Assessment of the
Internal Revenue Service's
Plans to Transition Software Development
Centers to a Shared Services Model

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MEMORANDUM FOR COMMISSIONER ROSSOTTI

Pamela J. Gardiner

FROM: Pamela J. Gardiner
                   Deputy Inspector General for Audit

SUBJECT: Final Audit Report – Assessment of the Internal Revenue
                   Service's Plans to Transition Software Development Centers to a
                   Shared Services Model

This report presents the results of our review of the Internal Revenue Service's (IRS) efforts to transition software development centers to a shared services model. In summary, we found that the IRS' Information Systems modernization plans for software development centers are off to a good start. The plans are complete and comprehensive. We believe the plans adequately address the basic principles necessary for a successful transition. The key to the IRS' success is now to carefully track progress against the plans and timely address any potential barriers or risks.

Copies of this report are also being sent to the IRS managers who are affected by the report. Please contact me at (202) 622-6510 if you have questions, or your staff may call Scott E. Wilson, Associate Inspector General for Audit (Information Systems Programs), at (202) 622-8510.

**Assessment of the Internal Revenue Service's Plans to Transition
Software Development Centers to a Shared Services Model**

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Executive Summary

On January 28, 1998, the Internal Revenue Service (IRS) announced an ambitious program to replace its traditional geographic divisions with an organizational structure made up of four core divisions designed to improve service to taxpayers.

To meet the information technology needs of this new organization, the IRS, working in conjunction with Booz-Allen & Hamilton, developed a shared services model. In the planned shared services environment, each division determines its information systems strategy and the corresponding need for support from a centralized Information Systems (IS) organization. IS is responsible for building the technology infrastructure and supplying the necessary resources to meet the needs.

One of the services provided by the IS organization is software development, which is conducted at various locations throughout the country. Developers coordinate and assist customers in designing, building, testing, implementing and maintaining IRS systems.

The objective of this audit was to assess the IRS' plans to transition the IS organization's software development centers to a shared services model.

Results

We believe that the IRS' modernization plans for software development centers are off to a good start. The key to the IRS' success is now to carefully track progress against the plans and timely address any potential barriers or risks.

The organizational modernization design teams prepared complete and comprehensive plans to transition software development centers to a shared services model. These plans adequately addressed the basic principles outlined by Booz-Allen & Hamilton for a successful transition.

The design teams identified software development staff by location and work, and recommended a plan to reallocate existing staff into positions that better meet the anticipated demand for services. The teams also established a framework for making staff reporting relationships consistent throughout the country and proposed the use of service contracts between IS and the organizational divisions.

Objective and Scope

The overall objective of our review was to assess the Internal Revenue Service's (IRS) plans to transition software development centers to a shared services model.

We conducted our review from October 1999 through January 2000. We limited our review to the plans completed by Information Systems' reorganization teams as of January 24, 2000. We performed this review in accordance with *Government Auditing Standards*.

Details of our audit objective, scope, and methodology are presented in Appendix I. Major contributors to this report are listed in Appendix II.

Background

On January 28, 1998, the IRS announced an ambitious program to replace its traditional geographic divisions with an organizational structure made up of four core divisions and three functional units geared completely to customers. The IRS employed design teams made up of executives, managers, and frontline employees from across the country to facilitate this reorganization.

The design teams divided the work into three formal phases. In the first phase (May – August 1998), design teams, working in conjunction with Booz-Allen & Hamilton[1], developed a concept for an improved Information Systems (IS) organization. The design teams recommended a shared services model for delivering common services and a dedicated staff for business-unique services.

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[1] The IRS selected the international management and technology consulting firm of Booz-Allen & Hamilton to conduct a validation study and risk assessment of the IRS' modernization plan.

The goal of the shared services model is to compete with the best the private sector has to offer in functional expertise, efficiency, and service quality.

In a shared services environment, each organizational division (Wage and Investment Income, Small Business and Self-Employed, Large and Mid-size Business, and Tax Exempt and Government Entities) determines its IS strategy and demand for IS services. IS is responsible for building the technological infrastructure and supplying the necessary resources to meet this demand.

In designing the shared services environment, the design teams proposed a structure to deliver software development needs. IS has software development centers located throughout the country. Developers working at the various centers coordinate and assist customers in designing, building, testing, implementing, and maintaining mission-critical systems. Each location has responsibility for one or more software applications.

The shared services model consists of elements that:

- *Facilitate development of a shared vision.*
- *Change the content of the work.*
- *Build the processes to institutionalize the changes.*
- *Help people adapt to the work.*

As part of the second phase of the reorganization, design teams developed an operating vision for the future state of the IS shared services model. Specifically, the design teams focused on "how we do it" and "who does it." Initially, the Phase IIA design team (September 1998 – April 1999) addressed how to best use software development assets. The Phase IIB design team (May 1999 – October 1999) completed the process by developing a detailed approach for consolidating IRS-wide staff performing software development work. For example, the design teams decided against closing all field development locations and proposed consolidating software development center ownership with the IS organization.

The Phase IIA design team issued its blueprint for the IS organization on April 15, 1999. The Phase IIB design team issued its blueprint for the IS organization on January 24, 2000. The Phase IIB design team addressed the organizational structure of software development resources as part of the IS transition to its new organization.

On January 19, 2000, the Phase III teams officially began to implement the Phase II design teams'

recommendations for transitioning software development centers. Memoranda of Understanding, signed during Phase II to implement software development resource assignments, will be executed during Phase III.

Other activities include:

- Refining design and implementation plans.

- Conducting pilot tests to ensure designs and plans are appropriate.

- Implementing the new organizational structure.

- Installing new processes and procedures.

Results

The IS Phase IIA and Phase IIB design teams followed Booz-Allen & Hamilton direction in assessing the IS organizational structure and use of software development center resources to transition to a shared services model. Booz-Allen & Hamilton, through many client engagements and research, identified six principles that are key for a successful transition to a shared services model.

1. Design an implementation approach unique to the IRS' specific needs.
2. Benchmark the shared services organization against other private/government agencies.
3. Distinguish between the types of services to share.
4. Choose shared services staff carefully.
5. Develop service level agreements.
6. Establish a governance board.

The IS Phase IIA and Phase IIB design teams prepared complete and comprehensive plans for software development centers. The design teams adequately addressed the basic principles necessary for a successful transition. The key to the IRS' success is now to

carefully track progress against the plans and timely
address any potential barriers or risks.

Software Development Center Plans Incorporate Basic Transition Principles

The IS design teams' plans for transitioning the software
development centers to a shared services function
address each of the six transition principles as follows.

Design an Implementation Approach Unique to the IRS' Specific Needs

*The design team identified a
number of viable actions to
improve software development
centers, ranging from keeping
the current structure to
closing all field development
locations.*

The Phase IIA design team blueprint identified software
development staff by location and work. The blueprint
also established a framework for making reporting
relationships consistent throughout the country. This
framework includes the following three steps.

The first step will be to realign reporting relationships of
the largest software development groups, located in the
Martinsburg and Detroit Computing Centers. This
realignment will facilitate the overall mission of systems
development by centralizing management control of all
development resources. Centralizing software
development groups sets the groundwork for the IS
shared service vision. This first step should be
completed by October 2000.

The next step involves consolidating the smaller
software development sites located throughout the
country. Work will be relocated from the smaller sites
to the larger software development centers. Staff will be
re-deployed in the smaller sites to other IS tasks.
Projects will be realigned so that a single location will
have overall responsibility for an entire project or
system.

Finally, all field development work will be consolidated
into five software development centers. Relocation
packages and attrition will be used to transition the
smaller sites and posts of duty. However, for the near
term, employees will continue to perform the same work

for the same manager and the same customers. This continuity of work should minimize attrition that may result from moving some employees into Systems Development.

Benchmark the Shared Services Organization Against Other Private/Government Agencies

Best practices upgrade the performance of the individual organizational divisions and functional units to the highest possible level, minimize duplication and development costs, and promote a better understanding of unique business needs.

The Phase IIA design team used private sector and government agency best practices to identify several opportunities for improvement.

For example, the design team found that, in the current software development environment, a majority of the staff located at the Martinsburg and Detroit Computing Centers are not within the software development organization under the Deputy Chief Information Officer (Systems). A best practice calls for software development centers to have a direct reporting relationship to a centralized IS software development organization. The most current IS organization chart now shows Martinsburg and Detroit resources reporting through the National Director, Systems Development to the Deputy Chief Information Officer (Systems).

In another example, the design team found that a majority of the software development sites were small and minimally staffed. Best practices suggest that a software development site should typically include at least 20 developers to ensure effective work assignment, management, and staff development. Phase IIB design team plans consolidate software development resources into five shared services groups. A shared services group includes systems development staff, quality assurance staff and contractors.

Distinguish Between the Types of Services to Share

Many software applications assigned to specific software development centers have more than one customer. For example, the Detroit Computing Center has responsibility for managing the Integrated Data Retrieval System, which is used by employees IRS-wide to access taxpayer account information.

Division Information Officers link IS with the organizational divisions and functional units.

The Phase IIA design team recommended the creation of Division Information Officers (DIO) whose duties include acting as the key liaison for sharing software development center applications among the organizational divisions and functional units. Each organizational division will be supported by a DIO in Information Systems who will work with the division's or unit's senior leadership team to determine software development service needs and advocate those needs in the IS organization.

The current IRS divisions and functions typically do not have support within the IS organization to proactively ensure that day to day operating needs are met. Moreover, the Phase IIA design team recognized that contact with IS is often confusing and difficult to manage.

The DIO provides a single point of contact to ensure the coordinated delivery of all software development center resources. Each organizational division and functional unit benefits because the DIO manages software development needs and service proactively.

DIO responsibilities include facilitating delivery of operational services and bridging the gap between demand for IS services and available resources. For example, the DIO ensures that final systems delivered by IS include tests that make sure the system works according to customer needs and contract specifications. To balance demand and supply, the DIO coordinates with other DIOs across divisions and units to identify common needs.

Choose Shared Services Staff Carefully

"The only thing that works is management by values. Find people who are competent and really bright, but more importantly, people who care exactly about the same things you care about." Steve Jobs, co-founder of Apple Computer

The Phase IIB design team acknowledged that the system development organization faces a significant challenge to accommodate a growing demand for services with currently available resources.

The demand for resources to support the IRS' modernization efforts is expected to grow rapidly. At the same time, resource requirements for day to day

activities and legislative demands will not decline.
Moreover, expected retirements will further decrease the
number of available resources. As a result, adequate
software development resources currently are not
available to support the IRS' on-going activities and
modernization efforts.

To address these challenges, the design team focused on
ways to reallocate over 600 existing staff positions to
improve the delivery of software development activities.
For example, IS started to release staff working on
Year 2000 compliance issues immediately after
January 1, 2000, and a majority of the remaining
Year 2000 staff were available for reassignment by the
end of March 2000. IS can allocate these resources to
the highest priority work, or can train them to support
future development initiatives.

Another recommendation establishes a Workload
Management and Tracking Initiative to capture all
planned and unplanned workload. This initiative
ensures a single point of entry for all systems
development work with an IRS-wide prioritization
process. This allows for more effective and efficient use
of resources.

Develop Service Level Agreements

The Phase IIA design team developed service level
agreements proposing contracts between IS and the
organizational divisions and functional units. Each
service level agreement will include specific measures
and standards to make sure the software development
centers deliver essential services.

The team identified several issues related to the service
level agreement process. First, current service levels
differ from one software development center location to
another. Second, under the current structure, the IS
organization defines software development center
service levels, and its customers have no input. Finally,
IS and customer expectations do not match up with each
other.

To address these issues, the service level agreement process 1) defines required service levels, 2) educates the divisions and units on how requests can influence costs, and 3) lets IS employees know how divisions and units would like service to be delivered.

Establish a Governance Board

Defined roles and responsibilities for governance structures focus the IS organization.

The Phase IIB design team identified six governance structures to complement and integrate the software development centers within the IS organization.

- The *Commissioner's IS Council* links the organizational divisions and functional units and IS' planning processes into a single entity to set organizational goals.

- The *Business Systems Planning Council* ensures that customer needs are coordinated across the enterprise and receive appropriate IS attention.

- The *IS Executive Steering Committee* meets bi-weekly to communicate status and address issues related to current and future IS activities.

- The *IS Change Control Board* controls and manages all changes that impact the deployed and target architecture baselines.

- The *Information Systems Training Council* reviews training priorities and approves information technology training plans.

- The *Curriculum Review Board* reviews and provides guidance on information technological training course curricula.

Conclusion

In summary, the IRS' modernization plans for software development centers are off to a good start. We found the plans to be complete, comprehensive and adequate to

address the basic principles necessary for a successful transition.

The key to the IRS' success is now to carefully track progress against the plans and timely address any potential barriers or risks.

Detailed Objective, Scope, and Methodology

The overall objective of our review was to assess the Internal Revenue Service's (IRS) Phase IIA and Phase IIB design team plans to transition Information Systems' (IS) software development centers to a Shared Services model.

Our survey work on software development centers identified that the IRS is relying on Booz-Allen & Hamilton assumptions to transition software development centers to a shared services model.

To get a better understanding of these assumptions, we obtained the book entitled "The Centerless Corporation – A New Model for Transforming Your Organization for Growth and Prosperity," written by Booz-Allen & Hamilton consultants. The book presents practical solutions for building a more effective organization by formulating a new people partnership with employees, implementing a learning organization, and cultivating leaders at every level in the organization.

To accomplish our objective, we used the following six principles developed by Booz-Allen & Hamilton in its document "Shared Services Implementation Principles" as a basis for making an assessment of the design teams' plans.

- Design an implementation approach unique to the IRS' specific needs.

- Benchmark the shared services organization against other private/government agencies.

- Distinguish between the types of services to share.

- Choose shared services staff carefully.

- Develop service level agreements.

- Establish a governance board.

In addition to reviewing the documentation contained in "The Centerless Corporation," the "Shared Services Implementation Principles," and the Phase IIA and Phase IIB design teams' IS organization blueprints, we interviewed IRS executives, managers, analysts, and Phase IIB design team members located at the National Office and New Carrollton facilities.

Review Objectives and Tests

We performed the following review steps to make our assessment about how well the design teams' plans matched up with the Booz-Allen & Hamilton six principles.

I.   Design an implementation approach unique to the IRS' specific needs.

      We determined whether the design teams' plans included actions to:

      A. Realign software development assets across IS Systems Development divisions to ensure efficient reporting relationships.

      B. Make reporting relationships consistent between software development centers and the organizational divisions and functional units.

      C. Consolidate and ensure a direct reporting relationship between software development centers and the National Office.

      D. Implement the structure, roles, and responsibilities below the IS division level.

II.   Benchmark the shared services organization against other private/government agencies.

      We determined whether the design teams' plans identified and incorporated best practices from:

      A. External government agencies.

      B. Commercial firms.

III.   Distinguish between the types of services to share.

      We determined whether the design teams' plans included actions to ensure:

      A. Software development centers will be aligned to efficiently support local business functions.

      B. Software development objectives will help keep the disparate organizational divisions and functional units focused on a common goal.

IV.   Choose shared services staff carefully.

      We determined whether the design teams' plans included:

      A. A detailed approach for consolidating staff performing IS work outside the IS organization.

      B. Steps to make sure resources will be available to provide the appropriate level of staff training.

V.   Develop service level agreements.

We determined whether the design teams' plans contained measures to ensure:

A. Software development assets are used consistently across the IS organization.

B. Staff productivity will be maximized.

C. IRS-wide priorities are taken into account.

VI.   Establish a governance board.

We determined whether the design teams' plan contained mechanisms that will:

A. Provide for identification and prioritization of 100 percent of the work.

B. Prioritize and staff projects across organizational boundaries.

C. Give greater focus to delivery of services.

D. Identify and better manager stakeholder expectations.

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Appendix II

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