Case Study: SOA at the National Park Service

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Phase one helps mature EA programs and leads business modernization initiatives
DOI performs
33 of 39 FEA
BRM business
functions

Largest Bureau
in DOI
NPS number of systems supporting Services to Citizens

Source: DOI Enterprise Architecture Repository (DEAR)
The classic problem

Natural Resource Management
Challenges around data capture, storage, dissemination, sharing, awareness, synthesis, and use for scientific, operational, and strategic purposes

- “I don’t know what information is out there”
- “The systems are too hard to use”
- “When employees retire, the information goes with them, since no one knows what was on their machines”
- “The information is not in a format or synthesized for me to use for my purposes”
- “We don’t have the time or resources to enter all this data in a system for others to use”
- … As well as many others that seasoned Enterprise Architects have heard before.
Build it and they won’t come

Without EA guidance authoritative data sources were created

• Examples: NPSpecies, NatureBib, NRData

• Separate funding, governance, SDLC – Stove Pipes were born

• Classic issues around alignment with business needs, maintainability, flexibility, usability, interoperability

• More insidiously: information relationships weakened or destroyed

• Users avoid systems – can’t reach critical mass of data
Study of Natural Resource Management

Methodology for Business Transformation (MBT)

1. Perform Blueprint Project Management
2. Analyze stakeholders & drivers and set the target business strategy
3. Analyze the business and define the target business environment
4. Analyze the IT and develop the target conceptual solution architecture
5. Author the Modernization Blueprint and obtain governance approvals
6. Incorporate approved Modernization Blueprint into enterprise architecture
7. Perform Business Transformation Initiation tasks
8. Conduct Business Process Reengineering (as necessary)
9. Conduct Data Standardization
10. Execute funding strategy for minor recommendations
11. Define detailed solution architecture
12. Implement solution and conduct change management tasks
13. Maintain the Blueprint and the architecture
SOA to the rescue?

NR Team begins to explore SOA as their cure-all

Policy: all new development must be “SOA”
Same teams
Same SDLC
No Enterprise approach
No holistic study of the business area
Immediate need to modernize to placate users

EA team is just beginning NR Management MBT study

Unfortunate timing
How EA saved SOA

Is organization mature enough to handle SOA?
Is it organized correctly?

EA team mobilized quickly – needed to improvise

- Interviewed execs, system owners, developers to assess maturity
- Made recommendations on governance, SDLC, team make-up
- Assisted in identifying leader for SOA rollout
- Piggy-backed requirements analysis with MBT study – leveraged stakeholders, focus groups, interim analysis
- Assisted with change management – significant effort
- “In the trenches work” – initial rollout had to succeed
- Coordinated with DOI to help shape departmental SOA strategy
Results

Services were created that support the real business processes

Applications were created that provide information that is useful and related

Reinvigorated user community

Lessons learned being incorporated in Department SOA strategy

Organizational and information management challenges are very representative of the greater enterprise

Blueprint will provide 5 year SOA rollout strategy – tight coordination with business
Lessons Learned

Significant change management effort – governance and SDLC maturity are paramount

“Just in time” blueprinting for segments

Blueprint recommendations need service orientation – define services

Need the Enterprise purview to drive the architecture and requirements for business areas

Blueprint process needed improvement to support hand off to solutions architecture space. Earlier involvement of key solutions team members.
Lessons Learned

Now more than ever

Keep it simple!
Questions and Answers

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