• Problem: How to modernize IRS Business Systems
• Approach
• SA-CMM Management Framework
• How SA-CMM was Implemented
• Capabilities
• Results
• Conclusion
U.S. Tax system collects over two trillion dollars ($2,000,000,000,000) each year.

The IRS network is composed of thousands of computers, almost 3000 vendor-supplied software products, and over 50 million lines of IRS-maintained code.

Modernizing these systems is one of the most complex modernization efforts ever attempted in the federal government!
Challenge: Modernize IRS business systems and processes to improve service to taxpayers

• Technology is badly in need of modernization
  – Systems have evolved over 35 years
  – Many applications have outdated and/or proprietary system code – modifications are costly and difficult
  – Tax code changes and unanticipated events (e.g., tax rebate of 2001) require continual system modifications, in addition to regular maintenance and enhancements

• IRS reorganized from a geographic structure into customer-facing business divisions – systems and processes need to be realigned

• The increasing demand for e-filing and internet-based taxpayer and third-party transactions requires new capabilities

• The IRS must continue to administer the tax code without modernization-related service interruption or decreased service quality

* It’s like “rebuilding an airplane while it is flying.” *

* Quote from Charles Rossotti’s Keynote Address on 7 November 01 at the CERCA Luncheon
Modernization Approach: Partnership

- IRS Business Systems Modernization Office (BSMO) was established to manage the modernization effort
  - Program size 12 – 15 Billion over 15 years
  - BSMO Staff currently at 165
  - IRS’ role in Modernization emphasizes acquisition rather than development
- December 9, 1998, the IRS selected CSC as the strategic partner to modernize the IRS business systems
  - CSC PRIME Alliance includes IBM, SAIC, BearingPoint (formerly KPMG), Northrop Grumman IT, and UNISYS
    - Current Staffing – 1000 +
- The success of this management partnership is paramount to the success of the Modernization Program
Our objective is to be the best at what we do

- Committed to process improvement
- Deliver timely solutions, with accountability and predictability
- Uphold BSMO and PRIME responsibilities as solution and software acquiring organizations

The SA-CMM was selected as the Modernization Program’s acquisition management model

- Based on best practices and recommended by oversight entities to enhance acquisition management accountability
- Provides for incremental and achievable improvement
- Enables efficient and effective project life cycle management, from pre-award to transition to operations and maintenance

Process Improvement meets oversight organizations’ expectation that we improve and enhance our ability to effectively manage modernization
Modernization Program view of acquisition relationships

BSMO Acquirer

PRIME

PMO, Systems Engineering Services, Acquisition Management, Integrated Solutions, ...

- Not the Ordinary Acquirer/Developer relationship
- This program is an acquisition program
- BSMO acquires products and services from PRIME
- PRIME, in turn, acquires products and services from its subcontractors

Developed Solutions

Alliance Partners

SUB-CONTRACT TASK ORDERS

TASK ORDERS
BSMO uses SA-CMM to develop capabilities for acquiring business solutions

<table>
<thead>
<tr>
<th>Acquisition Project Management</th>
<th>Task Order Monitoring</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>KPA = PM</strong></td>
<td><strong>KPA = CTO, EVAL</strong></td>
</tr>
</tbody>
</table>

- **Acquisition Project Planning and Requirements Development & Management**
  - KPA = SAP, RDM

- **Task Order Development & Issuance**
  - KPA = SOL

  - **Issue Task Orders**
  - **PRIME Acquisition Process (details on next slide)**

- **Systems Evaluation**
  - KPA = EVAL

- **Transition to Support**
  - KPA = TTS

- **Deliver Solutions**

**BSMO Acquisition Activities**
The PRIME uses SA-CMM to develop capabilities to manage acquisition of individual products.

PRIME Acquisition Process Baseline
KPA = PDM, ARM, TRA

S/W Acquisition Program/Project Management (Defined Process)
KPA = PM, PPM, ARM, TRA

Oversight KPA = CTO, EVAL, RDM, CPM, ARM, TTS

Projects (Developers)

SI and Test KPA = RDM, EVAL

Trans. Mgmt. KPA = TTS

Planning and Requirements
KPA = PM, SAP, RDM, ARM, TTS

Solicitation
SOW
Specification Agreement
KPA = SOL

Issue Contracts

PRIME Acquisition Activities

Development Activities

COTS/GOTS Acquisition

S/W Acquisition Program/Project Management (Defined Process)
While establishing these capabilities, both partners had successful SA-CMM evaluations in the past year:

- BSMO achieved SA-CMM Level 2 on December 6, 2002, on a group of five core modernization projects – the first Federal Civilian agency group evaluated at SA-CMM level 2.

- CSC PRIME achieved SA-CMM Level 3 on August 23, 2002 – the first organization in the world evaluated at SA-CMM level 3.

- First instance of coordinated SA-CMM accomplishment by a federal agency with associated contractor.
SA-CMM is the enabler used to address Modernization Program issues

<table>
<thead>
<tr>
<th>Startup Issues</th>
<th>SA-CMM Enablers</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Management alignment</td>
<td>• Common framework and language</td>
</tr>
<tr>
<td>• Identification and management of risks and issues</td>
<td>• Improved management reporting structure</td>
</tr>
<tr>
<td>• Transition planning</td>
<td>• Emphasis on risk management for successful program execution</td>
</tr>
<tr>
<td>• Cultural resistance to change</td>
<td>• Emphasis on Transition Management for successful program execution</td>
</tr>
<tr>
<td>• Definition of roles and responsibilities</td>
<td>• Executive commitment to change</td>
</tr>
<tr>
<td></td>
<td>• Developed common processes with clearly-defined roles for both partners</td>
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</table>

<table>
<thead>
<tr>
<th>Ongoing Issues</th>
<th>SA-CMM Enablers</th>
</tr>
</thead>
<tbody>
<tr>
<td>• High Program complexity</td>
<td>• Orderly, formal management framework</td>
</tr>
<tr>
<td>• Program duration</td>
<td>• Common commitment to program integration</td>
</tr>
<tr>
<td>– Inevitable staff turnover</td>
<td>• Required planning</td>
</tr>
<tr>
<td>– Frequent ramp-ups</td>
<td>• Emphasis on standard training</td>
</tr>
<tr>
<td></td>
<td>• Standard processes</td>
</tr>
</tbody>
</table>
BSMO overcame many organizational challenges to implement SA-CMM

<table>
<thead>
<tr>
<th>Challenges</th>
<th>How Overcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Culture resistant to change</td>
<td>• Engaged proactive senior executive sponsorship</td>
</tr>
<tr>
<td>• Lack of understanding of how framework improves acquisition activities</td>
<td>• Educated and trained all stakeholders</td>
</tr>
<tr>
<td>• Lack of Organizational Commitment</td>
<td>• Benefits of process improvement</td>
</tr>
<tr>
<td>• Intense scrutiny by oversight organizations</td>
<td>• Dedicated group to implement the model</td>
</tr>
<tr>
<td>• Organizational instability</td>
<td>• Demonstrated continued progress</td>
</tr>
<tr>
<td></td>
<td>• Delivered BSMO process improvement strategy with executive commitment</td>
</tr>
<tr>
<td></td>
<td>• Continuously communicated clear goals</td>
</tr>
<tr>
<td></td>
<td>• Developed standard roles and responsibilities</td>
</tr>
<tr>
<td></td>
<td>• Maintained executive leadership commitment to process improvement</td>
</tr>
</tbody>
</table>
Keys to successful SA-CMM implementation

- Establish Process Improvement Infrastructure
  - Management Steering Group (MSG) of senior leaders
  - Solution Acquisition Process Group (SAPG)
  - Process Improvement Strategic Plan – 3 years
  - Start with early adopter projects

- Align Process improvement program to organization
  - Seek, acquire and maintain executive sponsorship
  - Make a strong business case
  - Tie to organizational strategy

- **Get real** with expectations… **get real** with your schedule
  - Make your documented processes real to the project teams… only use the model to fill in the blanks
  - Use the process to address issues that are important to the practitioners
  - Engage experts to help you … and listen to them


Benefits

- SA-CMM as a common management model supports the IRS/PRIME partnership
  - Generates confidence from senior leadership and oversight organizations
  - Promotes alignment between BSMO/PRIME Management
  - Facilitates better understanding among all stakeholders
  - Enables better risk management from better and earlier planning
  - Increases morale

- SA-CMM helps identify opportunities for joint capability development
Program capabilities we now share

- Enterprise Lifecycle Methodology
- Process Asset Library
- Program Management Review Structure
- Risk Management Procedures
- Integrated Master Schedule
- Transition to Support Process
Enterprise Lifecycle and Shared Process Asset Library

Shared Development Life Cycle
- Standard development phases, techniques and methods
- Shared definition of governance and oversight requirements, checkpoints and milestones for Investment Review

Shared Process Asset Library
- Key repository for Modernization Standard Processes
- Includes both IRS and PRIME Policies and Procedures used on IRS Modernization Program
- Assets available electronically to IRS and PRIME personnel via Lotus Notes and Web interface
Joint Program Management Review Structure and Risk Management

Joint Program Management Meetings
• Regularly scheduled Program and project reviews provide oversight and communication mechanisms
• Provide insight into management and technical progress

Project Status Reviews
Monthly meeting to review progress, identify risks and issues, refine plans and identify corrective actions

Program Management Reviews
Quarterly briefing to Program Stakeholders to review status, risks/issues, and to initiate improvements/actions

Program Integration Reviews
Monthly reviews focused on integration dependencies, risks and issues

Modernization Executive Team Mtg.
Weekly meeting to focus management’s attention on critical issues & action items

Shared Risk Mgmt.
• Ability to address issues and risks early in project lifecycle
• Risks identified and tracked at both the Program and project level
• Shared Item Tracking, Reporting and Control System (ITRAC) repository

Risk Management
• Identification
• Validation
• Analysis
• Mitigation Planning
• Tracking and Control
• Reporting
• Issue Management
• Action Item Management
• Escalation
## Program Integrated Master Schedule (IMS)
- Program Level View
- Automatic Cross Project Dependency Identification

### Program Integrated Transition to Support Map
- Start Early and Span entire Life Cycle
- Roles and Responsibilities Clearly Defined

<table>
<thead>
<tr>
<th>Activity</th>
<th>MS1</th>
<th>MS2</th>
<th>MS3</th>
<th>MS4</th>
<th>MS5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Train IRS employees</td>
<td>Identify high level training needs</td>
<td>Develop training requirements</td>
<td>Develop training plans</td>
<td>Plan and schedule training</td>
<td>Execute training plan</td>
</tr>
<tr>
<td>NTEU participation</td>
<td>Identify NTEU involvement</td>
<td>Evaluate NTEU impact</td>
<td>Notify NTEU</td>
<td>Ensure NTEU requirements satisfied</td>
<td>Complete any outstanding NTEU items</td>
</tr>
<tr>
<td>Cost evaluation</td>
<td>Produce Case for Action</td>
<td>Produce Preliminary Business Case</td>
<td>Produce Baseline Business Case</td>
<td>Update business case</td>
<td>Obtain approved budget</td>
</tr>
</tbody>
</table>
Business Results: We have fielded six major functional capabilities in less than 4 years …

- 4,000 Revenue Agents using new application to compute complex business tax returns
- 1040 EZ Tele-filers accounts posted to modernized data store
- Taxpayer refund status over the Internet
- First truly secure internet infrastructure within the IRS
- Modernized help desk; asset, network and systems management
- Modernized telephony architecture supports world’s largest call center

… while the IRS was in full operation!
Conclusion: SA-CMM as a management model is necessary for IRS Modernization success, but it is not a silver bullet.

- Commitment to SA-CMM provides:
  - Opportunity to share Processes, Techniques, Information
  - Framework to improve chances of success in a large, complex program
  - Formality of terms for alignment and communication
  - Program Management and Planning best practices

- Other requirements for Program success:
  - Executive commitment to the process and process improvement is essential
  - Both organizations need to remain flexible and evolve together

**Organizational performance cannot be improved without a structured improvement process**