Implementing an Actionable & Practical Enterprise Architecture

Department of the Navy Enterprise Architecture (DON EA)

Presented by
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Understand What You Are Attempting to Achieve With Your Enterprise Architecture

Overarching Tenets of Department of the Navy Enterprise Architecture (DON EA)

- Only develop architecture products we plan to use
- Understand how these products relate to overall DON EA goals and objectives
- Ensure DON EA goals and objectives directly support Department’s “business” goals and objectives
- Implement necessary processes, mechanisms, and governance to ensure use of DON EA
- As needed, adjust content, processes, mechanisms, and governance…but always strive for consistency of purpose and outcome
Accomplishments Leading Up To and Since Release of DON EA v1.0 in July 2009
Accomplishment: Release and Use of Organizing Construct

- Developed, released, and refined “DON EA Framework”

- Organizing construct for DON EA content

- Specifies bins and buckets for different types of architecture content
Accomplishment: Release and Use of Organizing Construct (cont)
QUESTION: Do current DON EA Framework Segments adequately serve needs of all DON stakeholders?
   - ANSWER: Probably Not

Planned approach: Allow for flexibility in segment construct
   - Joint Capability Areas (JCA)
   - Mission Areas
   - Etc.
Accomplishment:
DON EA Overarching Goals and Objectives

1. Guide Department’s Information Technology/National Security System investments towards achieving departmental goals and objectives

2. Assist Program Managers in the development of “solution architectures” – as mandated by requirements and acquisition processes

Consistent Focus Since Release of DON EA v1.0 in July 2009
QUESTION: As DON EA continues to mature, will we need to add additional overarching goals and objectives?
- ANSWER: Yes

Planned approach: Thoughtfully add additional overarching goals, objectives, and sub-objectives
- System of System Interoperability
- Sub-objective: IT Effectiveness – Ensure IT supports the “business” of the DON
- Sub-objective: IT Efficiency Initiatives – Ensure focus on DoD and DON priorities
Accomplishment: DON EA Governance

- Got the momentum going: Informally established DON EA working groups and approval board – May 2009

  - Formally chartered DON EA working groups and approval board
  - DON EA Working Group
  - DON EA Configuration Control Board
  - DON EA Independent Verification and Validation Board
  - DON EA Approval Board
Accomplishment:
DON EA Governance (cont.)

- Clearly defined roles for each DON EA group/board

- DON EA Working Group
  - Develop, discuss, review, proposed DON EA policy, procedures, plans, etc.

- DON EA Configuration Control Board
  - Manage configuration of DON EA artifacts

- DON EA Independent Verification and Validation Board
  - Review maturity of proposed DON EA Artifacts
  - Make formal written recommendations to DON EA Approval Board

- DON EA Approval Board
  - Approve incorporation and release of new and modified DON EA Artifacts

An Integrated Architecture Requires a Single Governance Construct
DON EA Improvement Opportunity
DON EA Governance

- QUESTION: Is senior leadership fully aware and supportive of DON EA?
  - ANSWER:
    - Aware: Some, but not all key stakeholders
    - Supportive: Those that are aware are supportive

- Planned approach: Elevate primary DON EA approval function to senior DON IT/Cyberspace governance body

Active Engagement of Senior Leadership Required in Order to Achieve and Maintain Buy-in
Accomplishment: Made DON EA Discoverable

- Established single authoritative location for DON EA policy, guidance, procedures, content – DON EA Page on Intelink UNCLAS
DON EA Improvement Opportunity

DON EA Discoverability

- QUESTION: Is posting of DON EA content to Intelink wiki page sufficient?
  - ANSWER: No. Robust DON EA repository would provide significant benefits, including:
    - Improve reuse
    - Automate solution architecture / DON EA comparisons
    - Eliminate redundant and sub-optimized repositories and architecture tools
    - Facilitate creation of “abstract layer”

- Planned approach: Develop strategy for implementing DON-wide EA repository
Accomplishment: Regular Release and Enforcement Schedule

- Major DON EA releases each February and July
- Enforcement of compliance with updated DON EA content each October 1st
Accomplishment:
Use of DON EA

- Enforcement of compliance with DON EA v1.0 – Oct 2009
  - Scope: All Business and Enterprise Information Environment Mission Area (BMA & EIEMA) systems

- Expanded scope to include Warfighting and Defense Intelligence Mission Areas (WMA & DIMA) – Oct 2010

As of Oct 2010 All DON IT/NSS Programs will be Assessed Annually for Compliance with DON EA
Accomplishment:
Linked DON EA Assessments to Existing Oversight and Investment Review Processes

- DON EA compliance assessment triggering events
  - Clinger Cohen Act (CCA) Confirmations
  - Information Management / Information Technology (IM/IT) Investment and Annual Reviews

- DON EA compliance requirements incorporated into annual DON IT budget execution policy

As Needed, Existing Oversight and Investment Review Processes Provide Adequate Enforcement Mechanisms and Consequences
QUESTION: Why might it be unfair to require programs to be compliant with all applicable DON EA artifacts?

- ANSWER: Many programs have completed development or have already been fielded.

DON EA needs to leverage existing processes earlier in the program lifecycle:

- Requirements development and validation
- System and Engineering Technical Reviews
Accomplishment:
Automated Compliance Assessment and Waiver Processes

- Leveraged existing IT portfolio repository

- Automated DON EA waiver request process – Dec 2009

- Automated DON EA compliance assessment and review process – Oct 2010

- Where possible, automated artifact applicability and compliance determination

Automation Eliminates Potential for “Lost” Compliance Assessments and Waiver Requests
Accomplishment: DON EA Metrics

- Publish monthly DON EA Metrics
- Track number of compliant/non-compliant programs
- Track compliance and waivers statistics for each DON EA artifact
- Comparison of artifact statistics provides valuable insights, e.g.,
  - IPv6 Capable
    - Very high percentage of programs not “IPv6 capable”
    - Further analysis determined major driver was use of non-capable database management system
  - Public Key Enablement
    - Review of waiver requests takes much longer than for other artifacts
    - Additional documentation requirements impact process

-- Metrics Can Provide Valuable Insights
DON EA Process Improvement Opportunity

DON EA Metrics

**QUESTION:** Why is calculation of DON EA metrics a time consuming process?

- **ANSWER:** Compliance and waiver automation does not provide reports which directly correlate with desired metrics.

**Capitalized on opportunity**

- In process of developing new automated reports to directly produce metrics inputs.

Leverage Automation Whenever Possible
DON EA v2.0.000 Compliance
as of 30 Mar 2011
DON EA v2.0.000 Waiver Requests as of 30 Mar 2011
Accomplishment: Developed New Partnerships

- Navy Conditioned Based Maintenance (NCBM) – Logistics community
- Open Architecture (OA) – Weapon and platform acquisition community
- Discussions ongoing with additional partners (Item Unique Identification (IUID) Initiative, Financial Management Community, etc.)

DON EA Processes and Mechanisms are in Place and Can Serve Many Communities
Accomplishment:
DON Architecture Product Guide (APG)

- DON APG released - Oct 2009

- DON APG provides program offices and architects with best practices for development of DoDAF artifacts

- Improves solution architecture quality and consistency across DON

- Currently finalizing staffing of updated guide which incorporates DoDAF 2.0 “viewpoints”
Accomplishment:
Identified and Engaged New Subject Matter Experts (SME)

- As content of DON EA expanded beyond traditional CIO areas of expertise, needed to identify new Subject Matter Experts (SME)
  - SMEs assist in developing new DON EA artifacts
  - SMEs assist in reviewing assertions of compliance and waiver requests
  - SMEs maintain DON EA artifacts
Accomplishment:
DON EA Applicability and Usage Guide

- Guide specifies a number of attributes for each DON EA Artifact
- Type - Mandatory, Information Required, Documentation Required (new)
- Compliance Criteria
- Effect – If program is non-compliant what action needs to be taken?
- Documentation Requirements

Think Carefully About How Artifacts Will be Used
QUESTION: Why was it necessary to develop DON EA Applicability and Usage Guide?
- ANSWER: Approval Board had approved artifacts without being given opportunity to discuss specifically how artifacts would be used

Capitalized on opportunity
- Incorporated key attributes from DON EA Guide into new artifact submission form
- Proposed artifacts and how they will be used reviewed by IV&V and Approval Boards
What Other Challenges Have We Encountered?

(Additional Opportunities for Process Improvement?)
Challenge – Use of EA Results in Requirement for Additional Resources

- Use of each artifact may have widely varying resource implications

- Example: DON EA Commercial Off The Shelf Software Fielding (COTSF) Artifact
  - Based on Departmental Directive requiring all COTS software be supported throughout its fielded lifecycle
  - Programs may have 0, 1, or hundreds of associated COTS applications
  - Subject matter expert (SME) review can easily take 1 hour per program
  - ~1600 programs to be reviewed per year

- Addressing Challenge: Thoughtfully delegate and distribute responsibility for executing DON EA processes
Unanticipated Impact of Requirement for Additional Resources

- DON EA “project team” has less time to focus on the future
  - More and more of day taken up by activities associated with “use” of DON EA

- Results in
  - Drop-off in newly proposed architecture artifacts
  - Sliding schedules for implementation of new content, processes, procedures, etc.

- Addressing Challenge
  - Where possible, implement additional automation
  - Thoughtfully delegate and distribute responsibility for executing DON EA processes
Challenge – Lack of Common Understanding of Path Ahead by All Stakeholders

- Many DON EA activities underway, but no easily understandable plan for how these activities relate to each other
  - Overarching DON EA goals identified
  - Individual architecture artifacts under development
  - No master plan for how proposed artifacts relate to goals

- Lack of understandable plan leads to confusion by stakeholders and participants about “where we are going”

- Addressing Challenge: Develop DON EA Roadmap, which aligns near-, mid-, long-term activities with overarching goals

Ensure Clear Alignment of Ongoing Activities with DON EA Goals
**Overarching DON EA Roadmap (Draft)**

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<th>Prior Accomplishments</th>
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<th>Long-Term (FY13)</th>
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- **Guide IT/NSS to Achieve DON Goals & Objectives**
- **Assist PMs in Development of Solution Architectures**
- **New Goal 1**

1. LRPG X
2. DoDARF X
3. Etc.

- **DON EA 3.0 Release**
- **DON EA 3.0 Enforcement**
Challenge – Use of Individual DON EA Artifacts Uncovers Unanticipated Scenarios

- Not possible to anticipate all possible use and compliance scenarios

- Addressing Challenge
  - Rapidly document Frequently Asked Questions (FAQ) and answers
  - Develop and formally document “business processes” in DON EA

Must Work Closely with Program Offices, Subordinate Commands, and Reviewers to Refine EA Business Processes
Summary

- Use of DON EA required significant investment in implementing foundational elements.

- Continued flexibility necessary.

- Need to allocate necessary resources towards continued expansion of DON EA content.

- Need to ensure new DON EA content is focused on priority initiatives of the DoD and DON.

Don’t Build It If You Aren’t Going to Use It!
QUESTIONS?