Applications Framework Process;
The migration of DoD C2 Programs and Initiatives to a Net-Centric Capability-based Environment

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June 2005

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Problem Statement

• Point-to-Point architecture with current analysis processes coupled with management of programmatic milestones will not allow DoD to achieve transformation

• The DoD requires an information environment that allows for:
  – Agile, robust, interoperable and collaborative
  – Sharing of knowledge between war-fighter, business, and intelligence users
  – Combined capabilities from multiple services to form new capabilities
  – Process for programs to be “Born Joint”

• Must leverage very significant investment in legacy applications

DoD requires approach to Migrate & Transition Legacy Applications to Net-Centric Capabilities
Goal

- Process to evolve from current Point-to-Point DoD IT inventory to utilization of NCES infrastructure
  - Establish model to populate GIG with services for:
    - Increased information sharing
    - Improved decision-making activities
    - Improved self-synchronization of participants
  - Map to existing business aspects of Department in systematic manner
    - KPP, Requirements, UJTL’s
  - Combine capabilities from multiple services to form new capabilities and value-added services
    - Combine and tailor services on demand to meet mission requirements.
  - Leverage legacy application investment
    - Migrate Legacy Applications to Net-Centric Services
Migrate Legacy Applications to Net-Centric Services

**Application Framework Process**

1. **Populate Reference Model**
   - Managed & Evolved C2 Capabilities
   - Upgraded & New capabilities
   - Managed & Evolved C2 Capabilities

2. **Identify Focus Area**
   - Specific goals & objectives
   - Change requirements to C2 capabilities: (gaps, shortfalls, duplicates)

3. **Assess Focus Area**
   - Prioritized Solution Alternatives
   - Prioritized alternatives

4. **Synthesize Solution Alternatives**
   - Prioritized Solution Alternatives with associated risks
   - Applied solutions, Emerging solutions, R&D

5. **Evaluate Alternatives for ‘Best of Breed’**
   - Managed & Evolved C2 Capabilities
   - Implemented capabilities

6. **Implement Selected Alternatives**
   - Implemented capabilities
   - Applied solutions, Emerging solutions, R&D

7. **Update Reference Model**
   - Managed & Evolved C2 Capabilities
   - Managed & Evolved C2 Capabilities

**Portfolio for Implementation, IAW Budgeting and Acquisition**

**National Strategy, Threat Environment, Policy, Guidance**

**Net-Centric Compliant (NCOW-RM)**
1. Populate Reference Model

- Perform requisite Functional Analysis to determine Departmental C2 functional needs
  - Construct C2 business model for Department
- Identify inclusive and exhaustive set of C2 capabilities required to meet functional needs
  - Ongoing continuous process of discovery and update
- Identify **HOW** these needs are currently met
  - Is each need actually met?
  - Is need met with a legacy application?
  - Is need addressed within Planned or Development activity?
- Extend existing NCOW Reference Model to represent this information
2. Identify Focus Area

- Identify area of focus within extended Reference Model
- Prioritization of focus is based upon
  - National Strategy,
  - Threat Environment,
  - Policy,
  - Guidance
- Identify functions employed within this ‘Focus Area’
  - As identified within Reference Model
- Identify supporting capabilities required by these functions
- Identify specific goals and measurable objectives that focus area must achieve
  - Bound focus area for subsequent assessment
  - Establish evaluation criteria
3. Assess Focus Area

- Establish appropriate scenarios and use cases required to assess focus area
  - Reused as possible; made available for subsequent reuse
- Construct focus area within assessment environment
- Insure that assessment generates necessary information according to evaluation criteria
- Execute assessment and collect measurement results
- Analyze results with respect to established goals and objectives
  - Identify potential capability gaps, shortfalls, and duplication
4. Synthesize Solution Alternatives

- Collect gaps, shortfalls, and duplicates
- Identify potential solution alternatives from
  - Applied & existing solutions,
  - Emerging & under development solutions,
  - R&D
- Identify risks associated with each solution alternative
- Rank solutions by risks
- Develop recommended prioritizations of alternatives
- Group solutions alternatives
  - Insure consistent technical approaches within a group
  - Results in sets of solution alternatives for subsequent evaluation
  - Alternatives can be members of multiple groups
5. Evaluate Alternatives for ‘Best of Breed’

• Determine which group of solution alternatives are best choice to implement
  – Measure against scenarios and use cases developed in Focus Area assessment

• Decisions include Budgeting and Acquisition

• Consideration must include
  – If migration of capability necessary?
  – Is replacement under development elsewhere?
  – Can legacy ability be maintained in meantime?

• Solution Alternatives grouped into prospective portfolio
  – Rank ordered as to best meeting goals and objectives established for originating focus area assessment
6. Implement Selected Alternatives

- Identify selected Solution Alternative Portfolio that ‘best’ meets goals and objectives
- Develop risk mitigation approach
- Measure implementation of portfolio for contribution to objectives
  - Cost
  - Schedule
  - Technical performance
- Adjust portfolio elements as required to maintain
  - Baseline costs, schedules, risks, and performance
- Collect technical and programmatic decisions
  - For subsequent process improvement
7. Update Reference Model

- Update extended NCOW Reference Model with
  - Function additions, upgrades and removals
  - Capability additions, upgrades and removals
  - Technical and programmatic decisions
- Include information from
  - Completed portfolio implementation
  - Under development as reflected in element baseline information
- Prepare for identification of next ‘Focus Area’
Summary

• Applications Framework is a path to achieve migration to net-centric capabilities

• Requires commitment and awareness from DOD at level of Y2K
  – But ongoing Transformation already does!

• Successful execution depends upon governance and oversight integrated with ongoing budget and acquisition processes