



United States Transportation Command

Aligning, not Integrating Architectures: Leveraging a Common Language to Federate Disparate Architectures

May 1 2006

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Agenda

- Guiding Principles
- Challenges
- Federated Methodology & Solution
- Alignment Approach
- Systemic Analysis
- Maintenance
- Benefits & Conclusion





Guiding Principles

- ✓ Connect a series of disparate process architectures to uncover the end-to-end visibility of the broader distribution process
- ✓ Establish automated means to access, trace and display the information
- Utilize the information to expose potential systemic gaps, seams, overlaps and inefficiencies
- Maintain touch-points and configuration





Challenges

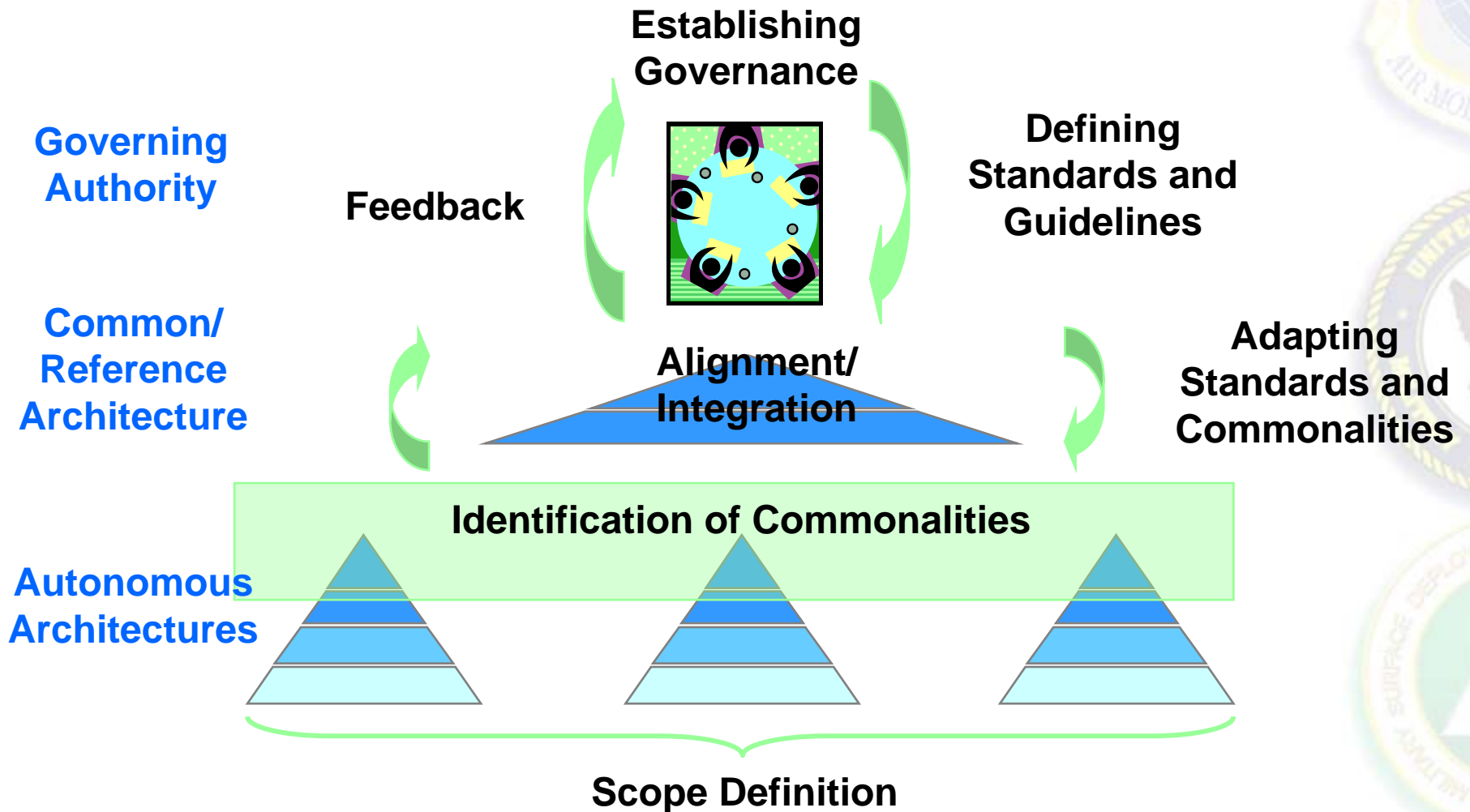
- DPO architecture and processes in CRIS (Corporate Resource Information Source)
- Logistics end-to-end (E2E) processes flow across independent service/agency architectures that are managed in a variety of applications
- Compliance requirements from Business Enterprise Architecture (BEA) and other policy architectures
- No disruption to ongoing service architectures
- Limited resources





Federated Methodology

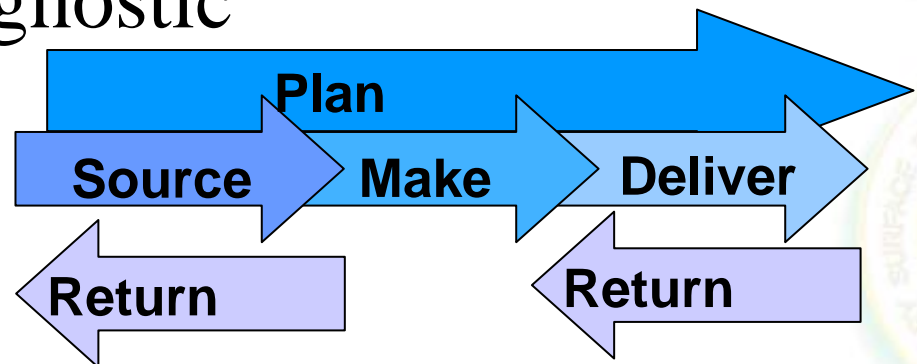
Iterative process that aligns existing architectures within a Federated Methodology.





Solution

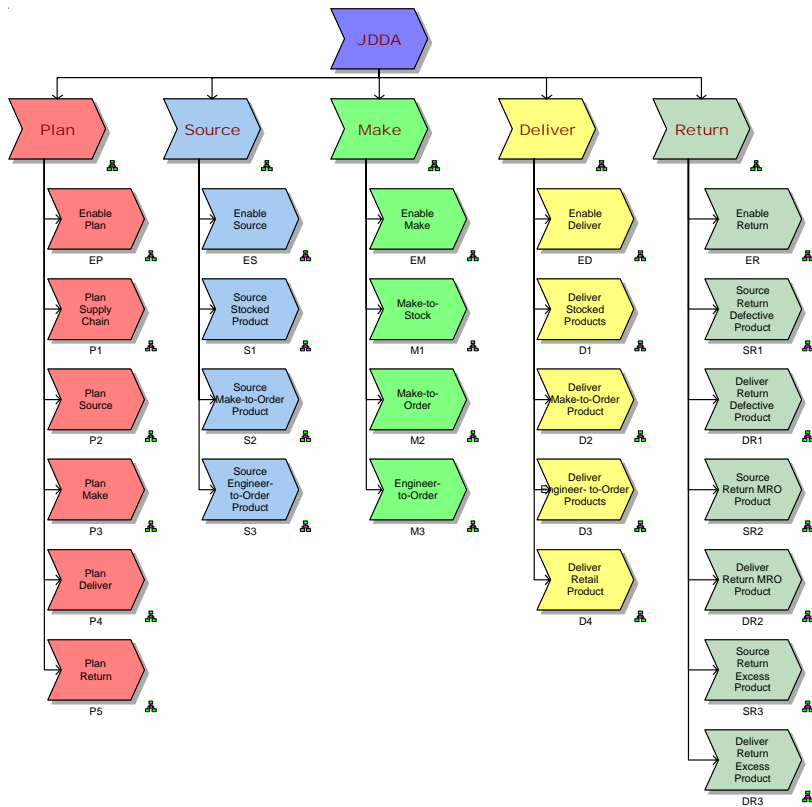
- Utilize ARIS as independent application that federates (aligns rather than integrates or duplicates) existing architectures
- Establish a tailored model representing DoD's Joint Deployment and Distribution environment founded on **SCOR**
- Web based, Tool Agnostic



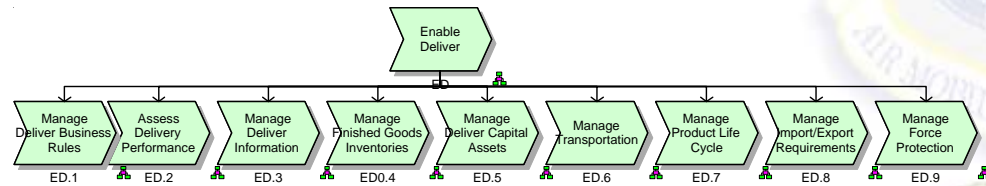


Structure by Levels

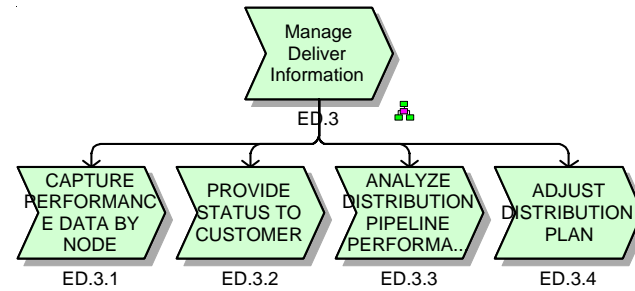
SCOR Overview Level 2



SCOR Level 3



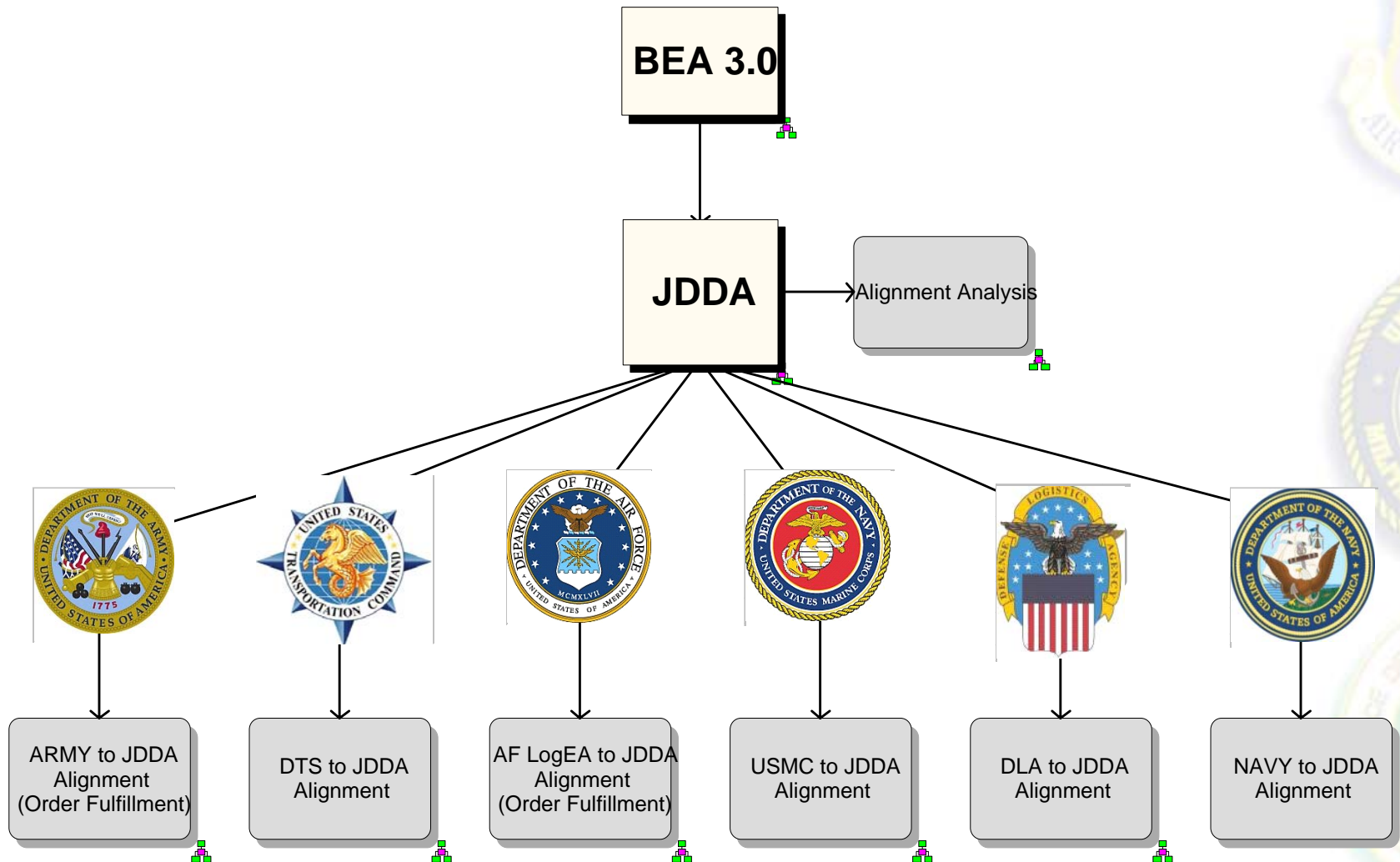
JDDA Level 4





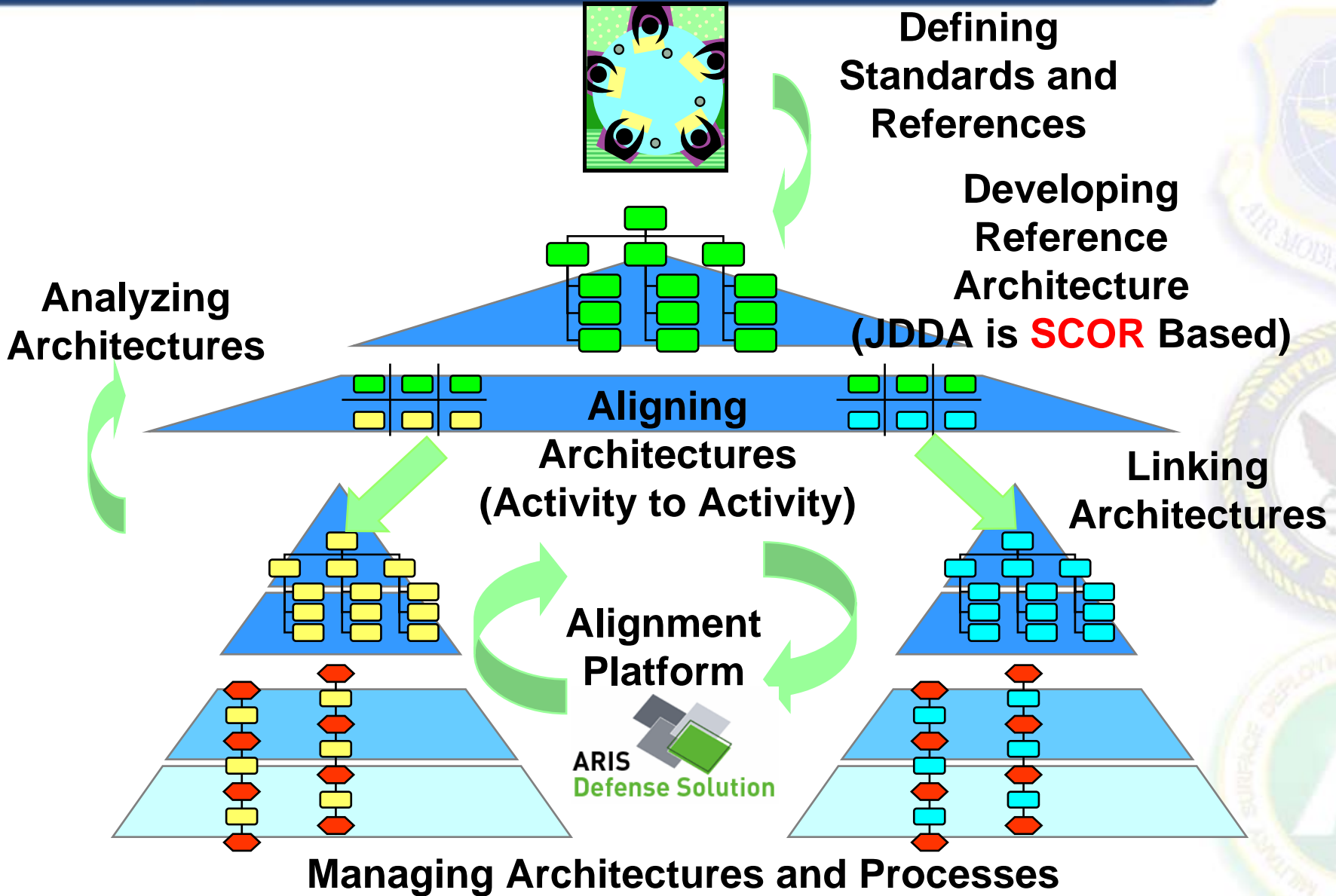
JDDA Alignment Tree

JDDA Alignment Architecture Overview





JDDA Alignment Approach





Resulting Environment

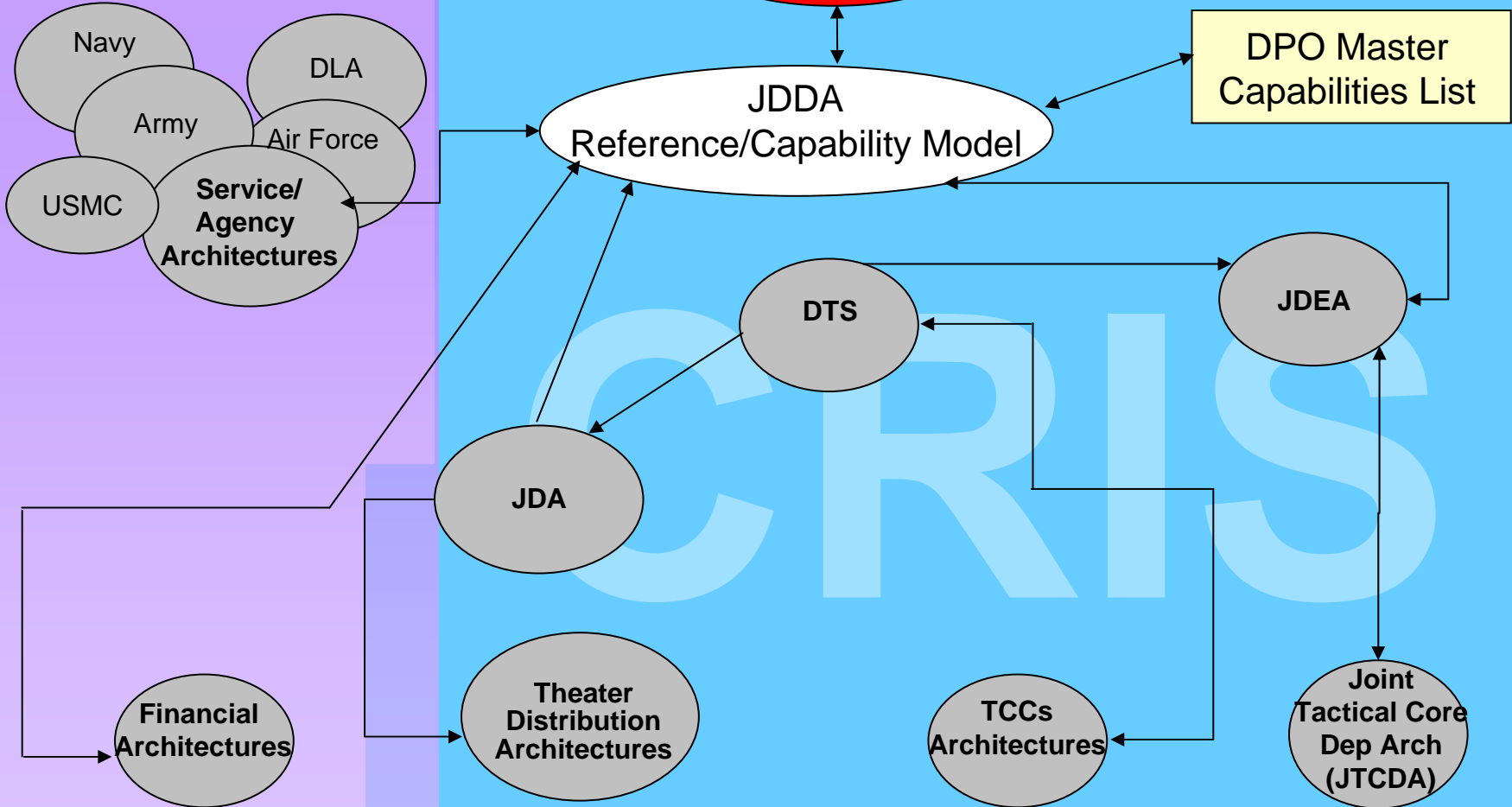
Business Enterprise Architecture (BEA)

Material Supply & Services

SCOR

ALIGNMENT

INTEGRATION





Systemic Analysis / Utilization & Value

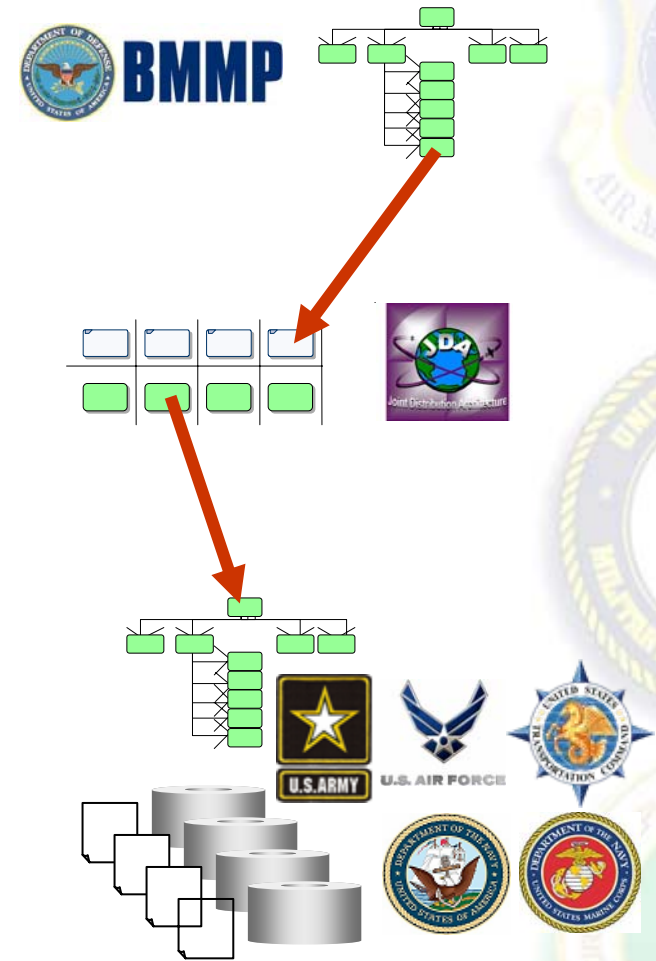
- Changing the Paradigm
 - From: Independent business unit driven, reactive, and system-centric
 - To: Proactive and focused on the complete supply chain process
 - Examples:
 - Policy Compliance
 - Capability Fulfillment
 - Process Comparison/Improvement





Policy Compliance Example

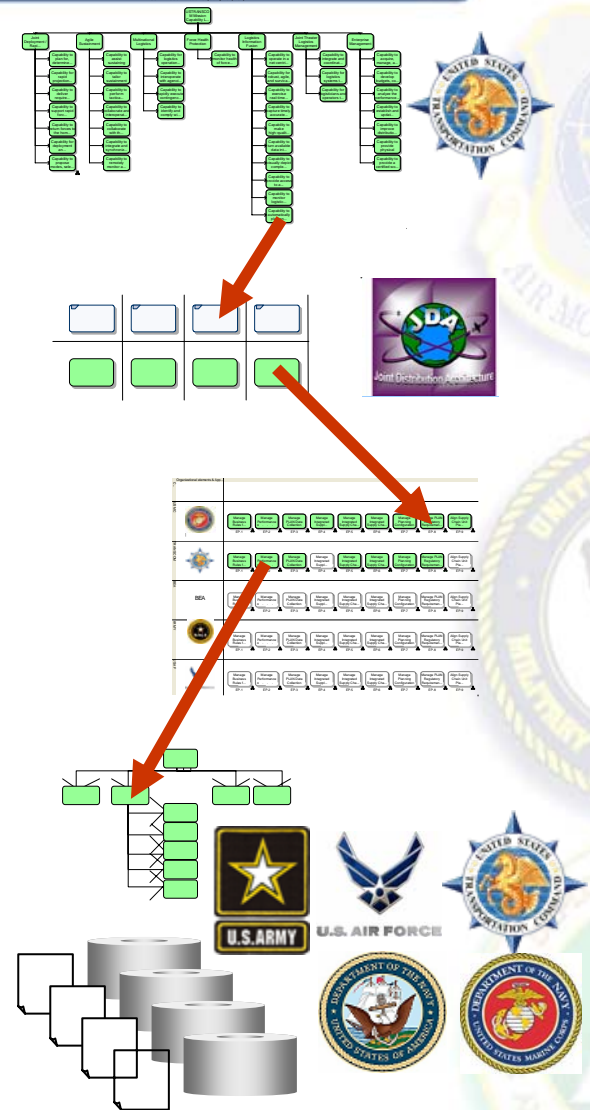
- Example Issue:
 - BEA 3.0 Mandated RFID Standards support by Service/Agency/CoCOM systems
- Analysis Steps:
 - BEA 3.0 aligned to JDDA
 - RFID standards compliance traced from the BEA through the JDDA, and into Service/Agency/CoCOM system views
 - Focus systems GATES, WPS
- Results:
 - Focus systems currently not actively supporting RFID standards in TV-1 profile
 - Program Managers of identified systems of requirement for standards support
 - Standards traceability established, potential feed in to program IPT reviews





Capability Fulfillment Example

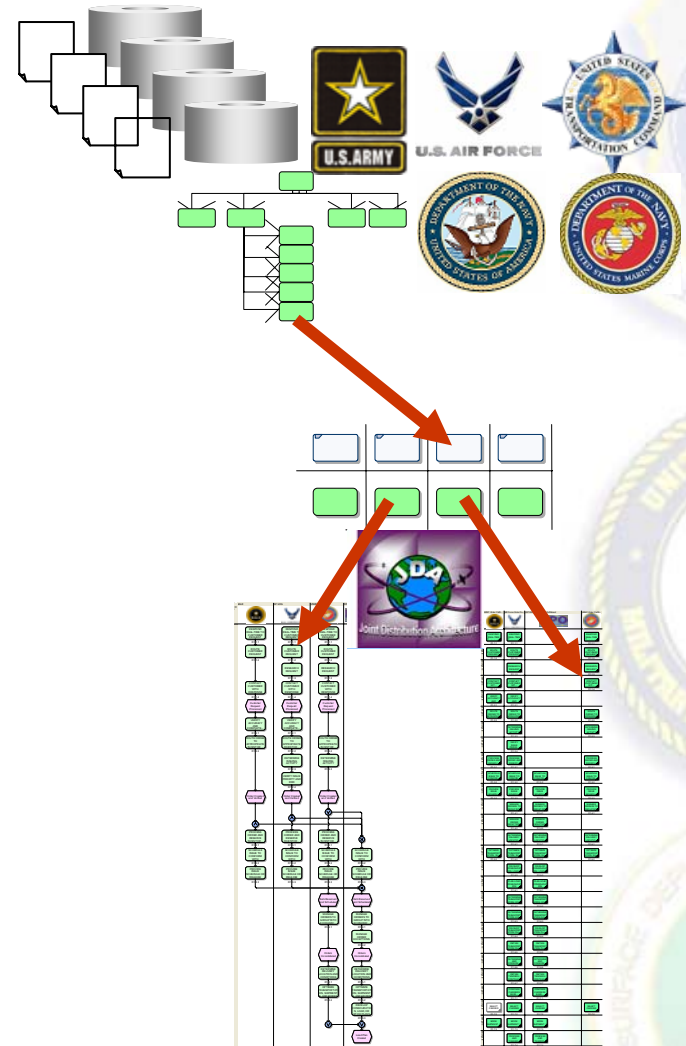
- Example Issue:
 - Service/Agency/CoCOMs support for USTRANSCOM Master Capability
 - Specifically C1G (Capability to propose modes, select routes and carriers, and dynamically schedule)
- Analysis Steps:
 - USTRANSCOM Capabilities are composed of JDDA activities
 - Service/Agency/CoCOM aligned to JDDA
 - Scope of “support” for a capability broken out by Service/Agency/CoCOM
 - System View information available in aligned Service/Agency/CoCOM architectures
- Results:
 - Identified coordination focus areas across the Service/Agency/CoCOM
 - Capability traceability established, potential feed in to program IPT reviews
 - Allows management by capability rather than by system/program





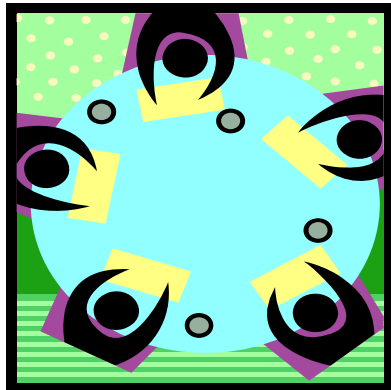
Process Comparison/Improvement Example

- Example Issue:
 - Enterprise-wide scenario documentation and improvement
 - Specifically Order Fulfillment across Service/Agency/CoCOMs
- Analysis Steps:
 - Service/Agency/CoCOM specific Order Fulfillment scenarios aligned to the JDDA
 - Scope of activities aggregated
 - Joint process flow aggregated
 - System View information available in aligned Service/Agency/CoCOM architectures
- Results
 - Potential Gap/Seams/Duplications identified across Service/Agency/CoCOM participants
 - Potential system to system interfaces and data exchange identified
 - Complete picture of broader Supply Chain allows true process improvement, avoids domain specific optimization





Maintaining Alignment



Rules of Engagement

- Purpose
- Working group
- Monitor changes
 - SCOR
 - JDDA ref model
 - Component architectures
- Access to tool
- Training





Conclusion and Outlook

- SCOR provided a common language & glue
- JDDA reference architecture is flexible and adaptable, vertically and horizontally
- Alignment results can be put to work now
- Analysis methods and tools are under development to further create architecture value
- Structured efforts required to maintain the Federated Architecture work
- Aligned architectures are working and Federated Architecture is achievable

Provides “card catalog” to library of processes

