U.S. FEDERAL ENTERPRISE ARCHITECTURE Perspective and Point of View

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Discussion Points

• TFMS in NAS EA Context
• What Is Enterprise Architecture?
• Federal EA Experiences
• EA Maturity Model: Medicare IT Architecture example
• CSC Experience/Federal Client Successes
• Questions
Enterprise Architecture Considerations for TFMS

- Interface evolution (e.g., SWIM)
- Schedule Coordination
- Shared/Integrated Functionality
- Architectural Consistency
TFMS in NAS EA Context: Many Complex Interactions

Note: The TPC and DRC are connected by a high-speed interlink, which is managed as part of the FTI-ED8 circuit. This interlink uses Generic Routing Encapsulation (GRE) for added security and provides a communications reroute function for disaster recovery.

Non-FTI (External Portal) Interfaces

FTI (FAA Portal) Interfaces

TFMS Interfaces Using FTI-BD1 Service
TFMS Partners and Correspondents

- Enroute ATC
  - Host/ERAM (HADDS)
  - NGRVR
- Terminal ATC
  - ARTS-IIIE
  - STARS
- TMA
- ATOP
- MEARTS

- Flight Operation Centers
- General Aviation
- Contractor Sites
- 100+ DoD
- Weather
- Various other government
- General Public
- International ATCs, including
  - 11 Canada
  - London
  - Mexico
  - Chile
  - COCESNA
  - Columbia
What Is Enterprise Architecture?

![Diagram showing the relationship between Return on Investment, Business Architecture, Enterprise Architecture, No Architecture, Technology Architecture, and Reduction of Complexity and Cost.](image)

©Institute for Enterprise Architecture Developments 2001-2008
EA Is a Multifaceted Tool

- Secures Funding
  - Improved Capital Planning

- Improves Efficiency
  - Better decision making/tradeoffs/streamlined business processes

- Aligns Resources
  - Clearer priorities for people and property

- Transforms Business
  - Clearer “big picture” with drill-down to needed details

- Facilitates Change
  - More agile reactions to evolving business needs

Enterprise Architecture
## EA Program Success Factors

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
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<tbody>
<tr>
<td><strong>Business Driven</strong></td>
<td>Ensure the enterprise architecture development is driven by the <strong>Business Vision</strong> — a joint effort among the <strong>business, stakeholders</strong> and <strong>IT</strong> organizations</td>
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<td><strong>Managed Scope</strong></td>
<td>Focus on the key <strong>(80/20)</strong> business processes (often cross-functional) to begin the redesign</td>
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<td><strong>Resourced for Sustained Momentum</strong></td>
<td>Allocate resources to ensure the momentum of the enterprise transformation effort is sustained through frequent tangible <strong>“quick-wins”</strong></td>
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<td><strong>Governance</strong></td>
<td>Ensure <strong>decision</strong> and ownership at the appropriate level within the organization and with external organizations, with <strong>program management</strong> to ensure business results as promised in the business case</td>
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<tr>
<td><strong>Change Management</strong></td>
<td>Address <strong>workforce’s</strong> reluctance to adopt new procedures and technology, as well as the impact of potential organizational changes</td>
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Federal EA Program Experiences

• Experiences — to be successful, an EA must:
  – Have a valid business vision and drive decision making
  – Be strongly promoted by agency head
  – Be tied to return on investment and performance outcomes
    • Aligned with agency strategic plan
  – Be strategic while also addressing major tactical concerns
  – Communicate to the many stakeholders in language that resonates with them
  – Be used meaningfully by all stakeholders
  – Not be technology-based only
Using an EA Maturity Model (Medicare IT Architecture)

States developed their own transition plans based on a self-assessment against the MITA Maturity Model, their priorities, and available resources.

<table>
<thead>
<tr>
<th>Level 1</th>
<th>At Level 1, the agency focuses on meeting compliance thresholds dictated by state and federal regulations. It primarily targets accurate enrollment of program eligibilities and timely and accurate payments of claims for appropriate services.</th>
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<td>Level 2</td>
<td>At Level 2, the agency focuses on cost management and improving quality of and access to care within structures designed to manage costs (e.g., managed care, catastrophic care management, disease management).</td>
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**Federal matching funds were tied to progress against the MITA Maturity Model.**
### Level 3
At Level 3, the agency focuses on coordination with other agencies and collaboration in adopting national standards and developing shared business services as a means of improving cost-effectiveness of healthcare services delivery. The agency promotes usage of intra-state data exchange.

### Level 4
At Level 4, widespread and secure access to clinical data enables the Medicaid enterprise to improve healthcare outcomes, empower beneficiary and provider stakeholders, measure quantitative objectives, and focus on program improvement.

### Level 5
At Level 5, national (and international) interoperability allows the Medicaid enterprise to focus on fine tuning and optimizing program management, planning, and evaluation.
Federal EA Successes

Open Government
- USA.gov
- USpending.gov
- Recovery.gov

Networked Government System of Systems
- IRS Modernization
- NextGen: Air Traffic Control
- Justice Network
- Environmental Network

Shared Services
- eAuthentication, Identity Management

Web Accessible Government
- Grants.gov
- RuleMaking.gov
- Data.gov

Operationally Efficient Government
- Financial Management LoB
- HR LoB
- Geospatial LoB

Federal EA underlies the Web to eGov to service oriented government change initiatives.
CSC’s EAs Have Provided Significant Business Value to Clients

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<th>Client</th>
<th>Summary Description</th>
<th>Value Realized by Client</th>
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<tr>
<td>1</td>
<td>Internal Revenue Service (IRS) EA</td>
<td>CSC performed business process reengineering and developed a business-driven EA used by IRS to drive the business modernization program and IT portfolio management. CSC has also completed two key segment architectures and is now working on the remaining segments. The EA drove IRS’s business-driven modernization, resulting in enhanced customer satisfaction, operational efficiencies, and revenue collection.</td>
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CSC’s EAs Have Provided Significant Business Value to Clients - 2

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| 2   | Department of Education | CSC developed an FEA-compliant, SOA-based EA and domain (segment) architectures. CSC shifted the EA effort from a technical focus into a vehicle to promote the Department’s business goals and IT future state strategic vision.  
Dick Burk, OMB Chief Architect, noted that Education was rated as having the fourth highest EA score in the federal government (after Interior, NSF, and Labor) | The EA has realized hundreds of millions of dollars in administrative and reporting cost savings, enabling a shift of financial resources from primarily back office administrative support to supporting education mission goals. |

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