



Implementing an Actionable & Practical Enterprise Architecture

Department of the Navy Enterprise Architecture (DON EA)

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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

**Understand What You Are Attempting to Achieve
With Your Enterprise Architecture**



Accomplishments Leading Up To and Since Release of DON EA v1.0 in July 2009





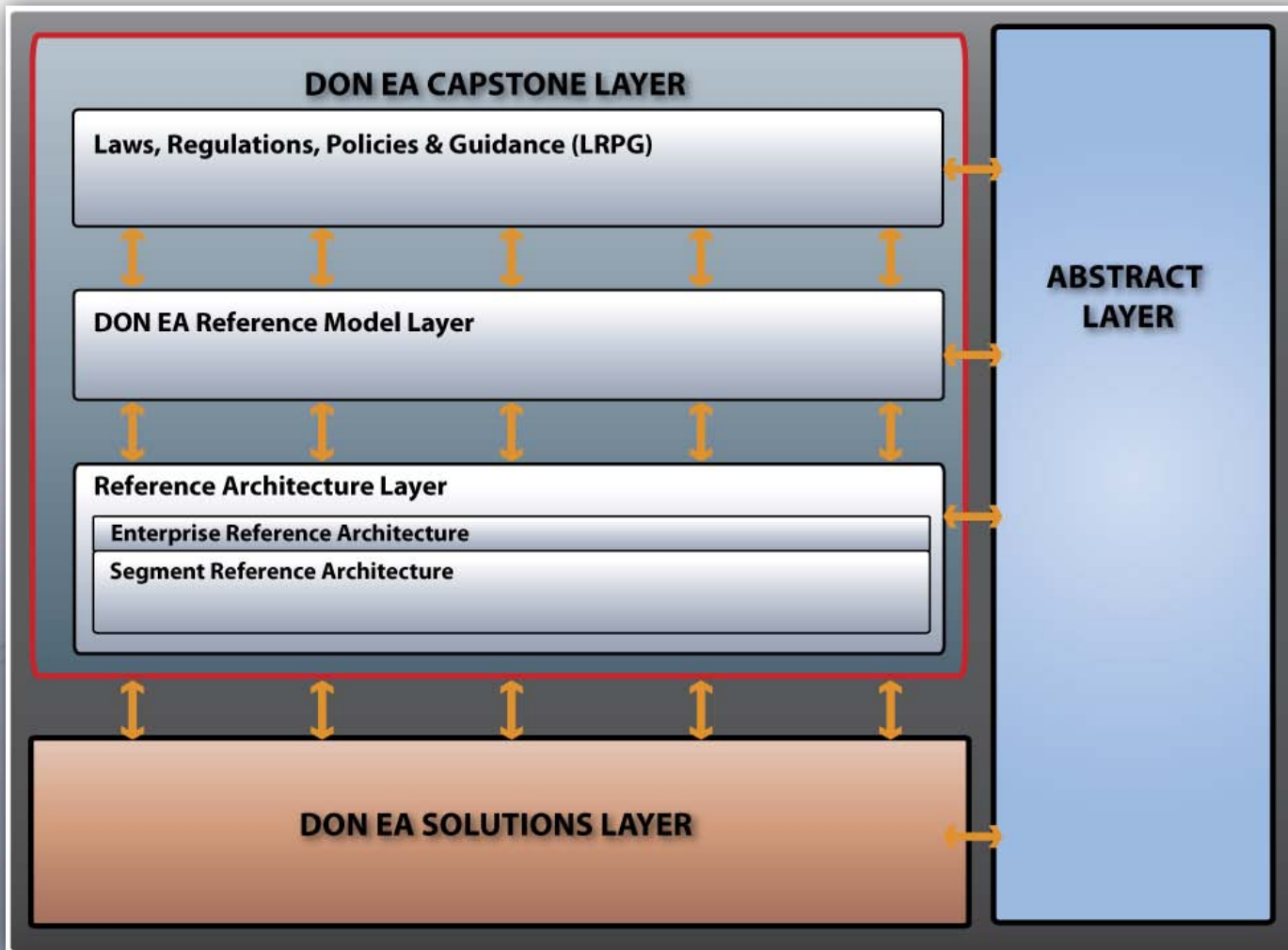
Accomplishment: Release and Use of Organizing Construct

- **Developed, released, and refined “DON EA Framework”**
- **Organizing construct for DON EA content**
- **Specifies bins and buckets for different types of architecture content**

**Single Framework Assists in Aligning EA Efforts
Across Department of the Navy**



Accomplishment: Release and Use of Organizing Construct (cont)





DON EA Process Improvement Opportunity



DON EA Framework

- **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.

Managed Flexibility May be Required to Serve Needs of Large Diverse Organizations



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**

**Improvement
Opportunity**

Consistent Focus Since Release of DON EA v1.0 in July 2009



DON EA Improvement Opportunity



DON EA Overarching Goals and Objectives

- **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

As Needed, Adjust Content, Processes, Mechanisms, and Governance, but... Always Strive for Consistency of Purpose and Outcome



Accomplishment: DON EA Governance

- **Got the momentum going: Informally established DON EA working groups and approval board – May 2009**
- **Institutionalized governance: Chief Architect released DON EA Governance and Configuration Management Plans – Sept 2010**
 - 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

An Integrated Architecture Requires a Single Governance Construct



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**

**Improvement
Opportunity**

**A Large Diverse Organization Needs to Have a Single
Authoritative Location for EA Information**



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**

Regular Release and Enforcement Schedule Allows DON Programs Time to Adjust to New and Modified Content



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**

**Improvement
Opportunity**

**As Needed, Existing Oversight and Investment Review Processes
Provide Adequate Enforcement Mechanisms and Consequences**



DON EA Process Improvement Opportunity



Use of DON EA

- **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

Inform and Effect Programs as Early in Lifecycle as Possible



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



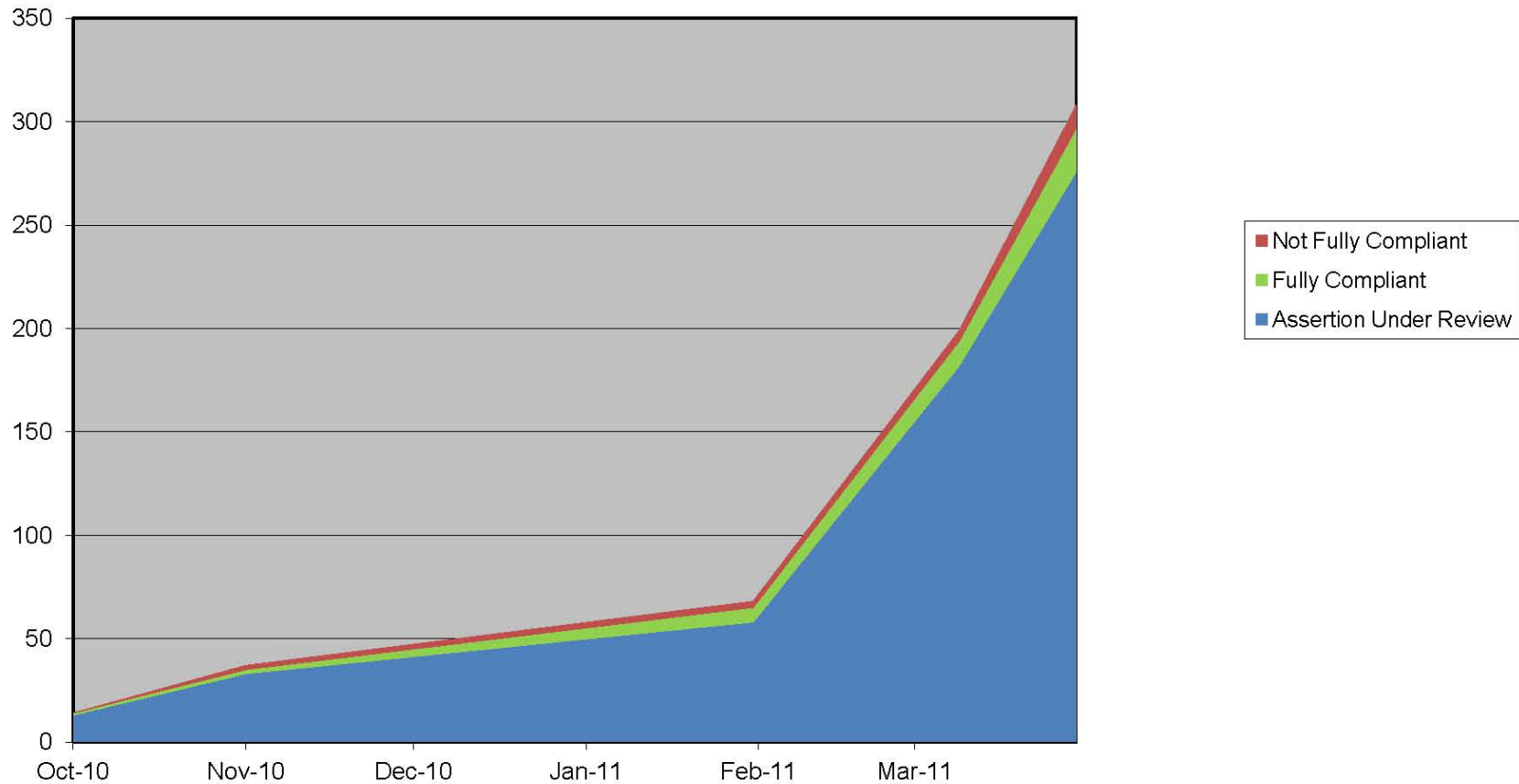
DON EA Metrics

- **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





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**

EA “Project Team” Needs Assistance with Management of Diverse Set of 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**

**Improvement
Opportunity**

Think Carefully About How Artifacts Will be Used



DON EA Process Improvement Opportunity



DON EA Applicability and Usage Guide

- **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

Optimize Processes Whenever Possible



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



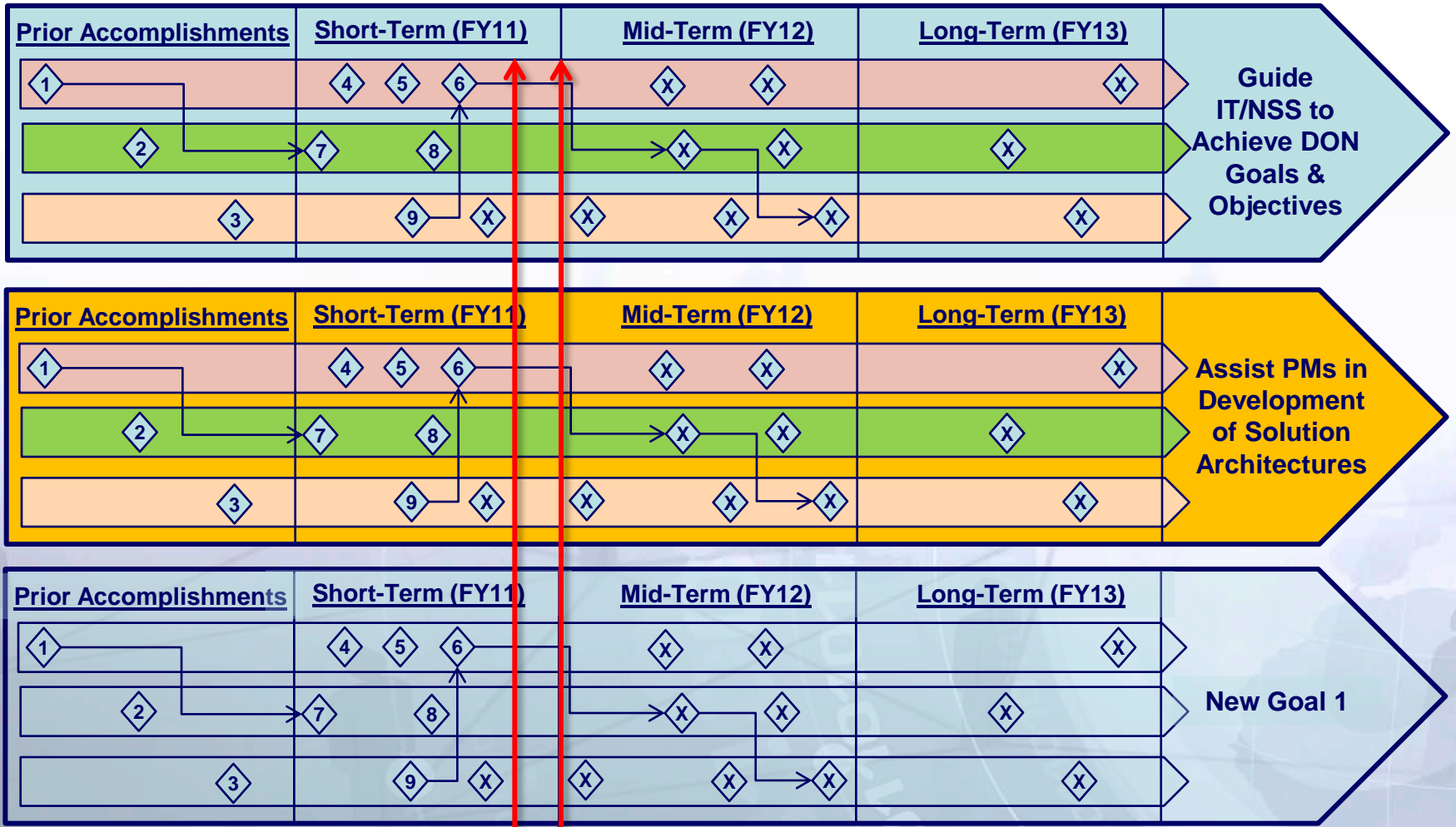
Challenge – Lack of Common Understanding of Path Ahead by All Stakeholders

- **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)



- 1. LRP G X
- 2. DoDAF 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!



Unclassified



QUESTIONS?

