Segment Architecture

Lessons Learned

Department of the Interior (DOI)

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Agenda

1. What is a Segment Architecture Approach?
2. Why Use a Segment Architecture Approach?
3. How to Orient the Business to Segment Architecture and Select the Segments to Architect
4. How to Develop Segment Architecture that has an Impact
What is a Segment Architecture Approach?
“Segment architecture development is a collaborative process forming a bridge between enterprise-level planning and the development and implementation of solution architecture.”

- OMB’s FEA Practice Guidance

(source: FEA Practice Guidance)
Why Use a Segment Architecture Approach?
Many Agencies, including DOI, have the challenge of architecting an enterprise with an unusually wide set of mission responsibilities.

Count of Services for Citizen Sub-Functions for Cabinet Agencies

DOI embraced a segment architecture approach to produce business-driven, actionable architectures and ensure a sustainable rate of transformation.
DOI developed the Methodology for Business Transformation (MBT) so that segment architecture quality was consistent throughout the Agency.
The MBT includes a toolkit of resources to accelerate and strengthen your segment architecture work.

<table>
<thead>
<tr>
<th>Task Name</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methodology for Business Transformation v1.5</td>
<td></td>
</tr>
<tr>
<td>Phase 1: Select the Business Areas to Blueprint</td>
<td></td>
</tr>
<tr>
<td>Step A: Prioritize and select business areas to blueprint</td>
<td></td>
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<tr>
<td>Refine/validate the enterprise’s business areas</td>
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</table>

**Phase 1:** Select the Business Areas to Blueprint

**Phase 2:** Prepare for the Blueprint

**Phase 3:** Develop the Blueprint

**Phase 4:** Implement the Blueprint Recommendations

**Phase 5:** Maintain the Blueprint

- Service 1: Business Service 1
- Service 2: Business Service 2
- Service 3: Business Service 3
- Service 4: Business Service 4

- PRM
- BRM
- SRM/ TRM/ DRM
- BRM
- DRM
- SRM/ TRM/ DRM

- Executive Sponsor solicits Core Team members
- Core Team Solicitation Memorandum
- Establish the Core Team Lead
- Core Team Formation Memorandum

Maintain the Blueprint and the architecture
Opportunity: Chief Architects may consider establishing a community of practice to leverage best practices and lessons learned on segment architecture methodologies.

OMB states that their segment architecture guidance:

“is not meant to be prescriptive, but to offer concepts to be applied using a variety of architectural frameworks and methodologies.”

We can learn from best practices and move towards a standard approach.
How to Orient the Business to Segment Architecture and Select the Segments to Architect
The first phases of the MBT is designed to select what segment will be developed.

**Phase 1:** Select the Business Areas to Blueprint (annual)

**Phase 2:** Prepare for the Blueprint

**Phase 3:** Develop the Blueprint

**Phase 4:** Implement the Blueprint Recommendations

**Phase 5:** Maintain the Blueprint

- Business leaders are engaged to determine what business areas are high priority for transformation.

- DOI has evaluated candidate Business Areas based on are on spending and performance (Budget & PAR/PART).

- Business leaders then issue a record of decision to initiate the development of a modernization blueprint (segment architecture)
Business areas are analyzed to facilitate a business prioritization decision.

## Business Area Prioritization Scoring

<table>
<thead>
<tr>
<th>CORE BUSINESS AREAS</th>
<th>Financial Spending</th>
<th>Performance Results</th>
</tr>
</thead>
</table>

**Financial Spending**

<table>
<thead>
<tr>
<th>% of Overall DOI Labor Costs</th>
<th>% of IT Portfolio</th>
<th>PART Outcome</th>
<th>PAR Results</th>
<th>Executive Sponsor for Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Score 1-4</td>
<td>Score 1-4</td>
<td>Score 1-4</td>
<td>Score 1-4</td>
<td>Yes = 4</td>
</tr>
<tr>
<td>Weight: 70%</td>
<td>Weight: 30%</td>
<td>Weight: 50%</td>
<td>Weight: 50%</td>
<td></td>
</tr>
</tbody>
</table>

“**Financial Spending**” is a weighted score based on Labor Costs and IT Portfolio Costs

“**Performance Results**” is a weighted score based on PART and PAR
Low Performance and High Cost Business Areas are highest candidates for Architecting.

Core Business Area Prioritization
(Larger Bubbles Have Executive Sponsors)

- Higher Performance Results & Lower Spending
- Higher Performance Results & Higher Spending
- Lower Performance Results & Lower Spending
- Higher Performance Results & Lower Spending

Low Performance and High Cost Business Areas are highest candidates for Architecting.
Business leadership then issues a record of decision to initiate the segment architecture development.

The MBT includes standard templates such as this record of decision template.
The second phase of the MBT is where organizational participation is secured.

- Business leaders formally appoint an executive sponsor for the segment.
- Business leaders formally publish a purpose statement for the development of the segment architecture.
- A core team of business representatives encompassing all Affected DOI Bureaus is appointed and they ratify a commitment agreement for developing the segment architecture.
How to Develop Segment Architecture that has an Impact
The third phase of the MBT is a step by step guide to develop a segment architecture.

- Stakeholder interviews/analysis.
- Performance architecture development.
- Analysis of products and services.
- Analysis of the business architecture (functions, processes, organizations).
- Analysis of solutions, services, and technologies.
- Analysis of data, data stewardship, data sharing, and authoritative data sources.
Stakeholders are interviewed and analyzed to determine the SWOT for the business area.

- Customer
- Service Provider
- Lobbyist
- Trip Planner
- Tourism
- Web Information Delivery Service Provider
- Payment Authorization Service Provider

Opportunities:
- Improve financial reconciliation between banks and Feds
- Reduce the use of cash in the field

Threats:
- Existing concessionaire contracts
- Legislative constraints on pricing
The performance architecture is defined then the target value chain is developed.

Provide for a Quality Recreation Experience, including Access, and Enjoyment of Natural and Cultural Resources on DOI Managed and Partnered (REO_1)

Provide for and Receive Fair Value (REO_2)

Business Service 1

Business Service 2

Business Service 3

Business Service 4
The MBT contains scoring templates that include scoring criteria. Systems are scored based on established criteria.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Description</th>
<th>Law (1)</th>
<th>Medium (2)</th>
<th>High (3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>P1</td>
<td>Business processes supported by the system.</td>
<td>Business processes are well-defined and stakeholder-defined.</td>
<td>Business processes are partly defined and stakeholder-defined.</td>
<td>Business processes are not defined.</td>
</tr>
<tr>
<td>P2</td>
<td>Extent of system support of OAM and BIM strategies, goals, and objectives.</td>
<td>Some inconsistencies between system functionality and OAM &amp; BIM strategies and goals.</td>
<td>Business processes in the system are clearly defined and aligned.</td>
<td>Business processes are not defined and not aligned.</td>
</tr>
<tr>
<td>P3</td>
<td>Lack of functional overlap with other systems.</td>
<td>Significant overlap between system functionality and other BIM systems.</td>
<td>Minimal overlap between system functionality and other BIM systems.</td>
<td>No overlap between system functionality and other BIM systems.</td>
</tr>
<tr>
<td>P4</td>
<td>Degree to which system training and support opportunities have been utilized.</td>
<td>No comprehensive training materials available, but training materials are defined and integrated.</td>
<td>Training materials defined and integrated.</td>
<td>Training materials not defined or integrated.</td>
</tr>
</tbody>
</table>

Well-defined criteria for assessing alignment:

- Templates for uniform system scoring
- Systems are scored based on established criteria
Systems are analyzed based on business and technology fit to define the target solution.
The final recommendations are packaged into a modernization blueprint and signed off by business and IT leadership.
Recommendations from the segments are prioritized using the Value Measuring Methodology to feed into CPIC.

Mission Needs Statements Flow Into CPIC During the Pre-Select Stage

Prioritized Recommendations Result In Mission Needs Statements

www.doi.gov/ocio/architecture
Approved segment architectures are tracked in the **DOI Enterprise Transition Strategy** which impact CPIC as well as budget.
The adoption of a standard segment architecture approach has yielded many results at DOI.
Proposed Next Steps….

Determine if the CAF sees benefit in forming a community of practice or sub-team to investigate:

- Best practices, lessons learned from available segment architecture development methodologies.

- Examine possible endorsement/adoption of a standard approach.
Questions?