   Determined the current condition of the Modernization Program.

   A.   Reviewed TIGTA reports issued from July 2007 through April 2008[2] and 6 previous Modernization Program annual assessment reports (issued in Fiscal Years 2002, 2003, 2004, 2005, 2006 and 2007).[3]

   B.   Reviewed recent IRS Oversight Board documents to identify current IRS Oversight Board issues and concerns.

   C.   Reviewed Government Accountability Office reports relevant to Modernization Program activities.

   D.   Determined the TIGTA audit recommendations related to the Modernization Program material weakness with incomplete IRS corrective actions.

II. Determined the status and condition of the Modernization Program reported by the IRS by reviewing the following documentation:

   A.   The Systems Modernization Material Weakness Plan.

   B.   The Information Technology Modernization Vision and Strategy documents.

   C.   The Business Systems Modernization Expenditure Plans, including an evaluation of any cost, schedule, and functionality variances. We did not validate the information

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[1] Pub. L. No. 105-206, 112 Stat. 685 (codified as amended in scattered sections of 2 U.S.C., 5 U.S.C. app., 16 U.S.C., 19 U.S.C., 22 U.S.C., 23 U.S.C., 26 U.S.C., 31 U.S.C., 38 U.S.C., and 49 U.S.C.).

[2] See Appendix VIII for a detailed list of recent TIGTA reports and associated findings.

[3] *Annual Assessment of the Internal Revenue Service's Business Systems Modernization Program* (Reference Number 2002-20-189, dated September 2002); *Annual Assessment of the Business Systems Modernization Program* (Reference Number 2003-20-208, dated September 2003); *Annual Assessment of the Business Systems Modernization Program* (Reference Number 2004-20-107, dated June 2004); *Annual Assessment of the Business Systems Modernization Program* (Reference Number 2005-20-102, dated August 2005); *Annual Assessment of the Business Systems Modernization Program* (Reference Number 2006-20-102, dated June 2006); and *Annual Assessment of the Business Systems Modernization Program* (Reference Number 2007-20-121, dated August 24, 2007).

provided by the IRS on the cost, scope, and business value of the Modernization Program.

D. The IRS' *Highest Priority Initiatives* status reports for the Modernization Program.

E. *IRS Modernization Has Delivered Real Business Value* status reports on business value released into production.

Major Contributors to This Report

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Enterprise Life Cycle Overview

The Enterprise Life Cycle[1] is the IRS' standard approach to business change and information systems initiatives. It is a collection of program and project management best practices designed to manage business change in a successful and repeatable manner. The Enterprise Life Cycle addresses large and small projects developed internally and by contractors.

The Enterprise Life Cycle includes such requirements as:

- Development of and conformance to an enterprise architecture.

- Improving business processes prior to automation.

- Use of prototyping and commercial software, where possible.

- Obtaining early benefit by implementing solutions in multiple releases.

- Financial justification, budgeting, and reporting of project status.

In addition, the Enterprise Life Cycle improves the IRS' ability to manage changes to the enterprise; estimate the cost of changes; and engineer, develop, and maintain systems effectively. Figure 1 provides an overview of the layers, paths, phases, and milestones (shown as "MS" in Figure 1) within the Enterprise Life Cycle Framework.
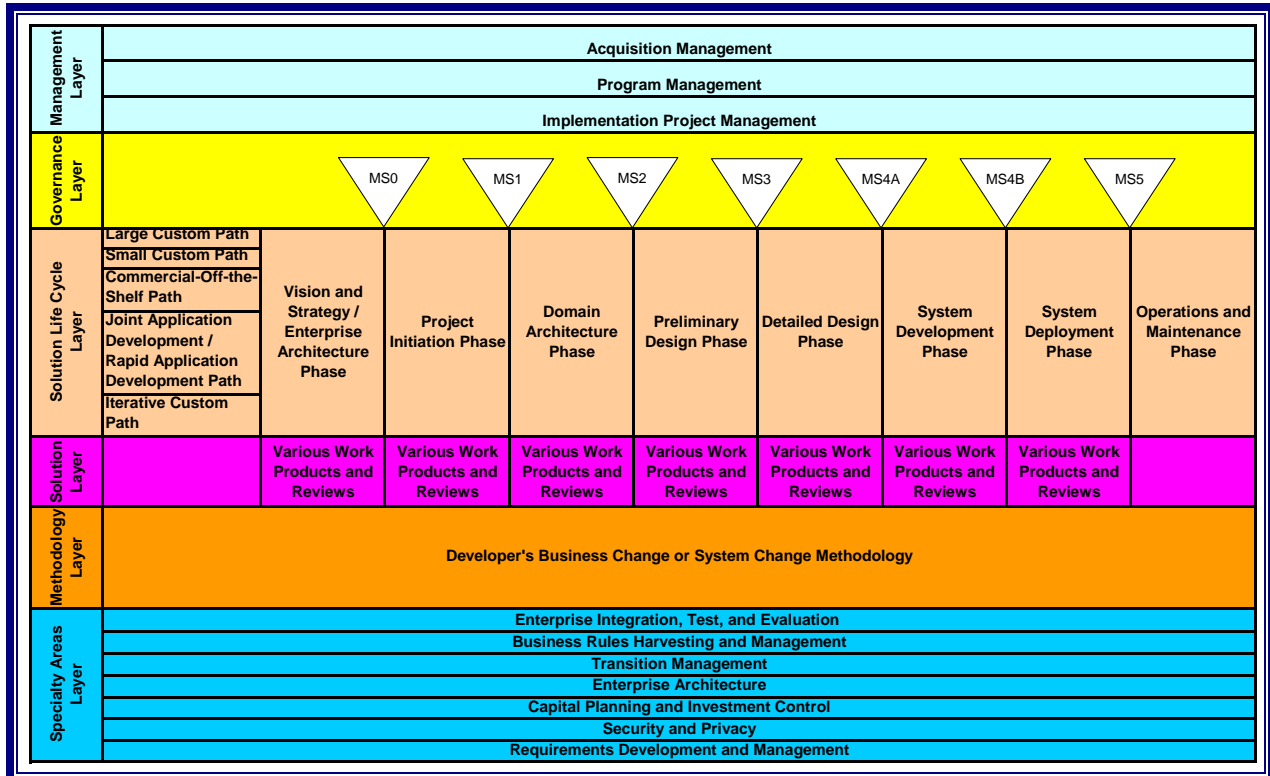
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[1] See Appendix IX for a glossary of terms.

Figure 1: Enterprise Life Cycle Framework

Management Layer										
		Acquisition Management								
		Program Management								
		Implementation Project Management								
Governance Layer		MS0	MS1	MS2	MS3	MS4A	MS4B	MS5		
Solution Life Cycle Layer	Large Custom Path / Small Custom Path / Commercial-Off-the-Shelf Path / Joint Application Development / Rapid Application Development Path / Iterative Custom Path	Vision and Strategy / Enterprise Architecture Phase	Project Initiation Phase	Domain Architecture Phase	Preliminary Design Phase	Detailed Design Phase	System Development Phase	System Deployment Phase	Operations and Maintenance Phase	
Solution Layer		Various Work Products and Reviews	Various Work Products and Reviews	Various Work Products and Reviews	Various Work Products and Reviews	Various Work Products and Reviews	Various Work Products and Reviews	Various Work Products and Reviews		
Methodology Layer		Developer's Business Change or System Change Methodology								
Specialty Areas Layer		Enterprise Integration, Test, and Evaluation								
		Business Rules Harvesting and Management								
		Transition Management								
		Enterprise Architecture								
		Capital Planning and Investment Control								
		Security and Privacy								
		Requirements Development and Management								

Source: Graphical representation of the Enterprise Life Cycle Framework modified from the Enterprise Life Cycle Guide.

Enterprise Life Cycle Layers

The Enterprise Life Cycle is a framework for organizing and using IRS directives, processes, procedures, templates, and standards to accomplish business change. It is organized as a set of six interacting layers.

- The **Management Layer** specifies how to plan and control business change programs, projects, acquisitions, and solutions throughout the Enterprise Life Cycle.

- The **Governance Layer** specifies additional controls imposed from outside the project or program.

- The **Solution Life Cycle Layer** specifies what should be done, but not how to do it.

- The **Solution Layer** manages the solution as it is produced, including providing standards for consistent solution specification and formal review of solution content.

This Layer provides control over work products that may be produced by multiple internal and external developers using differing methodologies.

- The **Methodology Layer** details how to do the work and specifies a unique set of work products to be produced. Specific methodologies are not part of the Enterprise Life Cycle Framework.

- The **Specialty Areas Layer** provides additional guidance for areas of particular importance within the IRS. These areas include Enterprise Integration, Test, and Evaluation; Business Rules Harvesting and Management; Transition Management; Enterprise Architecture; Capital Planning and Investment Control; Security and Privacy; and Requirements Development and Management.

Enterprise Life Cycle Paths

A path specifies a unique "philosophy" or orientation for performing the work. Although the Enterprise Life Cycle specifies a standard for the work required to produce and operate business change solutions, there are multiple ways to approach and accomplish the required work. Paths are like alternate roads, each of which crosses different terrain, but all of which lead to the same destination. The Enterprise Life Cycle provides five distinct paths or approaches to developing systems:

- The **Large Custom Path** is for large projects.

- The **Small Custom Path** is for small projects.

- The **Commercial-Off-the-Shelf Path** is a commercial software-based approach.

- The **Joint Application Development/Rapid Application Development Path** is a highly accelerated, prototyping-based approach for very small, stand-alone solutions or solution components.

- The **Iterative Custom Path** is a hybrid approach that combines elements of the other approaches.

Enterprise Life Cycle Phases and Milestones

A phase is a broad segment of work encompassing activities of similar scope, nature, and detail and providing a natural breakpoint in the life cycle. Each phase begins with a kickoff meeting and ends with an executive management decision point (called a milestone) at which IRS executives make "go/no-go" decisions for continuation of a project. Project funding decisions are often associated with milestones.

Figure 2: Enterprise Life Cycle Phases and Milestones

| Phase	General Nature of Work	Concluding Milestone
Vision and Strategy/ Enterprise Architecture Phase	High-level direction setting. This is the only phase for enterprise planning projects.	0
Project Initiation Phase	Startup of development projects.	1
Domain Architecture Phase	Specification of the operating concept, requirements, and structure of the solution.	2
Preliminary Design Phase	Preliminary design of all solution components.	3
Detailed Design Phase	Detailed design of solution components.	4A
System Development Phase	Coding, integration, testing, and certification of solutions.	4B
System Deployment Phase	Expanding availability of the solution to all target users. This is usually the last phase for development projects.	5
Operations and Maintenance Phase	Ongoing management of operational systems.	System Retirement

Source: The Enterprise Life Cycle Guide.

Modernization Program Funding

Figure 1 depicts cumulative funding received by the Modernization Program for contractor costs.

**Figure 1: Modernization Program Funding Timeline
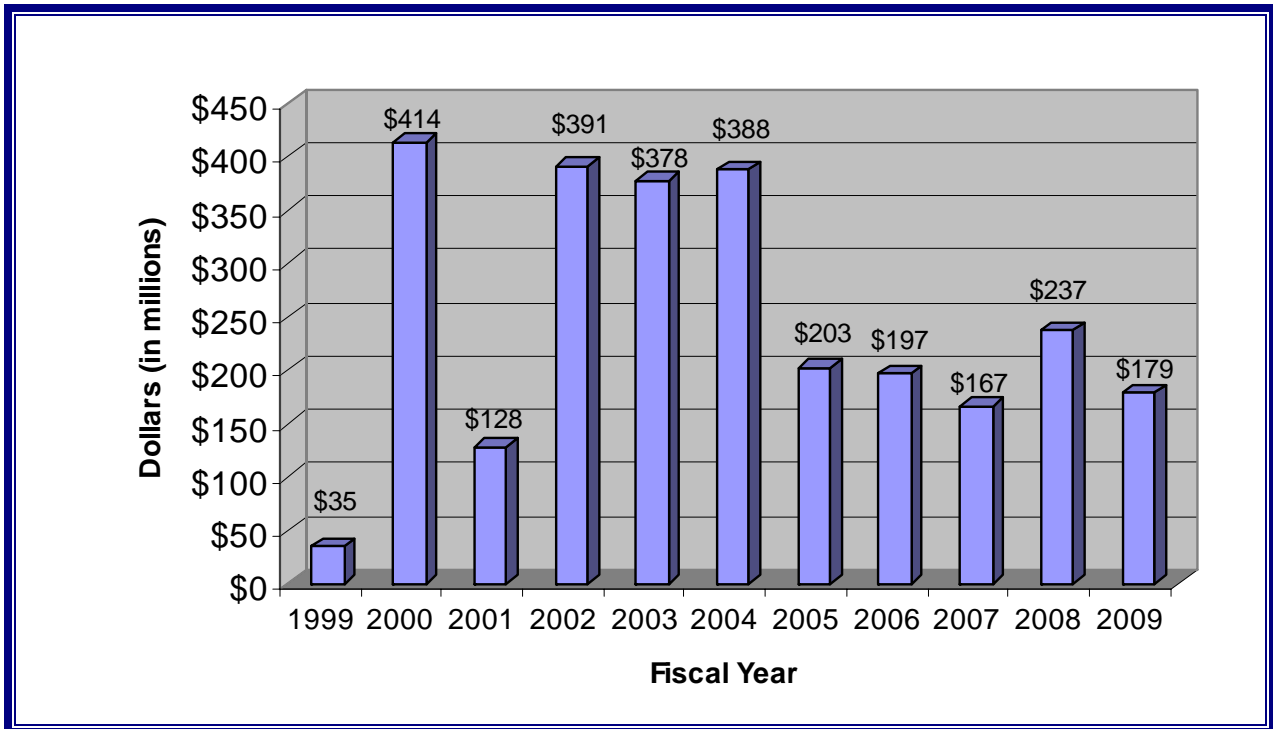(Dollars are cumulative)**
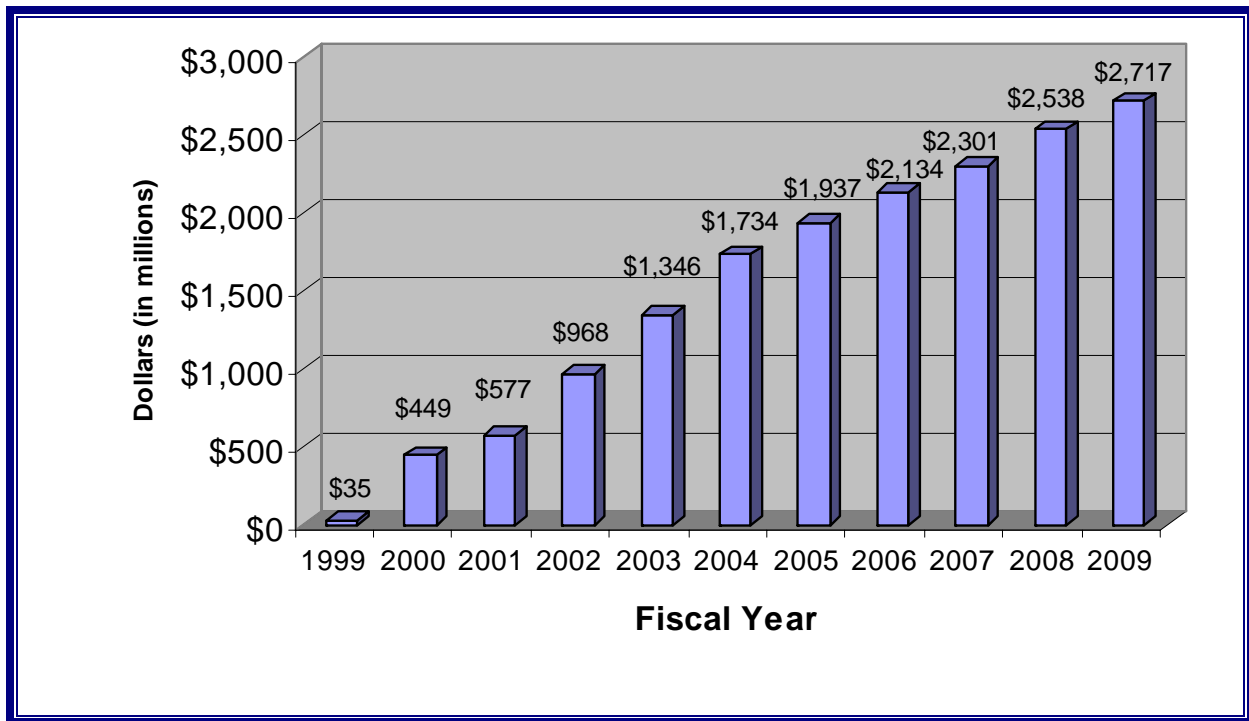
Source: Business Systems Modernization Expenditure Plans.

Figure 2 depicts the funding received annually by the Modernization Program for program management and development of business and infrastructure projects.

Figure 2: Modernization Program Funding by Fiscal Year

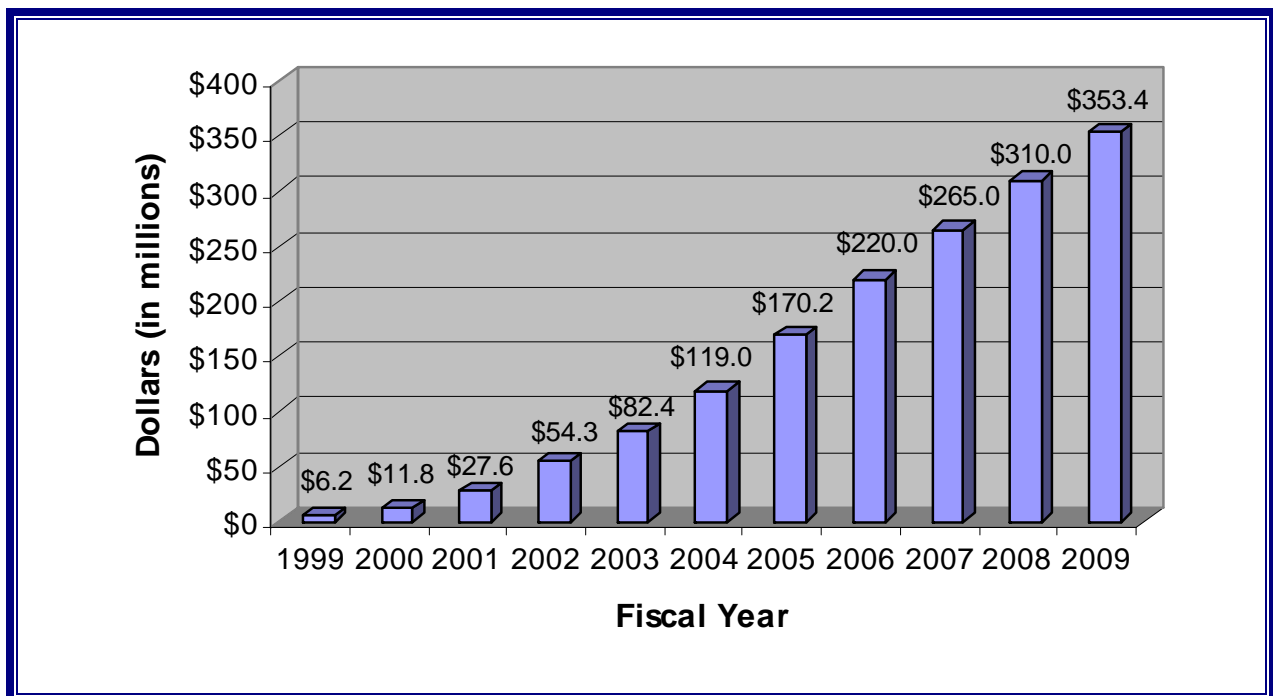*Source: Business Systems Modernization Expenditure Plans.*

Note – The Fiscal Year 2009 amount has not yet been appropriated. The amount is from the President's Fiscal Year 2009 Budget Request and includes an estimated $43.4 million to fund associated IRS labor costs.

Figure 3 depicts the cumulative funding received by the Modernization Program for non-contractor costs of managing Modernization Program activities. The IRS stated that approximately 25 percent of its non-contractor budget since Fiscal Year 2001 has been used to support non-Modernization Program activities in the IRS.

**Figure 3: Non-contractor Modernization Funding Timeline by Fiscal Year
(Dollars are cumulative)**

Source: Actual funding for Fiscal Years 1999 through 2008 and the budget estimate for Fiscal Year 2009 provided by the IRS.

Figure 4 depicts the funding received annually by the Modernization Program for non-contractor costs of managing Program activities.

Figure 4: Non-contractor Modernization Costs by Fiscal Year

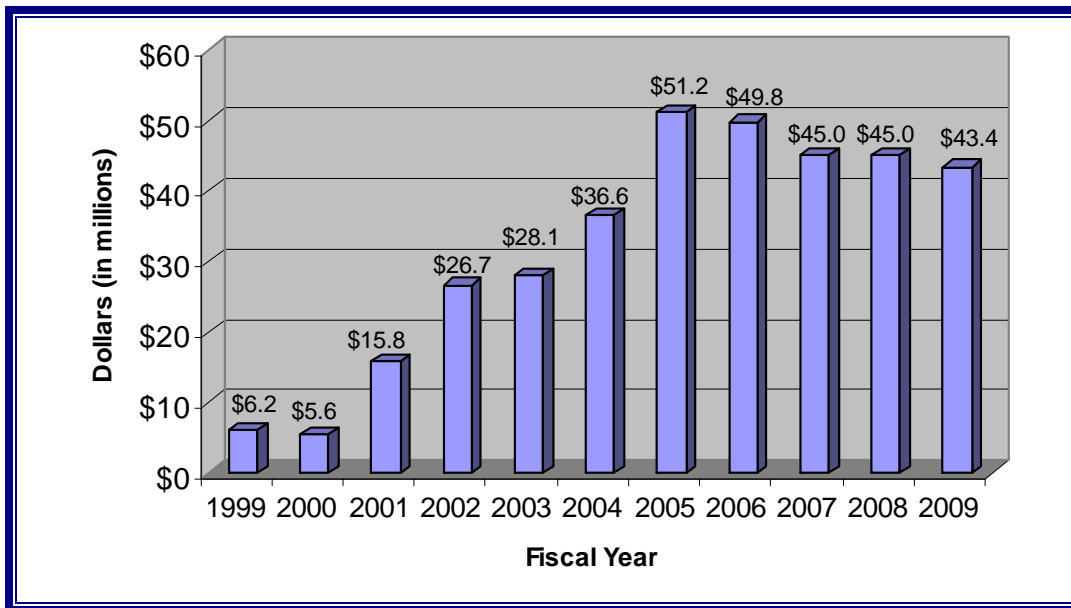*Source: Actual funding for Fiscal Years 1999 through 2008 and the budget estimate for Fiscal Year 2009 provided by the IRS.*

Figure 5 depicts the Modernization Program funding for non-contractor and external (contractor) costs to manage Program activities.

Figure 5: Internal and External Modernization Program Costs (in millions)

Internal Costs
$353.4 (11.5%)

External Costs
$2,717 (88.5%)
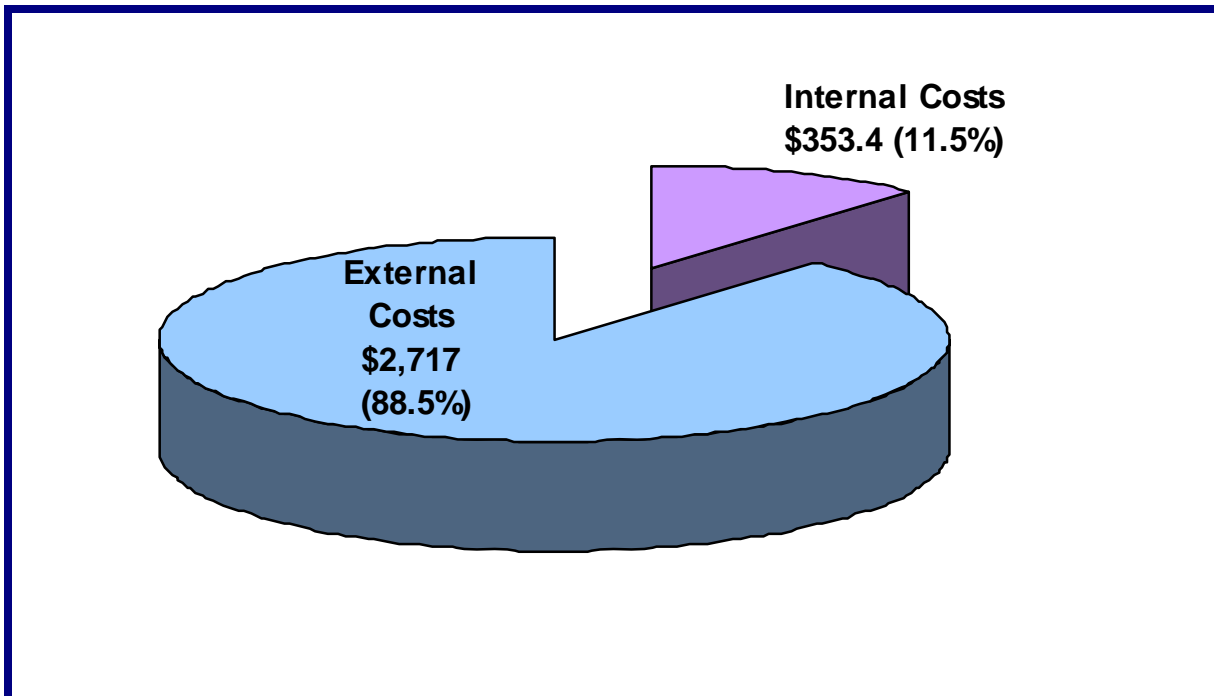
Source: Actual internal costs for Fiscal Years 1999 through 2008 and the internal budget estimate for Fiscal Year 2009 provided by the IRS. The external costs were derived from Business Systems Modernization Expenditure Plans.

Project Cost and Schedule Variance Analysis

Table 1 presents the cost and schedule variance for Modernization Program project releases delivered since May 2007 and currently in progress.

Table 1: Modernization Project Cost and Schedule Variance Summary

Release	Scheduled Finish Date	Milestone	Cost Variance (Dollars)	Cost Variance (Percent)	Schedule Variance (Days)	Schedule Variance (Percent)
CADE						
2.2	June 27, 2007	4	$3,777,000	15%	123	65%
3	September 26, 2007	2-3	$0	0%	214	152%
3.1	November 20, 2007	4	$0	0%	-7	-2%
3.2	February 27, 2008	4	$0	0%	-1	0%
4	February 13, 2008	2-3	$0	0%	-10	-3%
4.1	August 31, 2008	4	$0	0%	0	0%
5	September 30, 2008	2-3	$0	0%	0	0%
Account Management Services						
1.1	May 3, 2007	4a	$0	0%	3	5%
1.1	September 26, 2007	4b	$0	0%	-1	-1%
1.1	January 29, 2008	5	$0	0%	0	0%
1.2	March 13, 2007	4a	$0	0%	-2	-2%
1.2	February 13, 2008	4b	$0	0%	11	9%
1.2	November 11, 2008	5	$0	0%	0	0%
1.3	July 24, 2007	2-3	$0	0%	0	0%
1.3	February 13, 2008	4a	$0	0%	1	1%
1.3	November 11, 2008	4b	$0	0%	0	0%
2.1	April 15, 2008	3	$0	0%	0	0%
Filing and Payment Compliance						
1.2	September 27, 2007	5	$340,000	10%	-1	-1%
Modernized e-File						
5	April 2, 2008	4a-5	$1,300,000	10%	2	1%
6	May 6, 2008	3	$0	0%	19	10%

Source: IRS Applications Development organization – Resources Management office.

Open Recommendations Related to Modernization Program Material Weaknesses

Table 1 lists TIGTA audit recommendations with current IRS open corrective actions related to the Modernization Program material weakness.

Table 1: TIGTA Recommendations Related to Modernization Program Material Weakness

The Modernization, Information Technology and Security Services Organization Needs to Take Further Action to Complete Its Human Capital Strategy (Reference Number 2003-20-209, dated September 2003)	
2003-20-209 Finding 1, Recommendation 1	To ensure the MITS organization has sufficient data to determine human capital demands, the Chief Information officer (CIO) needs to support the Director, Management Services, to work with offices throughout the MITS organization to identify the human capital demand. The demand includes information to adequately plan the number, location, and assignment schedule of human capital assets for existing information systems (from owners in the Information Technology Services organization) and future MITS organization operations (from owners in the Business Systems Modernization Program). Due Date: December 31, 2010.
2003-20-209 Finding 2, Recommendation 1	To ensure the MITS organization has adequate staffing to meet its needs, the CIO should charge the Director, Management Services, to develop detailed hiring and retention plans. These plans should consider staff position "return on investment" as a consideration for determining the type of talent to recruit or retain and should be incorporated into the MITS organization's human capital strategy with relevant links to its budget. Recruiting: Prioritize the most critical skill needs and position locations with project development, deployment, implementation, and operation schedules. Proceed with hiring specific skills based on decisions to recruit for the subject position with either fully trained or trainable talent or through an internship position. Retention: Identify and compile retention incentives into a plan to maintain the MITS organization talent pool. Due Date: December 31, 2010.
Risks Are Mounting as the Integrated Financial System Project Team Strives to Meet an Aggressive Implementation Date (Reference Number 2004-20-001, dated October 2003)	
2004-20-001 Finding 2, Recommendation 1	To ensure a high-quality system is delivered, the CIO should ensure the disaster recovery environment is completely built out and tested as soon as possible. Due Date: December 31, 2010.
The Office of Release Management Can Improve Controls for Modernization Program Coordination (Reference Number 2004-20-157, dated September 2004)	
2004-20-157 Finding 1, Recommendation 1	To help provide clear direction in the development of the Modernization Program, the CIO should determine whether and how the Business Systems Modernization Office will fulfill the Modernization Program integrator role and document the related responsibilities and processes. Due Date: December 31, 2010.

The Business Systems Modernization Program Has Achieved Mixed Success in Addressing Weaknesses Identified in Internal and External Studies (Reference Number 2006-20-003, dated November 2005)	
2006-20-003 Finding 1, Recommendation 2	To ensure study weaknesses and previous recommendations concerning change/configuration management are addressed, the Associate CIO, Enterprise Services, should create an overall plan that includes defined tasks, responsible individuals, and estimated completion dates for implementing the standardized configuration management toolset. Due Date: December 31, 2010.
The Electronic Fraud Detection System Redesign Failure Resulted in Fraudulent Returns and Refunds Not Being Identified (Reference Number 2006-20-108, dated August 9, 2006)	
2006-20-108 Finding 3, Recommendation 4	The CIO should defer additional work on the Web Electronic Fraud Detection System until the IRS decides who will perform the Electronic Fraud Detection System work. If some or all of the work will transfer to other business units, the CIO should ensure their requirements are identified before initiating a contract for further development of the Web Electronic Fraud Detection System. The contract should be opened to competition. Due Date: December 31, 2010.
The Modernization and Information Technology Services Organization's Revised Post Implementation Review Procedure Can Be Improved (Reference Number 2007-20-001, dated October 26, 2006)	
2007-20-001 Finding 1, Recommendation 1	The CIO should direct the Program Performance Management office to develop a schedule to perform Post Implementation Reviews for releases deployed and to identify and obtain staffing resource commitments needed from the Program Performance Management office, the Office of Program Evaluation and Risk Analysis, and appropriate business unit representatives to effectively execute the Post Implementation Reviews. The CIO should also direct the Program Performance Management office to eliminate the requirement to perform Post Reviews of milestone completion activities after milestone exits, with the option of identifying any lessons learned for further project progress through the Milestone Exit Reviews. Due Date: March 1, 2010.
2007-20-001 Finding 1, Recommendation 2	The CIO should direct the Program Performance Management office to implement a procedure to control Post Implementation Review results that ensures appropriate executives and decision makers have access to these documents. Due Date: March 1, 2010.
2007-20-001 Finding 1, Recommendation 3	The CIO should direct the Program Performance Management office to identify skills and abilities desired for Post Implementation Review team members and ensure team assignments consider these qualifications. The Program Performance Management office should develop a training guide for Post Implementation Review team members to provide them with an understanding of the purpose, objectives, and processes of the Post Implementation Review. Due Date: March 1, 2010.
The Modernization and Information Technology Services Organization Can Improve Its Budget Formulation, Execution, and Review Processes (Reference Number 2007-20-064, dated May 9, 2007)	
2007-20-064 Finding 1, Recommendation 1	The CIO should implement a process to develop the entire MITS organization budget in line with the Information Technology Modernization Vision and Strategy's rolling 5-year prioritized plan. The budget process should consider organizational goals for each of the MITS organization components and include costs for operations and maintenance of existing computer systems, telecommunication systems, and other programs such as end-user support and help desk activities. Due Date: October 1, 2008.

2007-20-064 Finding 2, Recommendation 1	The CIO should ensure (1) the draft Budget Cycle procedures are approved and implemented timely and (2) the Financial Management Services organization supplements the budget formulation processes with detailed procedures documenting Financial Management Services organization staff duties and responsibilities for soliciting, receiving, reviewing, and reporting MITS organization budget estimates. Due date: January 1, 2008.
2007-20-064 Finding 3, Recommendation 1	The CIO should ensure (1) the draft Budget Cycle document is approved timely and the spending review procedures are implemented and (2) the Financial Management Services organization supplements the spending review reporting with additional procedures that identify Fund Center Changes necessary to realign funds in response to spending review results. Due date: January 1, 2008.
The Modernized e-File Project Can Improve Its Management of Requirements (**Reference Number 2007-20-099, dated July 9, 2007**)	
2007-20-099 Finding 1, Recommendation 1	To complete the previous corrective action, the CIO should ensure the Modernized e-File System Requirements Report and Release 4 requirements traceability verification matrices are updated to include traceability to valid requirement numbers, to meet the Enterprise Life Cycle provisions for managing requirements. This control will provide assurance about the development of all approved requirements. Due Date: February 1, 2009.
Vital Decisions Must Be Made to Ensure Successful Implementation of Customer Account Data Engine Capabilities (**Reference Number 2007-20-080, dated July 13, 2007**)	
2007-20-080 Finding 3, Recommendation 1	The CIO should partner with the Wage and Investment Division Business Modernization Office to jointly review alternative design solutions and identify process improvements for the CADE. Alternative design solutions, such as delaying processing of some tax returns on extremely high-volume processing days or obtaining additional computer resources on an interim basis, need to be explored to ensure the CADE can operate as efficiently and effectively as possible. Due Date: July 1, 2008.
While Improvements Continue in Contract Negotiation Methods and Management Practices, Inconsistencies Need to Be Addressed (**Reference Number 2007-20-123, dated July 27, 2007**)	
2007-20-123 Finding 2, Recommendation 1	The CIO and the Chief, Agency-Wide Shared Services, should collect and review lessons learned from the use of independent estimates to determine whether independent estimates can become a consistently more useful negotiations tool (e.g., ensuring estimates are obtained at the appropriate time). Due Date: March 1, 2009.
2007-20-123 Finding 3, Recommendation 2	The CIO and the Chief, Agency-Wide Shared Services, should ensure improvements and training opportunities for the use of performance standards are identified and coordinated with other IRS organizations to encourage the use of performance standards for systems development task orders outside of the control of the MITS organization. Due Date: June 15, 2008.
2007-20-123 Finding 3, Recommendation 4	The CIO and the Chief, Agency-Wide Shared Services, should collect and disseminate guidance for documenting contractor performance and coordinate with other IRS organizations to communicate the importance of documenting contractor performance for systems development task orders outside the control of the MITS organization. Due Date: June 15, 2008.

Improvements to the Modernized e-File System Will Help Provide Intended Benefits to the Internal Revenue Service and Taxpayers (Reference Number 2008-20-122, dated June 18, 2008)	
2008-20-122 Finding 1, Recommendation 1	The Commissioner, Wage and Investment Division, should require the Director, Submission Processing, and the Director, Electronic Tax Administration to develop a formal process for identifying, reporting, and resolving Modernized e-File system application processing issues that require subsequent tax return and account adjustment activity. This control process will provide a means for identifying significant Modernized e-File system tax return issues and provide the IRS with the ability to develop corrective actions. This control can also be used to notify IRS staff of processing issues to enable appropriate compliance actions. Due Date: March 15, 2009.
2008-20-122 Finding 2, Recommendation 3	The Deputy Commissioner for Operations Support and the Deputy Commissioner for Services and Enforcement should ensure the business operating divisions and the MITS organization coordinate the capabilities of the Technology and Data Integration Plan initiative and the Enterprise Return Retrieval system into the Information Technology Modernization Vision and Strategy. Coordinating the Technology and Data Integration Plan and Enterprise Return Retrieval system with the Information Technology Modernization Vision and Strategy will help allow the IRS to achieve enterprise-wide capabilities for the identification, control, and analysis of electronic tax return and taxpayer account information for customer service and compliance purposes. Due Date: December 1, 2008.

Recent Treasury Inspector General for Tax Administration Reports on the Internal Revenue Service's Modernization Program

Table 1 lists TIGTA reports related to the IRS Modernization Program issued from July 2007 through April 2008 and the associated findings, recommendations, and IRS corrective actions.

Table 1: Recent TIGTA Reports, Findings, and Corrective Actions

Report and Date	Finding and Recommendation	Corrective Action
The Modernized e-File Project Can Improve Its Management of Requirements **2007-20-099** **July 9, 2007**	*Finding: Additional actions should be taken to adequately complete requirements traceability for the project.* Recommendation: To complete the previous corrective action, the CIO should ensure the Modernized e-File System Requirements Report and Release 4 requirements traceability verification matrices are updated to include traceability to valid requirement numbers, to meet the Enterprise Life Cycle provisions for managing requirements. This control will provide assurance about the development of all approved requirements.	The IRS will complete the traceability of the requirements for Modernized e-File Releases 4 and 5 using the System Requirements Report manual process that is currently in place. Full bi-directional traceability will not be possible until the project is able to consolidate all requirements, change requests, work requests, test cases, and defects into one related system. For Release 6, the Modernized e-File project is working with the Business Rules and Requirements Management office to implement a full bi-directional traceability model. The Modernized e-File project's use of the Business Rules and Requirements Management office is consistent with the Government Accountability Office's 2006 recommendations related to strengthening requirements standards. **Status: Open. Due date is February 1, 2009.**
	Recommendation: The CIO should ensure the detailed guidance currently being developed by the IRS Business Rules and Requirements Management office includes specifics about how projects should maintain and report bi-directional traceability, to ensure traceability is complete and consistent for all projects.	The Business Rules and Requirements Management office will review the guidance developed as a part of Highest Priority Initiative-55, Implement Best Practices for Requirements Development and Management, dated March 7, 2007, and in response to a Government Accountability Office audit to ensure that proper information is included to help projects understand how to perform bi-directional traceability. The Business Rules and Requirements Management office will document its findings from this review. **Status: Closed July 31, 2007.**

Report and Date	Finding and Recommendation	Corrective Action
Vital Decisions Must Be Made to Ensure Successful Implementation of Customer Account Data Engine Capabilities **2007-20-080** **July 13, 2007**	<u>*Finding 1*</u>: *Plans for deploying CADE releases have not been achieved.* Recommendation: The CIO should ensure the IRS negotiates a reasonable scope of work for future CADE release development that considers the amount and difficulty of the work and the filing season time constraints.	The CIO agreed with this recommendation and will ensure the IRS negotiates a reasonable scope of work for future CADE release development that considers the amount and difficulty of the work and the filing season time constraints. The CIO has begun to address the cause of scope estimation problems through implementation of a formal Business Systems Requirements Report document using IRS processes in the Business Rules and Requirements Management Program Office to conduct detailed requirements elicitation. Beginning with Release 4.0, the IRS will further identify, prioritize, and approve business requirements to manage scope, mitigate business risks, and meet business needs within an improved framework. **Status: Closed February 5, 2008.**
	Recommendation: The CIO should ensure the IRS analyzes the amount of staffing used during prior releases to help verify the PRIME contractor's staffing plans are adequate to accomplish the scope of work projected for future project releases.	The CIO agreed that the IRS should analyze the amount of staffing used during prior releases to help verify the PRIME contractor's staffing plans are adequate. As of April 6, 2007, the IRS has mandated that PRIME contractors provide a list of employees supporting CADE releases. CADE release managers review and analyze resources listed to ensure adequate support is provided by the contractors. This information is provided weekly to the CADE Program Office. If staffing issues are identified, they are addressed at the Weekly Task Review meetings. This applies to the existing CADE Cost-Plus-Fixed-Fee and Cost-Plus-Incentive-Fee task orders. As the IRS pursues more Firm Fixed-Price development efforts in the future, it will not have the same access to staff level details. **Status: Closed July 31, 2007.**

Report and Date	Finding and Recommendation	Corrective Action
	Recommendation: The CIO should ensure the Project follows Enterprise Life Cycle guidance for performing Customer Technical Reviews and Life Cycle Stage Reviews after completion of the design phase for each release and major release segment.	The CIO agreed that the project should follow Enterprise Life Cycle guidance for performing Customer Technical Reviews and Life Cycle Stage Reviews after completion of the design phase for each release and major release segment. As the complexity of projects has increased, and as the IRS gains more experience in managing large complex development efforts, it has found that appropriately tailoring the Enterprise Life Cycle to ensure the effective use of contractor resources is critical to delivering within cost and schedule parameters. This tailoring aligns with the current Enterprise Life Cycle methodology. Status: **Closed August 29, 2007.**
	Recommendation: The CIO should not allow the PRIME contractor to exit the Preliminary Design Phase without identifying all of the work related to the release requirements.	The CIO agreed to not allow the PRIME contractor to exit the Preliminary Design Phase without identifying all of the work related to the release requirements. The IRS will identify all work related to a release before exiting the Preliminary Design Phase. It is also tailoring the Enterprise Life Cycle to align with best practices to ensure that project continuity is not lost; specifically, when low-risk activities can be implemented in parallel with Enterprise Life Cycle approvals. As mentioned in a prior corrective action, the IRS will ensure the scope and requirements for a release are fully understood so that it will be possible to segment work into distinct builds or subreleases as it continues to mature the development process for the CADE in accordance with the Enterprise Life Cycle guidance. Each of the builds or subreleases for new CADE functionality will complete logical and physical design before development. Status: **Closed August 29, 2007.**

Report and Date	Finding and Recommendation	Corrective Action
	Finding 2: The approach taken to implement the architectural design will not support CADE project long-term goals and objectives. Recommendation: The CIO should limit future project delivery to essential capabilities and filing season updates. Further, the CIO should consider postponing new capabilities until key business decisions are made and the following requirements are implemented: historical data are stored, requirements identified by the CADE Independent Requirements Project are developed and implemented, and daily processing routines are improved.	The CIO agreed with this recommendation and has tasks underway to develop the historical data store and the requirements that are captured in the CADE Independent Requirements Project, and has also undertaken efforts to see what improvements can be made to daily processing. The scope of Releases 3.1 and 3.2 has been fully defined and work is well underway under a fixed-price arrangement with the PRIME contractor. As part of scoping Releases 3.1 and 3.2, many new capabilities were deferred to ensure the above noted infrastructure improvements and previously deferred requirements were incorporated; however, some new capabilities have been included in Release 3.2. The IRS will continue to carefully plan and approve increments of new functionality to include in future CADE releases. **Status: Closed August 29, 2007.**

Report and Date	Finding and Recommendation	Corrective Action
	Finding 3: Implementing current technology to support the CADE's ultimate computer processing demands may be cost prohibitive. Recommendation: The CIO should partner with the Wage and Investment Division Business Modernization Office to jointly review alternative design solutions and identify process improvements for the Project. Alternative design solutions, such as delaying processing of some tax returns on extremely high-volume processing days or obtaining additional computer resources on an interim basis, need to be explored to ensure the CADE can operate as efficiently and effectively as possible.	The CIO agreed with this recommendation and is actively engaged and continues to ensure the CADE Program Office and Wage and Investment Division Business Modernization Office jointly review design solutions and identify process improvements for the Project. The CIO will continue to work with the Submission Processing organization to identify alternatives for processing tax returns on high-volume days, and the Wage and Investment Division Business Modernization Office will continue to work along with the Enterprise Computing Center to implement Saturday tax return processing during the filing season. This approach avoids a backlog by allowing weekend volume to be spread across CADE cycles. These procedures were first utilized for the 2006 Filing Season and continued in the 2007 Filing Season, and are outlined in memorandums signed by the Deputy Director, Submission Processing, dated January 26, 2006, and January 18, 2007, respectively. The IRS remains committed to ensuring all taxpayers processed by the CADE receive the same advantages. Additionally, the Submission Processing organization continues to evaluate potential automated routines for returns initiated through the Electronic Filing System for processing in the CADE to further balance workload throughout the day. The IRS will also continue to explore alternative solutions for successful implementation. In support of this issue, a joint technical assessment team is being formed to identify CADE technical constraints and improvement opportunities with regard to the architecture, performance, and software quality. **Status: Open. Due date is July 1, 2008.**

Report and Date	Finding and Recommendation	Corrective Action
While Improvements Continue in Contract Negotiation Methods and Management Practices, Inconsistencies Need to Be Addressed **2007-20-123** **July 27, 2007**	*Finding 1: Further improvements are needed in the selection and documentation of appropriate contract types.* Recommendation: To ensure an appropriate balance of risk between the IRS and its contractors, the CIO and the Chief, Agency-Wide Shared Services, should determine how persistent barriers to firm fixed-price contracting within the Modernization Program can be eliminated.	The IRS stated it agreed with, and has already implemented, the recommendation to determine how persistent barriers to firm fixed-price contracts within the Modernization Program should be eliminated where possible. In addition, other comments included that the IRS continues to look for opportunities to employ firm fixed-price contracts on an ongoing basis. **Status: Closed August 23, 2007.**
	Recommendation: The CIO and the Chief, Agency-Wide Shared Services, should ensure improvements and training opportunities for the use of incentives and disincentives are identified and coordinate with other IRS organizations to encourage the use of incentives and disincentives for systems development task orders outside the control of the MITS organization.	The IRS stated it agreed with, and has already implemented, the recommendation to ensure improvements and training opportunities for the use of incentives and disincentives are identified and coordinated with other IRS organizations. In addition, other comments included that the Director, Procurement, emphasizes to Procurement office management the use of performance-based acquisitions to the maximum extent practicable, including the use of incentives and disincentives. **Status: Closed August 23, 2007.**
	Recommendation: The CIO and the Chief, Agency-Wide Shared Services, should ensure Determination and Findings Documents are consistently prepared, as required by the Federal Acquisition Regulation, with adequate information to explain the reasoning for the choice of contract type.	The IRS stated it agreed with the recommendation to ensure Determination and Findings Documents are consistently prepared, as required by the Federal Acquisition Regulation, with adequate information to explain the reasoning for the choice of contract type. The IRS Procurement office's Quality Assurance Branch ensures that the Determination and Findings Documents are in the files requiring solicitation/contract review. It has also issued reminder emails to operations offices to ensure they are continually aware of this requirement for any award other than firm fixed-price. **Status: Closed October 4, 2007.**

Report and Date	Finding and Recommendation	Corrective Action
	Finding 2: Further improvements are needed for pre-award processes. Recommendation: To improve pre-award processes, the CIO and the Chief, Agency-Wide Shared Services, should collect and review lessons learned from the use of independent estimates to determine whether independent estimates can become a consistently more useful negotiations tool (e.g., ensuring estimates are obtained at the appropriate time).	The IRS stated it agreed with the recommendation to collect and review lessons learned from the use of independent estimates. It will collect and review lessons learned from the use of independent estimates developed by the Estimation Program Office, a branch in Program Management Office Service. The Estimation Program Office will document findings from the review. The Business Integration organization is in the process of implementing changes in the estimation program for the remainder of Fiscal Year 2007 and through Fiscal Year 2008, based on reviews of existing processes as well as industry best practices. The resources associated with the estimation program are fully engaged in implementing these changes and applying the new processes to the creation of estimates during the remainder of Fiscal Year 2007 and through Fiscal Year 2008. The IRS will collect and review lessons learned from the new processes in order to gain the maximum benefit of the review. **Status: Open. The planned due date is March 1, 2009.**
	Recommendation: The CIO and the Chief, Agency-Wide Shared Services, should eliminate the Memorandum of Understanding requirement included in the *Acquisition Package Development* procedure for Modernization task orders.	The IRS stated it agreed with, and has already implemented, the recommendation to eliminate the Memorandum of Understanding requirement included in the *Acquisition Package Development* procedure for Modernization task orders. **Status: Closed August 23, 2007.**
	Recommendation: The CIO and the Chief, Agency-Wide Shared Services, should ensure estimated and actual pre-award dates are consistently tracked.	The IRS stated it agreed with, and has already implemented, the recommendation to ensure estimated and actual pre-award dates are consistently tracked. To ensure consistent tracking of estimated and actual pre-award dates for systems development projects, the Treasury Information Processing Support Services Program Branch has enhanced the standard Acquisition Plan to better reflect estimated and actual pre-award dates. The new tracking tool identifies the major milestones with both the planned and actual dates of completion. **Status: Closed August 23, 2007.**

Report and Date	Finding and Recommendation	Corrective Action
	Finding 3: Further improvements are needed in monitoring contractor performance. Recommendation: To improve monitoring of contractor performance, the CIO and the Chief, Agency-Wide Shared Services, should complete development of additional Total Information Processing Support Services performance-based statement of work templates to include all milestones.	The IRS stated it agreed with, and already implemented, the recommendation to complete development of additional Total Information Processing Support Services performance-based statement of work templates to include all milestones. The current Total Information Processing Support Services Performance Work Statement template is being tailored to meet each of the Enterprise Life Cycle milestones based on the customers' needs. The newly created Operations and Maintenance template was released as a draft version on March 8, 2007, and further enhanced to incorporate Milestones 2 through 6 (IRS Enterprise Life Cycle and Operations and Maintenance Programs) on May 23, 2007. **Status: Closed August 23, 2007.**
	Recommendation: The CIO and the Chief, Agency-Wide Shared Services, should ensure improvements and training opportunities for the use of performance standards are identified and coordinate with other IRS organizations to encourage the use of performance standards for systems development task orders outside the control of the MITS organization.	The IRS stated it agreed with the recommendation to ensure improvements and training opportunities for the use of performance standards are identified and coordinate with other IRS organizations to encourage the use of performance standards for systems development task orders outside of the control of the MITS organization. Other corrective action comments included that the Procurement office will continue to emphasize to Office Directors and Branch Chiefs the use of performance-based acquisitions, and the Procurement office will update its Intranet web site to include links to sample monitoring plan templates under the "How To" module and the Procurement Forms, Reports and Templates module. The "Performance Based Module" and the "How To" module will be updated to contain a link to the "The Six Disciplines of Performance-Based Management." The Procurement 101, a basic guide to procurement for Procurement office customers, is currently under development and will reference performance-based links to applicable areas on the Procurement office web site and other performance-based contracting guidance as applicable. **Status: Open. The planned due date is June 15, 2008.**

Report and Date	Finding and Recommendation	Corrective Action
	Recommendation: The CIO and the Chief, Agency-Wide Shared Services, should ensure Modernization projects consistently prepare performance monitoring plans (e.g., Task Order Monitoring Plans, Quality Assurance Surveillance Plans).	The IRS stated it agreed with, and already implemented, the recommendation to ensure Modernization projects consistently prepare performance monitoring plans (e.g., Task Order Monitoring Plans, Quality Assurance Surveillance Plans) and will continue to work with projects to ensure implementation of current policy. For Modernization projects, the Enterprise Life Cycle requires project managers to develop a Project Management Plan, which is a milestone exit requirement. The Project Management Plan templates include sections for Configuration Management, Task Order Monitoring, Quality Assurance, and other plans. In Fiscal Year 2007, the IRS had continued to enhance and improve the governance and project control of its Information Technology portfolio. As part of these improvements, additional project oversight has been achieved through project health assessments, expanded project control reviews, and expanded governance by Executive Steering Committees. **Status: Closed August 23, 2007.**

Report and Date	Finding and Recommendation	Corrective Action
	Recommendation: The CIO and the Chief, Agency-Wide Shared Services, should collect and disseminate guidance for documenting contractor performance and coordinate with other IRS organizations to communicate the importance of documenting contractor performance for systems development task orders outside the control of the MITS organization.	The IRS stated it agreed with the recommendation to collect and disseminate guidance for documenting contractor performance and coordinate with other IRS organizations to communicate the importance of documenting contractor performance for systems development task orders outside of the control of the MITS organization. The Procurement office is working on several new initiatives that will assist IRS organizations in successful monitoring of contractor performance. In addition to acquisition training and seminars, plans also include for the Procurement office to update its web site to make improvements to address this recommendation and issue a communication to inform all IRS employees that performance monitoring information is available through the Procurement office web site. Also, a Procurement 101 initiative is currently under development to include a guide and reference performance-based links to applicable areas in the web site and other performance-based guidance. Timely completion of the following activities will be monitored: Web site updates – August 1, 2007; Frequently Asked Questions update – September 30, 2007; IRS Newsflash – September 30, 2007; Procurement 101 – December 30, 2007; and Acquisition Planning Conference – May 30, 2008. **Status: Open. The planned due date is June 15, 2008.**

Report and Date	Finding and Recommendation	Corrective Action
	Finding 4: While actions are being taken to improve contracting and management practices concerning non-Modernization development projects, additional actions need to be taken. Recommendation: To improve consistency of contract negotiation and management practices between Modernization and non-Modernization systems development task orders, the CIO and the Chief, Agency-Wide Shared Services, should ensure program and project managers are aware of the availability of multiyear funding for non-Modernization systems development, to further enable the use of firm fixed-price contracting.	The IRS stated it agreed with the recommendation to ensure program and project managers are aware of the availability of multiyear funding for non-Modernization systems development to further enable the use of firm fixed-price contracting. The MITS organization's Financial Management Services function will work with the Associate CIOs to assess their needs for multiyear funding and add the appropriate amount of Information Technology Modernization Vision and Strategy funds into the 2-year budget appropriation. In addition, at the start of each Budget Cycle the IRS will assess whether the amount should be adjusted. This procedure will be documented in the Budget Cycle document by October 12, 2007, to communicate this change to program and project managers. **Status: Closed October 15, 2007.**
	Recommendation: The CIO and the Chief, Agency-Wide Shared Services, should ensure smaller, low-risk projects are not overburdened by excessive internal controls by establishing criteria (e.g., cost, risk, dependencies) for applying Modernization contract negotiation and management practices to non-Modernization systems development activities.	The IRS stated it agreed with, and has already implemented, the recommendation to ensure smaller, low-risk projects are not overburdened by excessive internal controls by establishing criteria for applying Modernization contract negotiation and management practices to non-Modernization systems development activities. With this corrective action, the IRS addressed all aspects of the second part of this recommendation. For instance, the IRS stated that interim guidance on the Enterprise Life Cycle, signed by the CIO and dated May 15, 2007, establishes that the full Enterprise Life Cycle will supersede the Enterprise Life Cycle-Lite. **Status: Closed August 23, 2007.**

Report and Date	Finding and Recommendation	Corrective Action
The Customer Account Data Engine Release 2.1 Generally Posted Tax Return Information Accurately **2007-40-131** **August 10, 2007**	*Finding: CADE Release 2.1 accurately posted tax return information to taxpayer accounts, and it contained significant additional functionality over prior releases, including the ability to post tax returns with the Head of Household filing status and the most common tax schedules. In addition, name and address changes were posted accurately, and a previously reported condition related to long addresses being cut off was corrected. Also, the process used to determine the audit potential of returns posting to the CADE was adequately tested.* Recommendation: No recommendations were made.	No corrective actions were required because the report did not make any recommendations.
The Account Management Services Project Is Meeting Its Development Goals **2008-20-053** **March 3, 2008**	*Finding: The initial releases of the Account Management Services project were adequately incorporating prescribed project management processes and were on schedule to deliver essential release components and support the CADE capabilities. The Account Management Services project team followed Enterprise Life Cycle guidelines, developed required deliverables and work products, and timely completed the detailed project release designs. In addition, the project team actively documented and resolved risks and issues identified as having the potential to negatively affect the project schedule.* Recommendation: No recommendations were made.	No corrective actions were required because the report did not make any recommendations.

Report and Date	Finding and Recommendation	Corrective Action
Improvements to the Modernized e-File System Will Help Provide Intended Benefits to the Internal Revenue Service and Taxpayers **2008-20-122** **June 18, 2008**	*Finding 1: After a new Modernized e-File release is deployed, the IRS does not perform error detection or trending to identify systemic or processing problems with tax returns filed through the Modernized e-File system.* Recommendation: The Commissioner, Wage and Investment Division, should require the Director, Submission Processing, and the Director, Electronic Tax Administration to develop a formal process for identifying, reporting, and resolving Modernized e-File system application processing issues that require subsequent tax return and account adjustment activity.	The IRS stated it agreed with the recommendation and will use the Wage and Investment Division Submission Processing function's Hot Topics application, currently under development, to provide a mechanism for identifying, elevating, and resolving issues. In addition, as the Submission Processing function's Hot Topics evolve, the IRS will determine how to gather and analyze the information to develop trends. **Status: Open. The planned due date is March 15, 2009.**
	Recommendation: The Commissioner, Wage and Investment Division, should require the Director, Submission Processing, and the Director, Electronic Tax Administration, to perfect the validation control to verify taxpayers file the correct tax form based on their established filing election. After perfecting the control, they should notify the Modernized e-File Project team to implement the validation in processing tax returns through the Modernized e-File system.	The IRS stated it agreed with the recommendation for U.S. Return of Partnership Income (Form 1065) and U.S. Corporation Income Tax Return (Form 1120) and has implemented the proposed validation controls. The IRS proposed not implementing the validation control for U.S. Income Tax Return for an S Corporation (Form 1120S) due to process and system limitations. **Status: Closed January 1, 2008.**

Report and Date	Finding and Recommendation	Corrective Action
	Finding 2: *The Modernized e-File System is not being used to the extent originally planned and the intended benefits to the business operating divisions are not being achieved.* Recommendation: The Deputy Commissioner for Operations Support and the Deputy Commissioner for Services and Enforcement should ensure the business operating divisions and the Modernization and Information Technology Services organization coordinate the capabilities of the Technology and Data Integration Plan initiative and the Enterprise Return Retrieval system into the Information Technology Modernization Vision and Strategy.	The IRS stated it agreed with this recommendation. The Small Business/Self-Employed Division submitted and prioritized the Enterprise Return Retrieval project's Release 1 investment proposal as part of the Fiscal Year 2010 Information Technology Modernization Vision and Strategy. The Small Business/Self-Employed Division will also submit future releases of the Enterprise Return Retrieval project as investment proposals for corresponding Information Technology Modernization Vision and Strategy cycles. The Small Business/Self-Employed Division is developing the Technology and Data Integration Plan, which will communicate the approach for using technology to achieve the Small Business/Self-Employed Division's business objectives and supporting organizational priorities. The Plan is not an enterprise plan, but the Small Business/Self-Employed Division will use it to collaborate with other business operating divisions and, where possible, maximize the application of technological initiatives. **Status: Open. The planned due date is December 1, 2008.**

Source: TIGTA audit reports issued from July 2007 through April 2008.

Glossary of Terms

Term	Definition
Account Management Services	This project will modernize the capability to collect, view, retrieve, and manage taxpayer information.
Best Practice	A technique or methodology that, through experience and research, has proven to reliably lead to a desired result.
Business Rule	A statement that defines or constrains some aspect of the business.
Business Rules Harvesting	A general term used to broadly describe the entire set of activities involved in gathering, formalizing, analyzing, and validating business rules for a particular scope.
Customer Account Data Engine	The foundation for managing taxpayer accounts in the IRS modernization plan. It will consist of databases and related applications that will replace the existing IRS Master File processing systems and will include applications for daily posting, settlement, maintenance, refund processing, and issue detection for taxpayer tax account and return data.
Deferral	An approved request for verification of a requirement or set of requirements to be moved to another phase of testing.
Electronic Fraud Detection System	The primary information system used to support the IRS Criminal Investigation Division's Questionable Refund Program, which is a nationwide program established in January 1997 to detect and stop fraudulent and fictitious claims for refunds on income tax returns.
Enterprise Computing Center	Supports tax processing and information management through a data processing and telecommunications infrastructure.
Enterprise Integration, Test, and Evaluation	Processes for integrating multiple components of a solution and conducting various types and levels of testing on the solution.

Term	Definition
Enterprise Life Cycle	A structured business systems development method that requires the preparation of specific work products during different phases of the development process.
Executive Steering Committee	Oversees investments, including validating major investment business requirements and ensuring that enabling technologies are defined, developed, and implemented.
Filing and Payment Compliance	This project will provide support for detecting, scoring, and working nonfiler cases (filing compliance) and delinquency cases (payment compliance).
Filing Season	The period from January through mid-April when most individual income tax returns are filed.
Firm Fixed-Price Task Order	A contract with a set price that is not subject to any adjustment because of cost overruns incurred by the contractor.
Forms 1040, 1040EZ, and 1040A	The series of IRS forms that include individual income tax returns.
Information Technology Modernization Vision and Strategy	A 5-year plan that drives investment decisions, addresses the priorities around modernizing front-line tax administration and supporting technical capabilities, and leverages existing systems (where possible) and new development (where necessary) to optimize capacity, manage program costs, and deliver business value on a more incremental and frequent basis.
Infrastructure	The fundamental structure of a system or organization. The basic, fundamental architecture of any system (electronic, mechanical, social, political, etc.) determines how it functions and how flexible it is to meet future requirements.
Logical Design	Describes the functions required of a system; that is, what is to be done, not how it will be done. Logical design is concerned with the processes to be performed.
Master File	The IRS database that stores various types of taxpayer account information. This database includes individual, business, and employee plans and exempt organizations data.

| Term	Definition
Milestone	The "go/no-go" decision point in a project and is sometimes associated with funding approval to proceed.
Modernized e-File	The modernized, web-based platform for filing approximately 330 IRS forms electronically, beginning with the U.S. Corporation Income Tax Return (Form 1120), U.S. Income Tax Return for an S Corporation (Form 1120S), and Return of Organization Exempt From Income Tax (Form 990).
PRIME Contractor	The Computer Sciences Corporation, which heads an alliance of leading technology companies brought together to assist with the IRS' efforts to modernize its computer systems and related information technology.
Release	A specific edition of software.
Requirement Traceability Verification Matrix	Provides the status of how each requirement is being satisfied as it gets designed and implemented, as well as how the test components are developed, to verify the successful operation of each requirement.
Return on Investment	The net profit or loss in an accounting period divided by the capital investment used during the period, usually expressed as an annual percentage return.
Systems Requirements Report	Documents a feasible, quantified, verifiable set of requirements that define and scope the business system being developed by a project.
Task Order	An order for services placed against an established contract.
Transition Management	Helps ensure that personnel and organizations are prepared to receive, use, operate, and maintain the business processes and technology provided by business change solutions.
Vision and Strategy	Translates the fundamental business strategy into a transformation strategy for business processes, information technology, and organizational change.

Appendix X

Management's Response to the Draft Report

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

CHIEF INFORMATION OFFICER
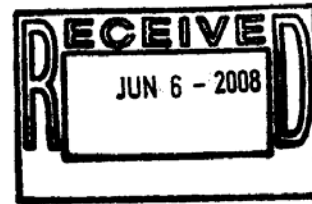
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MEMORANDUM FOR DEPUTY INSPECTOR GENERAL FOR AUDIT

FROM: Arthur L. Gonzalez
               Chief Information Officer

SUBJECT: Draft Audit Report – Annual Assessment of the Business Systems
               Modernization Program (Audit #200820005) (i-trak #2008-37202)

Thank you for the opportunity to review your draft audit report and to meet with the audit team
to discuss earlier draft report observations. We are pleased that the annual assessment:

- Recognizes our progress in implementing BSM projects, including meeting cost
  and schedule targets on most of the releases delivered in fiscal year 2007;
- Identifies the expanded functionality of CADE and MeF;
- Commends our successful deployment of the first release of AMS;
- Validates our improvements in contracting procedures, which affect the BSM
  program;
- Documents our work to institutionalize the Modernization Vision & Strategy; and
- Commends our effectiveness in assessing, prioritizing and addressing BSM issues
  and challenges.

We have taken additional steps to improve our performance, including:

- Developing mitigation strategies to confront risks and issues that may potentially
  surface as we develop future releases of our systems;
- Initiating efforts to address human capital challenges, including plans to analyze
  turnover rates and further efforts to hire and retain critical personnel;
- Completing a succession planning pilot for all of the Applications Development
  organization, including BSM, that included identifying key positions that
  retirement eligible individuals hold and launching an aggressive nationwide
  recruitment strategy across MITS to reduce the hiring gap caused by retiring
  employees; and
- Developing and implementing a methodology for quantitatively measuring and
  reporting on project scope.

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We have also begun developing specific timeframes for implementing our human capital initiatives; expanding requirements development and management policies, procedures and tools to a wider range of projects; and developing program-wide, reusable requirements.

We welcome and appreciate your continued support and the valuable assistance and guidance your team provides. If you have any questions, please contact me at (202) 622-6800 or Perry Robinett, Director of Program Oversight, at (202) 283-6283.