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

November 8, 2000

CHIEF INFORMATION
OFFICER
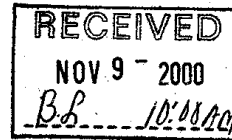
MEMORANDUM FOR TREASURY INSPECTOR GENERAL FOR
TAX ADMINISTRATION

FROM: Paul J. Cosgrave
                  Chief Information Officer

SUBJECT: Additional Actions are Needed to Strengthen the Development
                  and Enforcement of the Enterprise Architecture
                  (Audit No. 200020019)

Thank you for the opportunity to respond to your draft audit report. The Business
Systems Modernization (BSM) program represents our next step in modernizing the IRS
through process reengineering and introduction of new technology that will strengthen
IRS performance. It is a massive effort and not one without risks. However, we are
managing the risks by adhering to rigorous program management procedures,
implementing strong oversight of the program, and revising the IRS Enterprise
Architecture (EA). The enterprise architecture, guided by the enterprise vision, gives a
high-level, complete picture of how the future IRS business systems will operate and
how they will fit together. It also provides those developing the new systems with a
clear picture of the overall business objectives and a clear set of technical standards.

In May 2000, the IRS launched the project called Blueprint 2000 to update the IRS
Enterprise Architecture to reflect the changes in our organization, goals, and available
technology. This revised Blueprint lays the foundation for the near-term projects. We
plan to complete this first release of the EA during November 2000.

The findings in your report highlight the need to strengthen processes to ensure the EA
products meet IRS needs and that the systems development projects follow the
architecture guidance. We are following a sound development methodology to
successfully develop and implement IRS modernized systems. The Blueprint 2000
Project Teams are following the draft *Enterprise Architecture Supplement* to the
Enterprise Life Cycle (ELC) to ensure the architecture products meet the business
needs of IRS. In conjunction with other ELC processes, IRS is taking aggressive steps
to validate architecture products, enforce architecture standards, and conduct a change
control process for the enterprise architecture. We will include the *Enterprise
Architecture Supplement* in the next revision of the IRS ELC scheduled for December
2000. While methodology provides a useful discipline, it does not provide a mechanical
textbook routine for producing such an important product as a blueprint for the IRS
systems architecture. Through building and periodically refining the architecture and
developing projects, EA processes will fully mature over time. In some cases, decisions

made at the enterprise level may not be consistent with initially conceived project direction. However, we are implementing processes to ensure projects are guided and constrained by the enterprise architecture and standards and to ensure IRS business systems are fully integrated.

Your individual recommendations are addressed in the attachment. If you have any questions, please call Bert Concklin, Director, Business Systems Modernization, at (202) 283-5750.

Attachment

cc: Director, Legislative Affairs Division
    Director, Communications Division

Business Systems Modernization Management Response (September 2000)
Additional Actions are Needed to Strengthen Development and Enforcement
of the Enterprise Architecture (Audit No. 200020019)

I.   **The Enterprise Life Cycle Does Not Contain the Detailed Processes
and Activities Necessary to Develop the Enterprise Architecture**

Recommendation 1: To ensure the critical processes, activities, and
work products necessary for the enterprise architecture are identified and
developed, the Chief Information Officer (CIO) should develop and
implement a plan to expedite the completion of the Enterprise Architecture
supplement to the Enterprise Life Cycle (ELC). This part of the ELC is
necessary to provide all of the processes, products, techniques and
procedures that are needed to establish and update the IRS' enterprise
architecture, and to provide needed guidance to ongoing systems
development projects.

Corrective Action:

The IRS will:

- Augment the ELC with the Enterprise Architecture Supplement. This
supplement will include the critical processes, activities, and work
products necessary to establish and update the enterprise architecture
and will provide the needed guidance to ongoing systems development
projects.

Implementation Date: December 2000

Responsible Official: Business Systems Modernization Executive

Business Systems Modernization Management Response (September 2000)
Additional Actions are Needed to Strengthen Development and Enforcement
of the Enterprise Architecture (Audit No. 200020019)

II. **A Validation Process Has Not Been Established to Ensure That Architecture Products Meet the Internal Revenue Service's Needs**

Recommendation 2: To establish a process to ensure architecture deliverables meet the IRS' needs, the CIO should take actions to implement processes necessary to ensure the architecture deliverables received from the PRIME contractor are thoroughly evaluated by the AE Division staff. These validation controls should be established prior to the delivery of the Enterprise Architecture.

Corrective Action:

The IRS will:

- Establish validation procedures to ensure the architecture deliverables are thoroughly evaluated.

Implementation Date: December 2000

Responsible Official: Business Systems Modernization Executive

Recommendation 3: Strengthen the deliverable acceptance process to ensure that payment for an architecture deliverable is not initiated until the Director of AE approves that the deliverable meets the IRS' needs.

Corrective Action:

- As part of the Enterprise Architecture Supplement, the IRS will strengthen the deliverable acceptance process, as defined in the ELC, to include approval from the Director of the Architectural Engineering Division before accepting an architecture deliverable.

Implementation Date: December 2000

Responsible Official: Business Systems Modernization Executive

Business Systems Modernization Management Response (September 2000)
Additional Actions are Needed to Strengthen Development and Enforcement
of the Enterprise Architecture (Audit No. 200020019)

III.   **Processes Are Needed to Ensure That Architecture Requirements of
       Critical Modernization Projects Are Obtained and Addressed**

   Recommendation 4: To ensure that system modernization project teams
   understand and agree to enterprise architecture standards, the CIO
   should take actions to establish a process to obtain, fully document, and
   address the needs of the modernization projects in the development of the
   enterprise architecture products. This process should require technical
   representatives from each project team to participate in meetings as
   architecture deliverables are developed that impact the design of their
   projects.

   Corrective Action: No separate corrective action required. This is
   included in corrective action number 1.

IV.   **A Change Control Board Is Needed to Review and Approve Changes
      to the Modernization Blueprint**

   Recommendation 5: To ensure that changes to the enterprise
   architecture are approved and the Modernization Blueprint properly
   updated, the CIO should establish a central Change Control Board to
   approve enterprise architecture changes to the Modernization Blueprint.
   The results of each Change Control Board review should be documented
   and include the results and conclusions reached by the Board.

   Corrective Action:

   The IRS will:

   - Establish a change control board to approve enterprise architectural
     changes to the Blueprint and document roles, responsibilities, and
     processes in the Configuration Management Section of the ELC.

   Implementation Date: December 2000

   Responsible Official: Business Systems Modernization Executive

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Business Systems Modernization Management Response (September 2000)
Additional Actions are Needed to Strengthen Development and Enforcement
of the Enterprise Architecture (Audit No. 200020019)

V. **Enforcement and Waiver Processes Are Needed to Ensure Compliance with Architecture Guidance**

Recommendation 6: To ensure systems modernization project teams comply with established enterprise architecture standards, the CIO should establish an enforcement process to ensure compliance with the enterprise architecture. This control should involve periodic reviews of project system designs. The results and conclusions of these reviews should be documented and actions should be taken to correct unauthorized departures from the Blueprint.

Corrective Action:

The IRS will:

- Implement ELC reviews in the IRS and enforce Configuration Control Board and Engineering Review Board to compliance with the Enterprise Architecture included in the architecture supplement to the ELC.

Implementation Date: December 2000

Responsible Official: Business Systems Modernization Executive

Recommendation 7: Establish a waiver process to approve minor deviations from the established architecture standards. This process should allow projects the ability to request guidance and approval to deviate from the Blueprint architecture.

Corrective Action:

The IRS will:

- Establish a waiver process to approve minor deviations from the established architectural standards in the architecture supplement of the ELC.

Implementation Date: December 2000

Responsible Official: Business Systems Modernization Executive