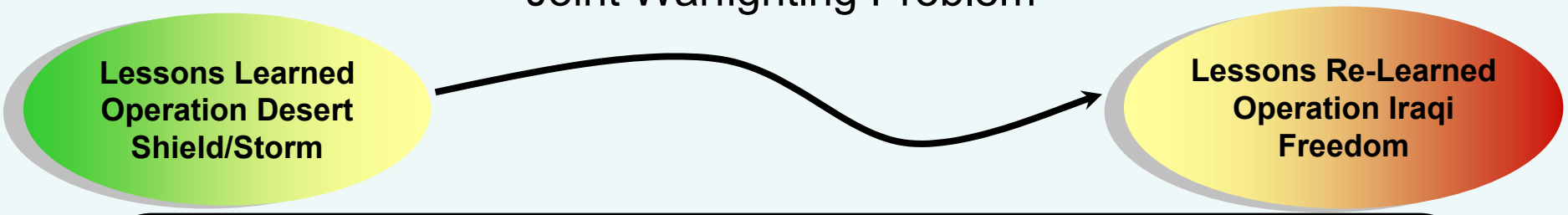
Operationalizing Force Projection in a Netcentric Environment

Col Ed Hatch
USJFCOM J9 JDPO

Joint Warfighting Problem



"Deployment Planning & Execution is Cumbersome - Needs to improve to meet the 21st century operational demands"

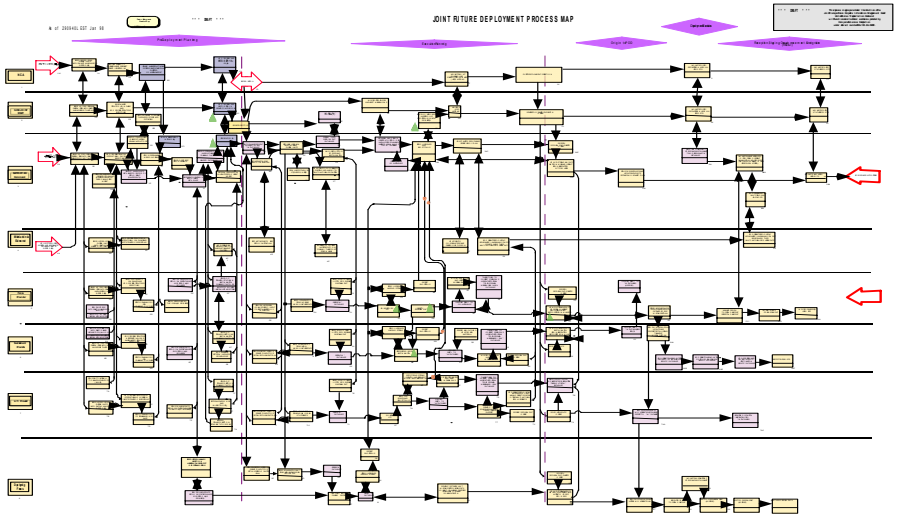
General Tommy R. Franks, USA
Summary of Lessons Learned for the
Senate Armed Services Committee, 9 July 2003

"The current joint deployment planning and execution process was not sufficiently flexible, transparent, user-friendly, or disciplined to accommodate conditions experienced in this contingency…. Consequently, despite vast amounts of energy invested by CENTCOM, TRANSCOM and others, demands for flexibility and adaptation outpaced existing processes."

Joint Lessons Learned
Operation Iraqi Freedom Major Combat Operations
Joint Forces Command. 01 March 2004

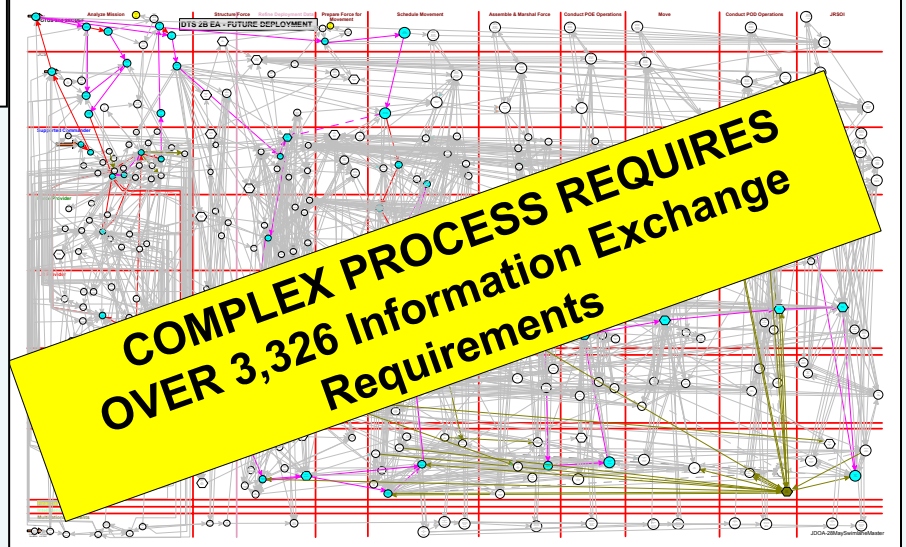
Joint Deployment Process Complexity

Joint Deployment Process Map



Service and Functional Stovepipes have led to a system that lacks:
- **Flexibility**
- **Agility**
- **Responsiveness**

Joint Deployment Process Complexity



23 Major Stakeholders
170+ Supporting Systems
183 Major Process Activities
3000+ Information Exchange Requirements

The Vision For Force Projection

Today's Reality

- **Unwieldy** process for ***capability*** and ***risk*** decisions
- Action officers are data ***collectors***
- Management by ***PowerPoint*** *and* ***Excel spreadsheet***
- Typical response time measured in ***weeks & months***.
- ***"Soda straw"*** visibility of force capabilities and deployment flow
- Track and monitor "***pieces and parts"***
- Service ***unit*** oriented ***regional*** focused force management
- Insufficient, uneven, and untimely visibility of ***Reserve Component*** (RC) capability and pre-mob actions

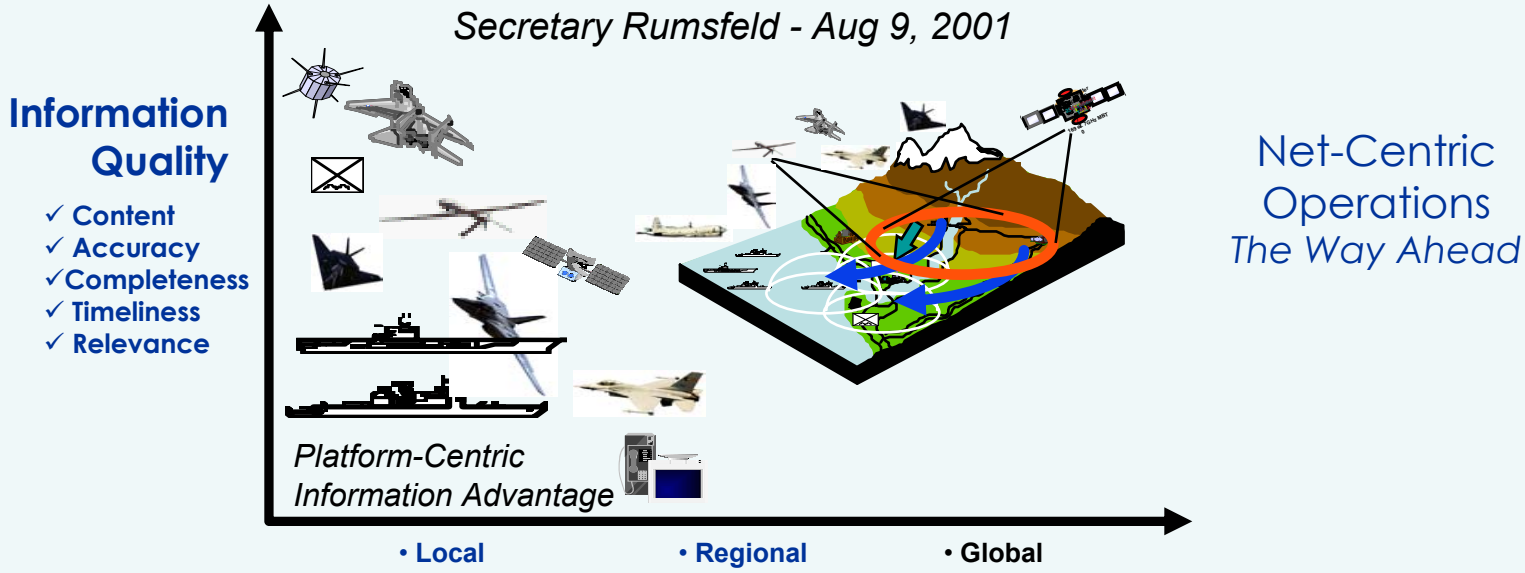
Future Capability

- ***Responsive*** process for ***capability*** and ***risk*** decisions
- Action officers are data ***analysts***
- Manage by continuous access to ***decision quality information***
- Response time measured in ***hours/days and maybe weeks.***
- "***Holistic"*** visibility of end-to-end deployment flow
- Track and monitor ***operational capabilities***
- Service and Joint ***capabilities*** oriented ***Global*** Force Providing / Management
- ***Total Force availability*** and ***capabilities*** are known/visible

Net-Centric Vision

"The ***two truly transforming things***, conceivably, might be in information technology and information operation and ***networking and connecting things in ways that they function totally differently than they had previously***. And if that's possible, what I just said, that possibly the ***single-most transforming thing*** in our force will not be a weapon system, but ***a set of interconnections*** and a substantially enhanced capability because of that awareness."

Secretary Rumsfeld - Aug 9, 2001



Goals of Net-Centricity

- **Make information available on a network that people depend on and trust.**
- **Populate the network with new, dynamic sources of information to defeat the enemy.**
- **Deny the enemy comparable advantage and exploit weaknesses.**

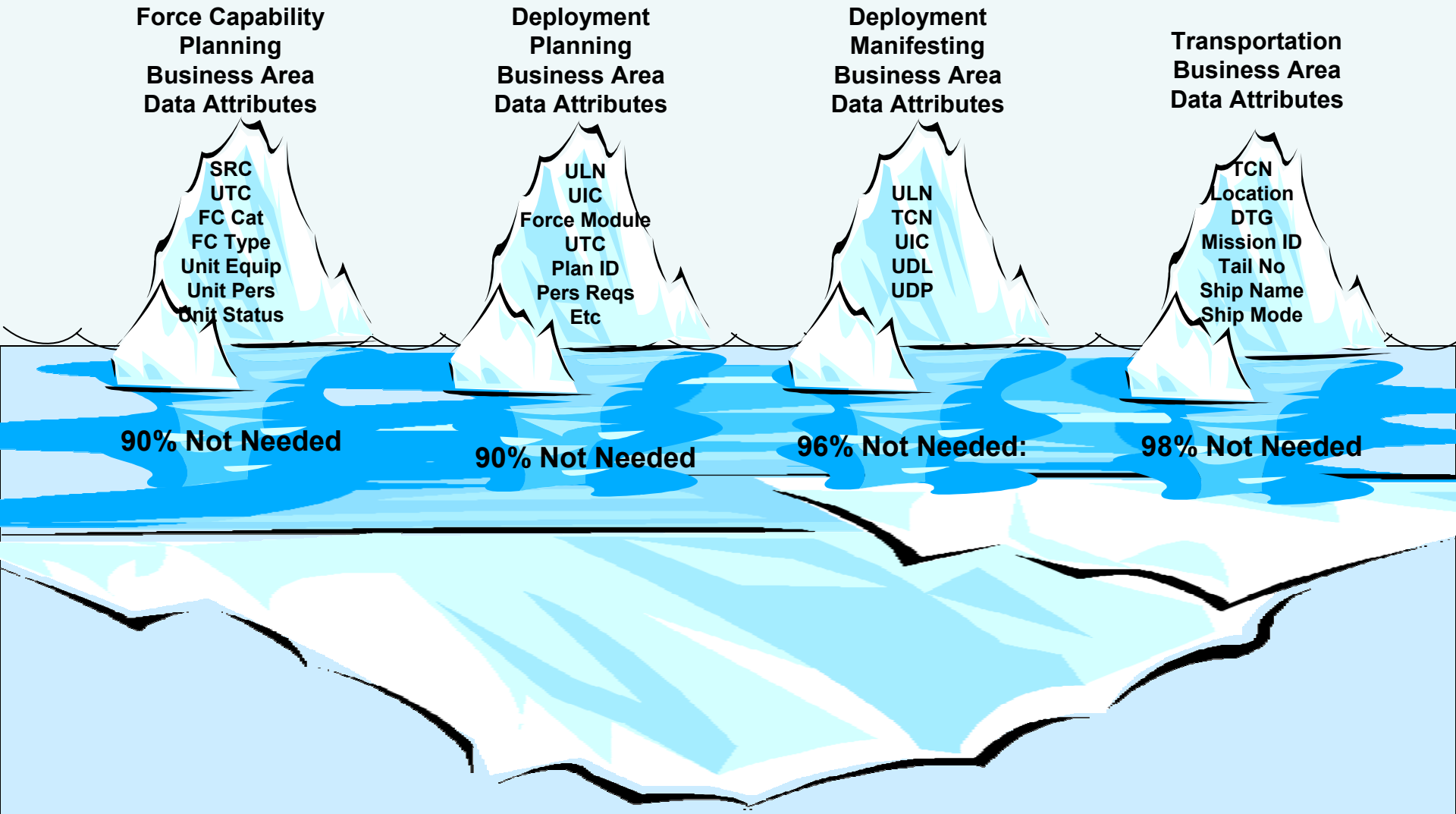
Net-Centric Approach to Force Projection

Current systems are stove piped and application centric; must move to net centric world where data is transparent. Transparent, web enabled data will…

- **Facilitate improved decision making**
  - Accurate deployment estimates
  - Compress planning timelines
  - Increase strategic responsiveness
- **Enable dynamic deployment and force rotation planning**
  - Increased visibility of what is available to move
  - Simplify answering "what if" scenario's
  - Realize potential of tactical level joint planning
- **Improved transportation support**
  - Accurate lift planning estimates
  - Optimize airlift / sealift decisions
  - Provide near real time force tracking from Origin to Final Destination

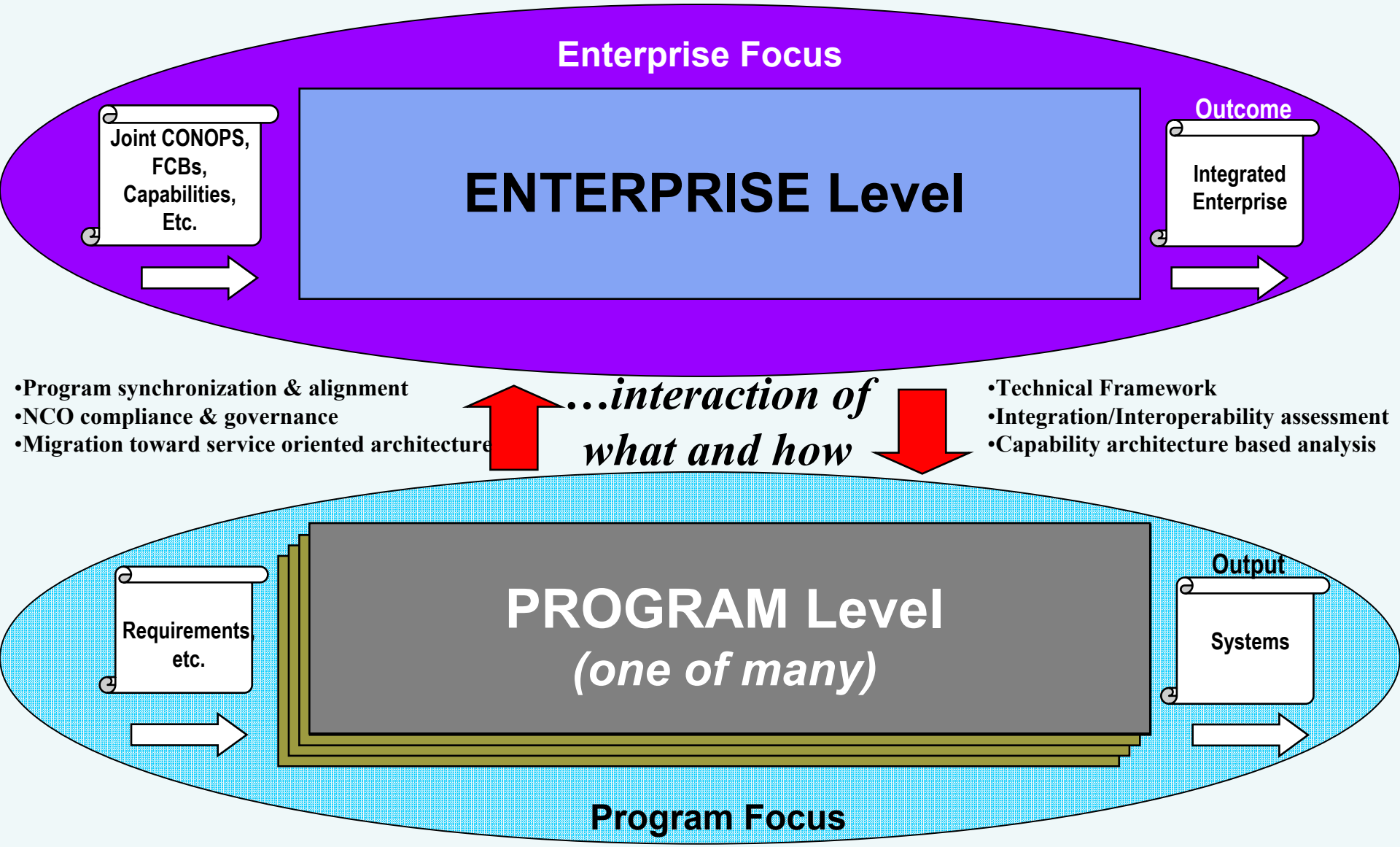
It's All About the DATA!

Net-Centricity Data Exposure Requirements



BOTTOM LINE: Only a small fraction of individual system data elements require exposure to support Force Projection net-centricity requirements

Enterprise & Program Relationship



Top Down/Bottom Up Collaboration to Achieve Capability Enhancement

Simultaneous Efforts

- **Joint Deployment Protoyping**
  - Information Provided Earlier with More Detail
  - Defined, Understood Data Attributes & Data Relationships
  - Much larger step to an operational environment
  - Smart Push / Smart Pull
  - Live operational data separate from its application, available by a web browser and the right permissions
- **Joint Force Projection ACTD**
  - Technology demonstration to provide the data interoperability and integration across the entire process
  - Key enabler to vision of JC2
  - Brings together a single joint solution vs. having 4 Service solutions that need to be integrated later
- **JDS Mission Area Initial Capabilities Document**
  - Captures the “As-Is” baseline deployment process
  - Identifies the Primary Thread, and related systems in the JDS FoS
- **Force Projection Community of Interest**
  - Data accessibility, visibility and transparency
  - Standard Taxonomy
  - Define data standards
  - Establish connectivity agreements with source system

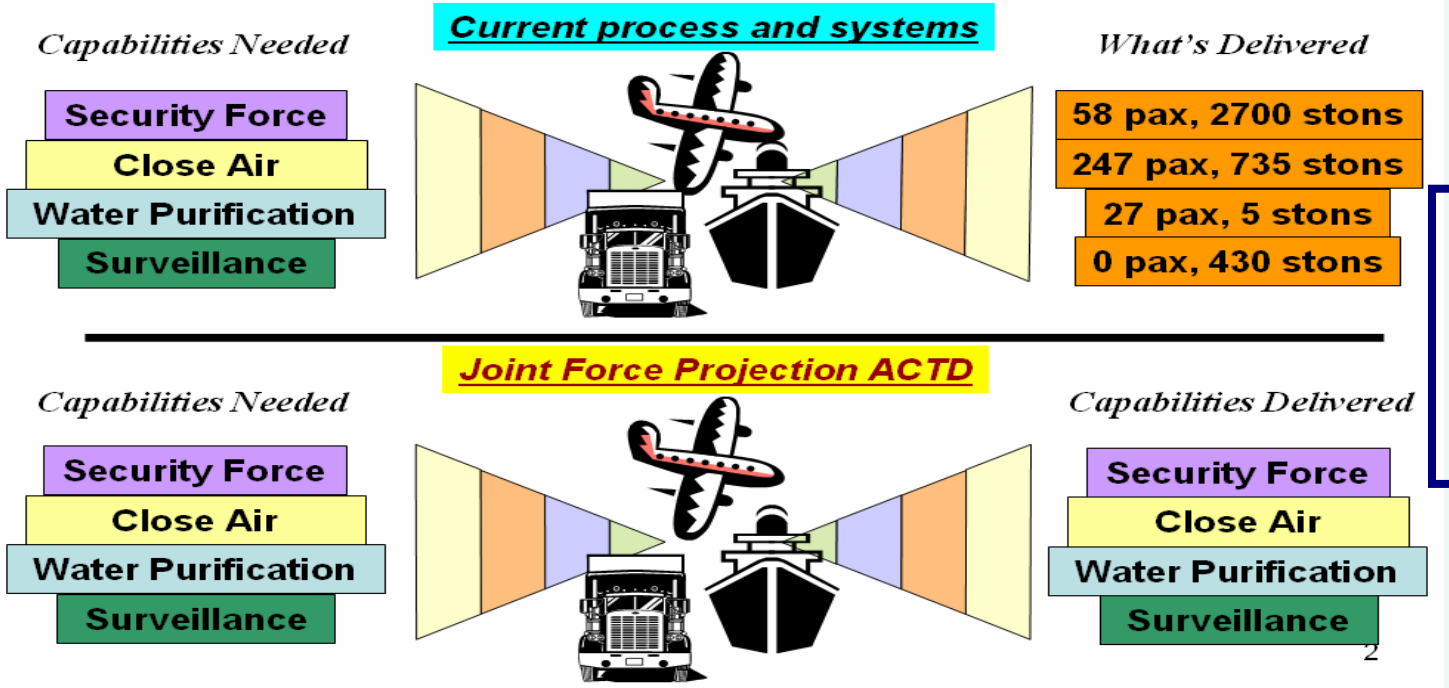
Joint Force Projection J9

FY 05-06, Transition FY 07

GOALS

Identify required ***Joint Force Projection Enterprise Services*** for Net-Centric Operations (FP MCP for JC2)
Demonstrate initial ***Modeling & Simulation*** capability for joint deployment planning and execution
Demonstrate initial ***Joint Reception, Staging, Onward Movement, and Integration (JRSOI) Planning*** *capability*
Ensure ***Enterprise Integration*** of Joint Deployment Family of Systems (FoS)

Pilot MCP (web-service) for JC2



Integration of mature technologies to solve a complex problem

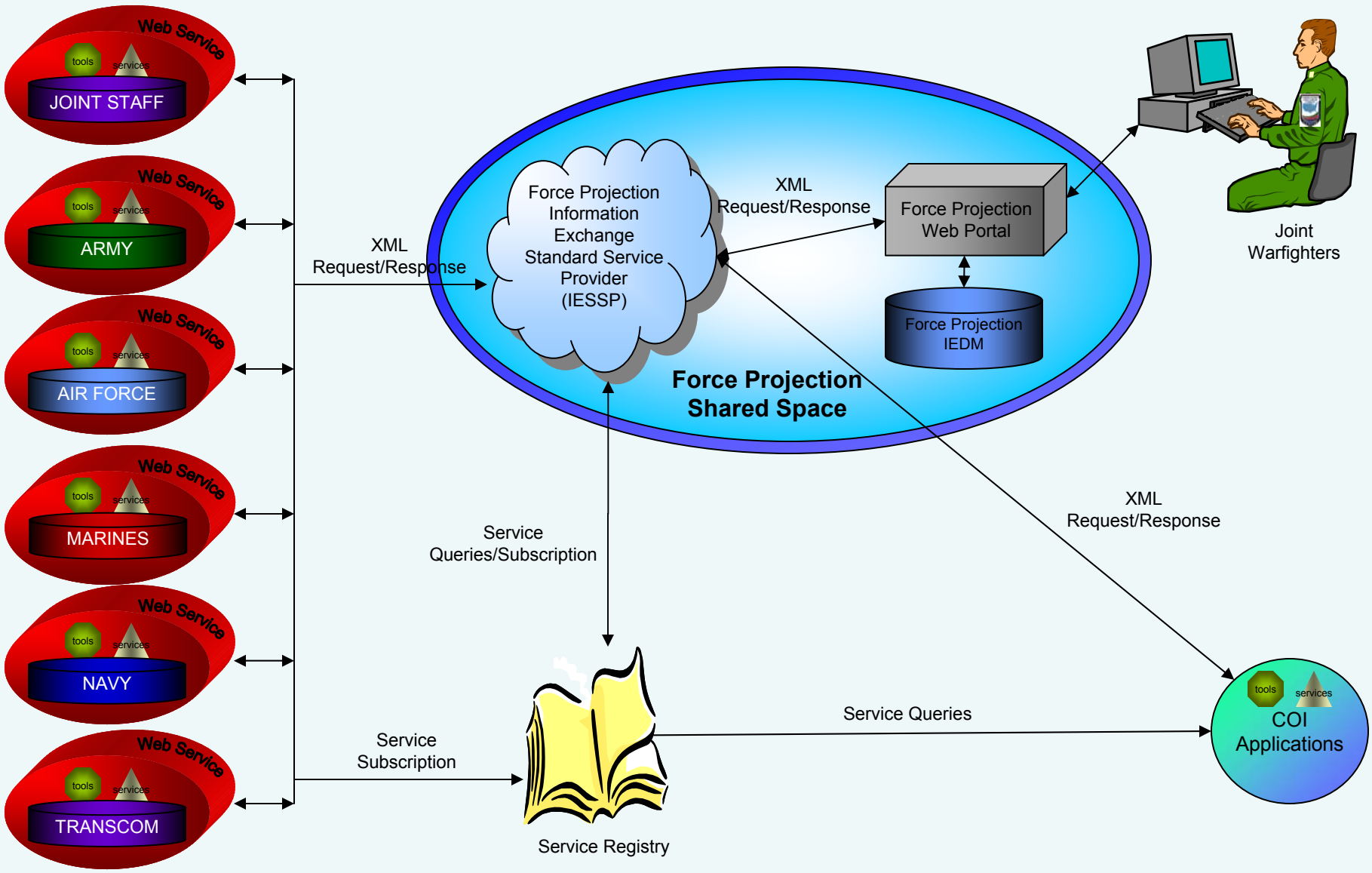
Capabilities

- End-to-end planning and execution of JDP
- End-to-end mod & sim of JDP
- Joint JRSOI tool
- Enterprise (Database) Integration

Systems/Hardware

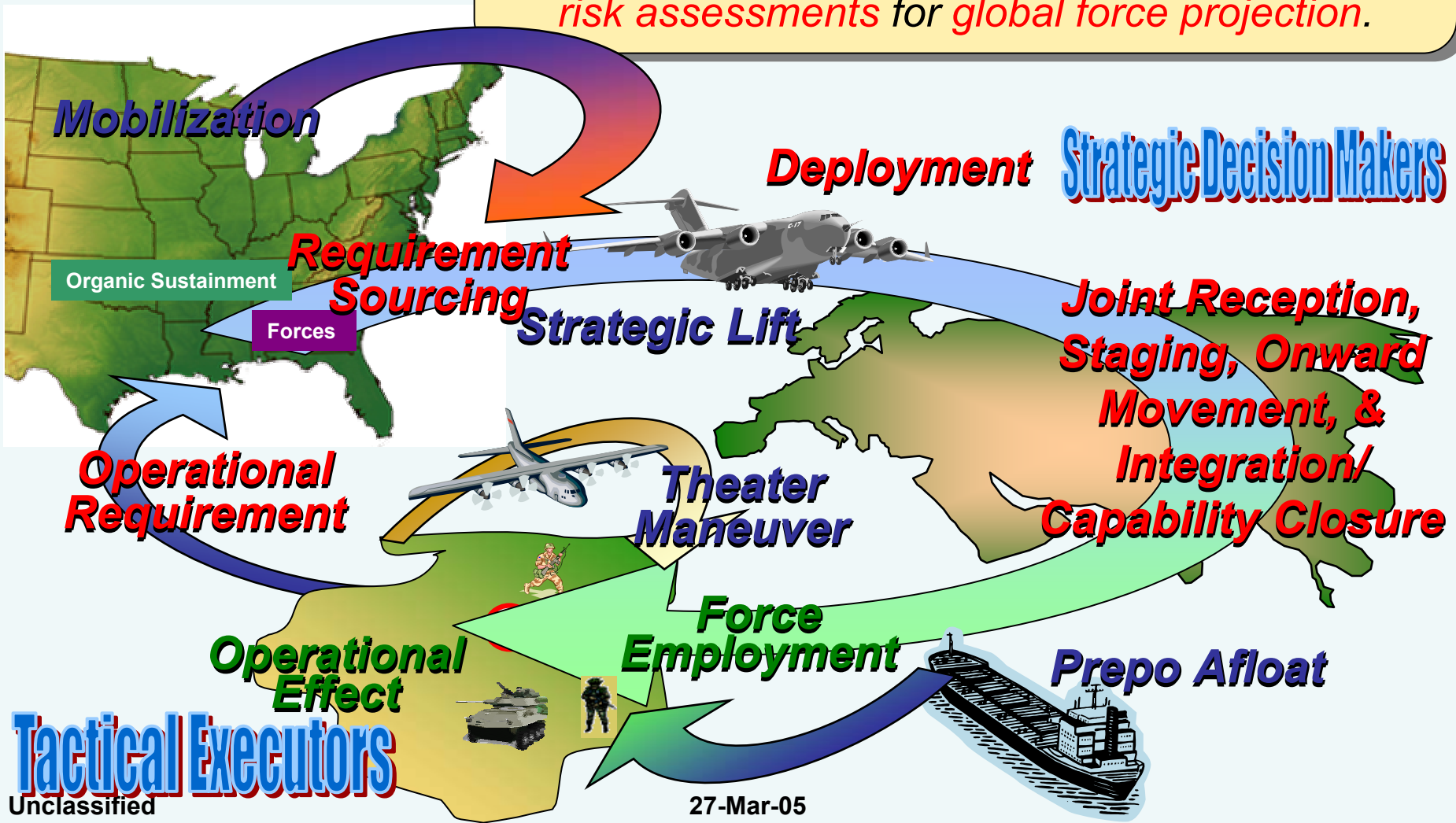
- Web-portal – One-stop Force Projection tool (JC2 MCP)
- Database Integration (XML)
- Smart search tools
- JRSOI planning and execution tool
- Mod & Sim tool suite
- Associated server architecture

Force Projection COI



Joint Force Projection Vision

A responsive and adaptive, knowledge-based process that enables decision-makers at all levels the ability to make timely, accurate decisions and risk assessments for global force projection.



BACKUP Slides

JFP ACTD

-- Executive Summary --

Objective: Provide warfighters a simple, timely, comprehensive understanding of deployment and distribution information. Increase their ability to see and influence the sourcing, projection and integration of Force Capabilities.

Why an ACTD?: Before we can exercise sufficient control over the deployment and distribution pipeline from end to end, we must integrate the stove piped processes, systems and data underlying the pipeline

The Product: A single integrated force projection picture that links operators and logisticians at Service, Joint, and Agency levels by using real time, web-based, and network-centric information systems.

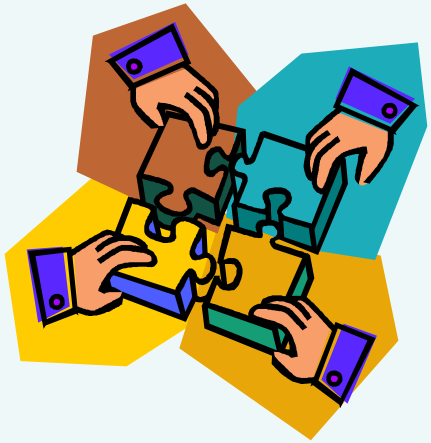
The Expected Result: Supported joint force commanders will be provided a significantly higher degree of certainty that required forces, equipment, and sustainment will arrive where needed, on time, and prepared for employment.

JFP ACTD

-- Primarily Integration Not Development --

Programs that may be included:

• CFAST	• JCRT	• ASPEN
• AT-21	• DRRS	• CTL
• GTN-21	• JESS	• JTL
• ELIST	• CORSOM	• JL
	• JWARS	



The missing piece is the seamless linkage between them

Using net-centric solutions and mature technology, JFP will provide the capability to monitor, model, simulate, and execute joint force deployments

JFP ACTD

-- Expected Results --

Single web-portal for joint force projection information need.

- Designed for all joint force projection users
- Eliminates need to have multiple systems to get the full picture
- Supports full spectrum of operations
- Single system for operations and training/exercises

Tools for Shared Visualization of the Deployment Process

- All users can share common view of the current deployment status
- Commander's intent clearly communicated to all echelons
- Allows for precise measurements of performance to validate discipline

Single system to gain the full joint perspective

- Cross reference of base operating support assets
- Insight into mutual support issues

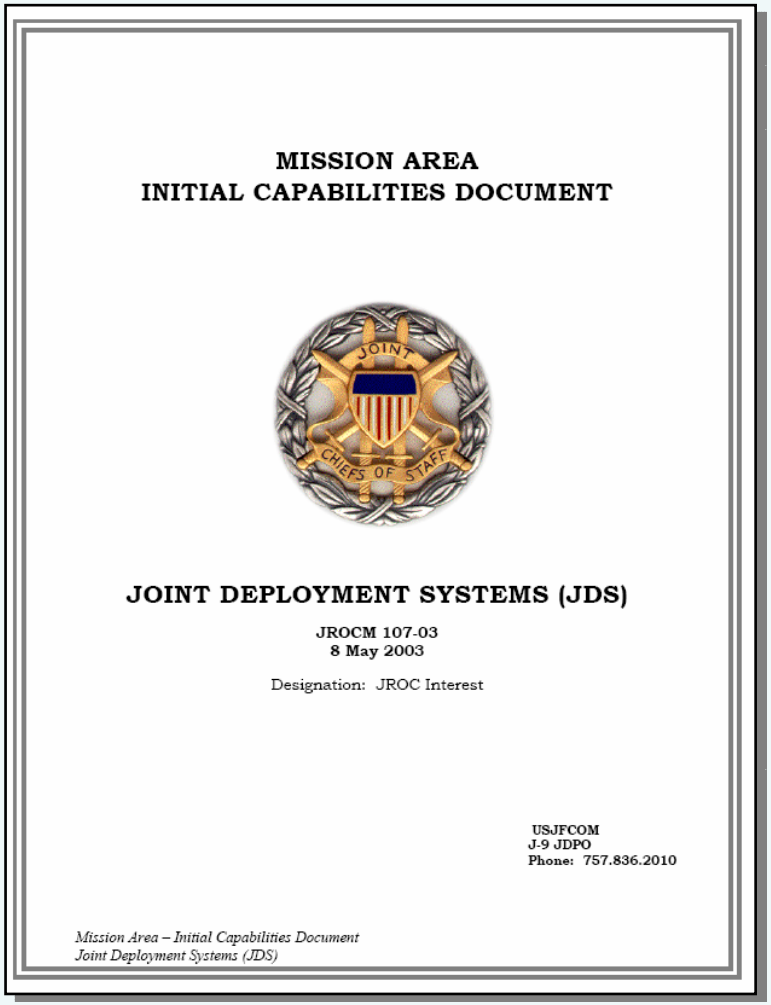
Tool suite for JRSOI operations

- Agile enough for any operation, in any theater
- Smooth the seam between strategic and theater distribution systems

Joint Deployment Systems

-- Mission Area Initial Capabilities Document --

- Describes the overarching interoperability requirements for joint deployment systems
- Facilitates integration of deployment systems at the tactical/ operational levels with applications supporting deployment and force projection at the operational / strategic levels
- Provides baseline criteria for the development of requirements documents for future and legacy deployment systems



MISSION AREA
INITIAL CAPABILITIES DOCUMENT

JOINT DEPLOYMENT SYSTEMS (JDS)

JROCM 107-03
8 May 2003

Designation: JROC Interest

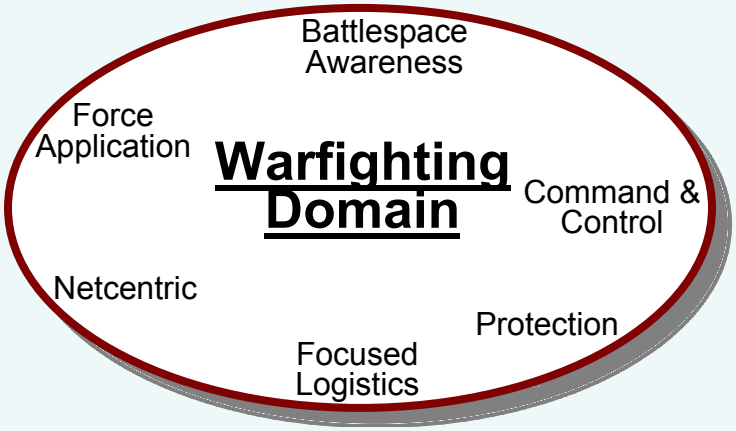
USJFCOM
J-9 JDPO
Phone: 757.836.2010

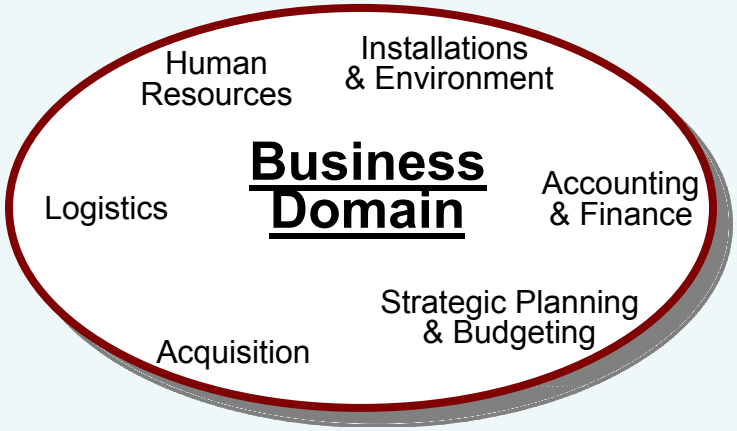
Mission Area – Initial Capabilities Document
Joint Deployment Systems (JDS)

IT Portfolio Management

22 March 2004 OSD Memo:
Establishes policy and assigns responsibilities for managing IT investments as 'portfolios', based on the [GIG] Integrated Architecture.

Applies to the six JWCA / Warfighting Domains, six Business Domains, and the underlying [GIG] Enterprise Information Environment.





Enterprise Information Environment

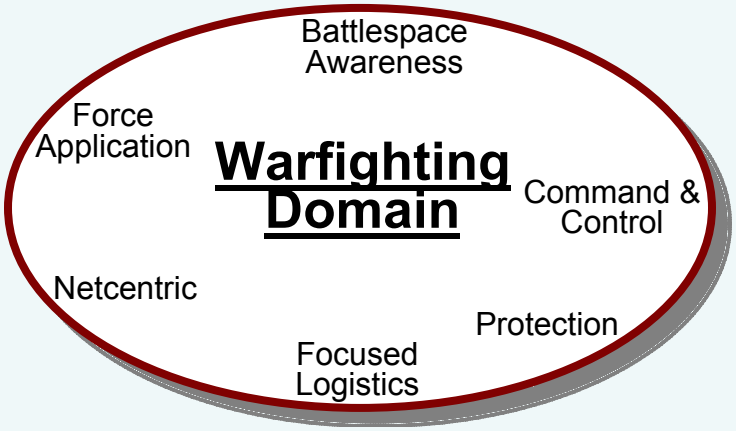
…Improved and timely IT investment policies area a cornerstone to enable change throughout the Department, assure that we have the right IT capabilities to perform our mission and conduct effective information operations, eliminate outdated ways of doing business, and achieve our net-centricity goals.

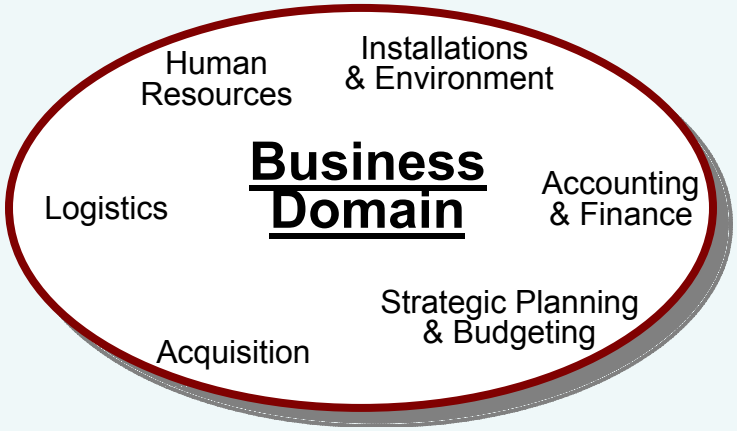
-- Mr. Wolfowitz, 22 March 2004.

IT Portfolio Management

JDPO Issue: Manage the sub-portfolio for Core Joint Deployment Systems (JDS) supporting the Primary Thread of the Joint Deployment Process (JDP).

Provides consistency of management oversight with the JDS MA ICD. Ensures that the same organization manages the JDP the IT sub-portfolio for JDS.





Enterprise Information Environment

Includes management oversight for systems outside the Distribution PfM lane, but impact / contribute to the JDP.

Builds a case for PfM of these systems with the Warfighting Domains.

BACKUP Slides
Deployment Problems

Strategic Planning

-- *Behind the Power Curve* --

Combat Team: 2,000 PAX, 4800 Tons

CDR: COURSE OF ACTION APPROVED

CDR: REQUEST FOR FORCES

SECDEF: SIGN DEPLOYMENT ORDER

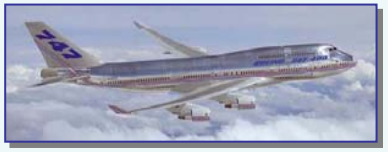
USTRANSCOM: DEPLOYMENT ACTIONS

D-60 D-50 D-45 D-40 D-30 D-20 D-10 D DAY

DEPLOYMENT SUPPORT

AIR

DEPLOYMENT SUPPORT



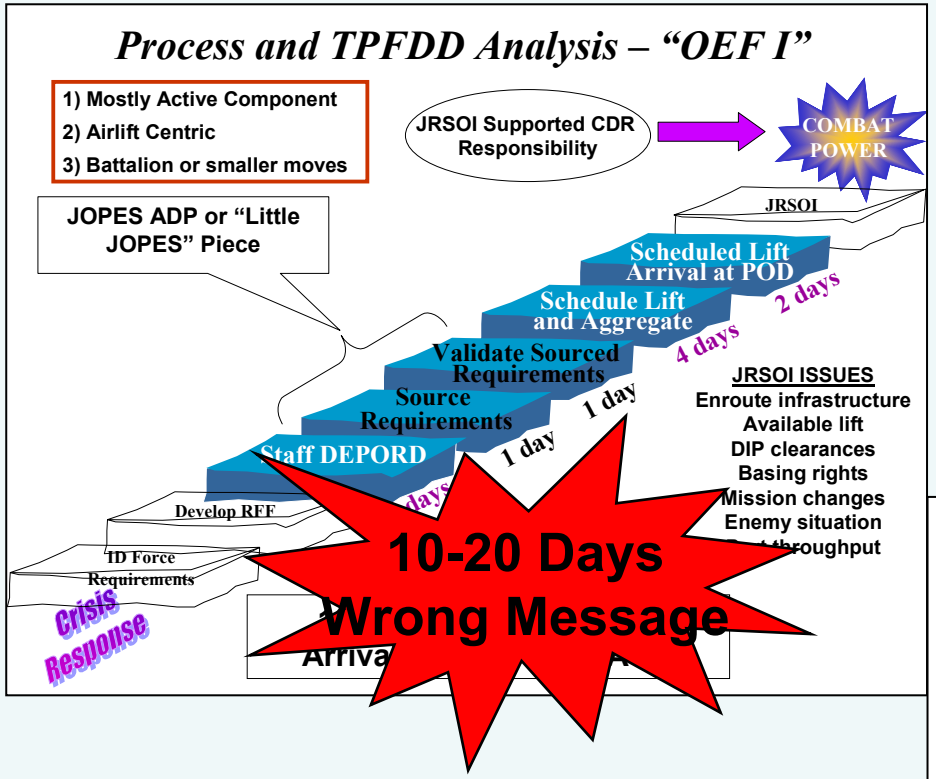
SEA/AIR

Data Transparency

We Want to Be Here…

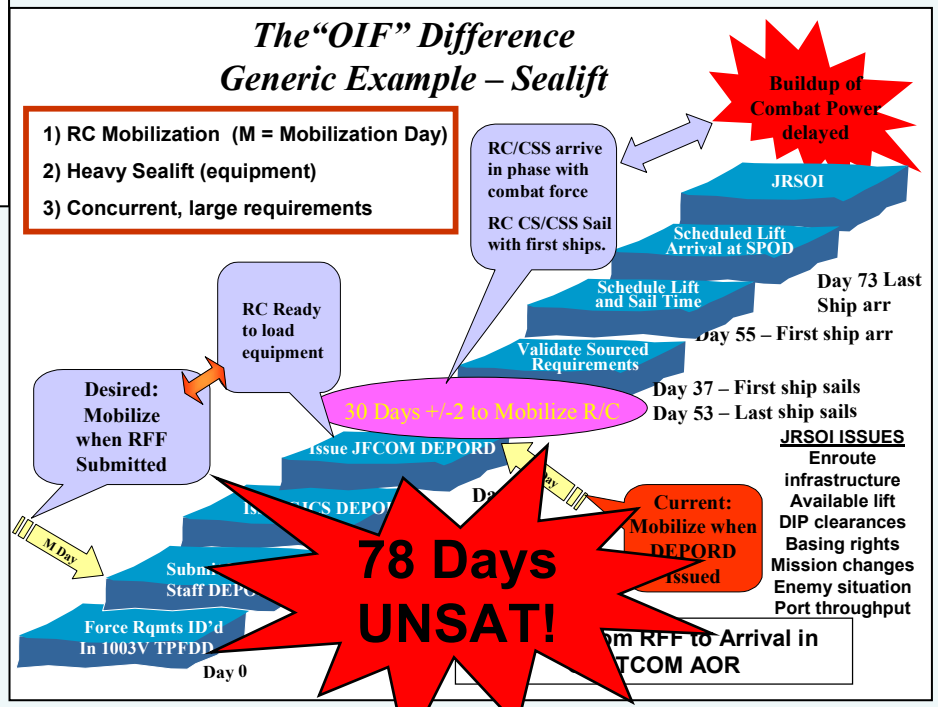
But We Typically Operate Here! --Compressed for Time

Crisis Response Still Too Long



Deployment Reality:

Operational requirements change during mission execution. Joint deployment process business rules and systems interoperability must be significantly improved to support a dynamic operational environment.



Improving decision making and initial deployment response time lay in improving

DATA TRANSPARENCY.

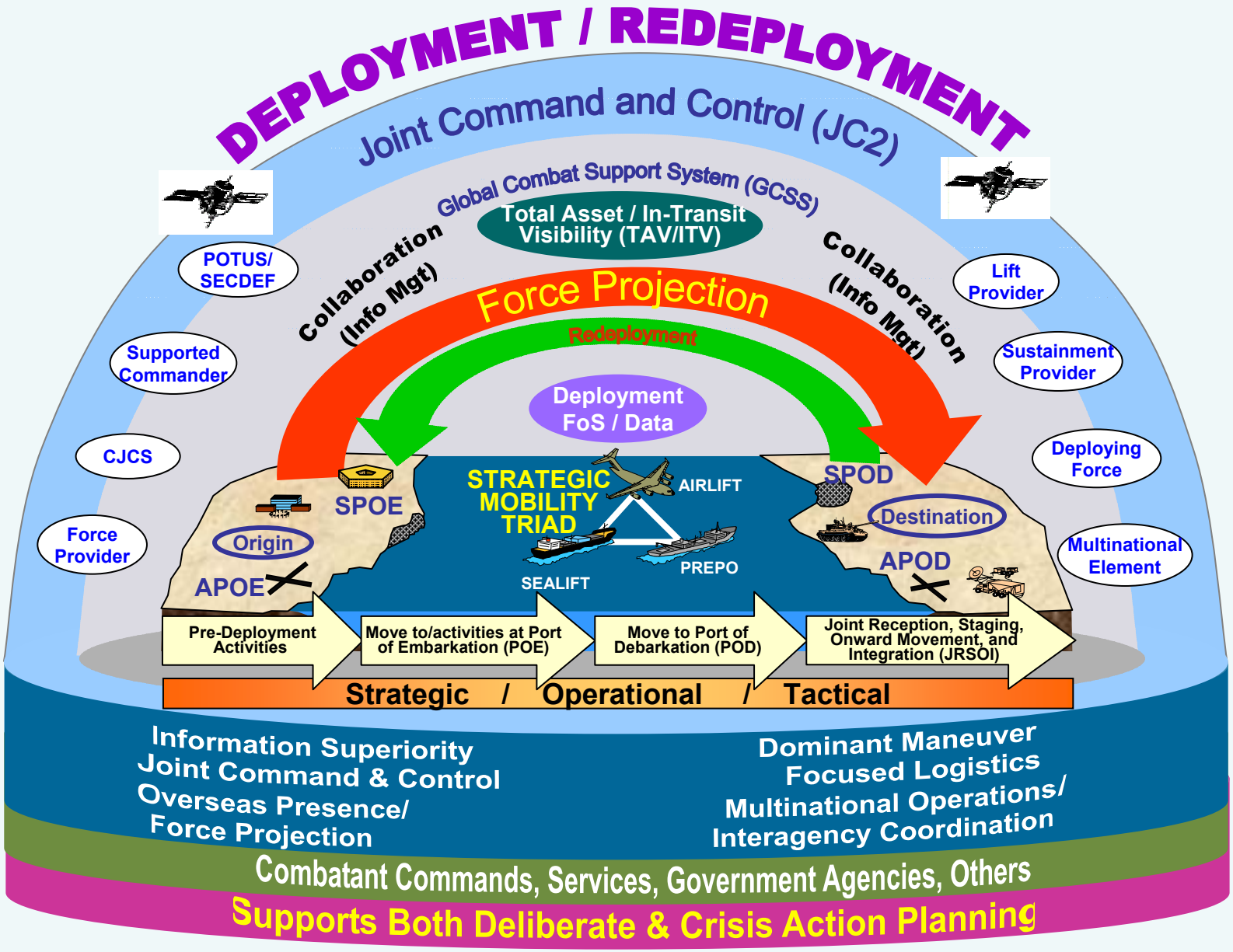
BACKUP Slides
Netcentricity

DoD's Net-Centric Data Strategy

- **The Net-Centric Data Strategy (signed May 9, 2003) provides the foundation for managing the Department's data in a net-centric environment, including:**
  - **Ensuring data are visible, accessible, and understandable when needed and where needed to accelerate decision making**
  - **"Tagging" of all data (intelligence, non-intelligence, raw, and processed) with metadata to enable discovery by known and unanticipated users in the Enterprise**
  - **Posting of all data to shared spaces for users to access except when limited by security, policy, or regulations**
  - **Organizing around Communities of Interest (COIs) that are supported by Warfighter, Business, and Intelligence Domains.**

BACKUP Slides
Joint Deployment / Force Projection

Questions?


DEPLOYMENT / REDEPLOYMENT
Joint Command and Control (JC2)
Global Combat Support System (GCSS)
Total Asset / In-Transit Visibility (TAV/ITV)
Collaboration (Info Mgt)
Collaboration (Info Mgt)
Force Projection
Redeployment
Deployment FoS / Data
POTUS/ SECDEF
Supported Commander
CJCS
Force Provider
Lift Provider
Sustainment Provider
Deploying Force
Multinational Element
STRATEGIC MOBILITY TRIAD
AIRLIFT
SEALIFT
PREPO
SPOE
Origin
APOE
SPOD
Destination
APOD
Pre-Deployment Activities
Move to/activities at Port of Embarkation (POE)
Move to Port of Debarkation (POD)
Joint Reception, Staging, Onward Movement, and Integration (JRSOI)
Strategic / Operational / Tactical
Information Superiority
Joint Command & Control
Overseas Presence/ Force Projection
Dominant Maneuver
Focused Logistics
Multinational Operations/ Interagency Coordination
Combatant Commands, Services, Government Agencies, Others
Supports Both Deliberate & Crisis Action Planning

BACKUP Slides
JFP ACTD

Joint Force Projection

-- Advanced Concept Technology Demonstration (ACTD) --

- Problem: Can't exercise sufficient control over the deployment and distribution pipeline from end to end; or provide a high degree of certainty to the supported commander that required forces, equipment, sustainment, and support will arrive where needed and on time, prepared for employment.
- Objective: Provide warfighters a simple, timely, comprehensive understanding of deployment and distribution information. Increase their ability to see and influence the sourcing, projection and integration of Force Capabilities.

- Technologies
  - Semantic Web advances (XML/OWL)
  - Net-Centric, Portal Environment
  - JC2/NCES Common Services
- Active Coordination Technology
  - Web-based Collaborative Visualization
  - Intelligent Software Agents
- Residuals
  - JFP prototype DSTs and data model
  - Software, documentation and TTPs
  - Training support packages
  - Associated server hardware

- Participants
  - User-Sponsors – USJFCOM
  - Proposed Lead Agency - DISA
  - Technical Manager –DISA AITS-JPO
  - Transition Manager – DISA JC2
  - Operational Manager –USJFCOM J9/JDPO
- Schedule
  - FY05: Identify Requirements/ Develop 1st Spiral
  - FY06: Spirals 2/3, Utility Assessment
  - FY07: Maintenance and Transition

- Comments
  - JFP ACTD enhances JDPO and DPO efforts in Prototyping and Reengineering the joint deployment and distribution processes
  - JFP ACTD supports end-to-end joint deployment and distribution planning, analysis, and execution
  - JFP ACTD enables joint deployment process to meet rapid force projection requirements envisioned in JV 2010/2020.
  - JFP ACTD enables the JFC to make better risk decisions relative to joint deployment and the joint force mission.

JFP ACTD Technicalities

- Technologies
  - Semantic Web advances (XML/OWL)
  - Net-Centric, Portal Environment
  - JC2/NCES Common Services
- Active Coordination Technology
  - Web-based Collaborative Visualization
  - Intelligent Software Agents
- Residuals
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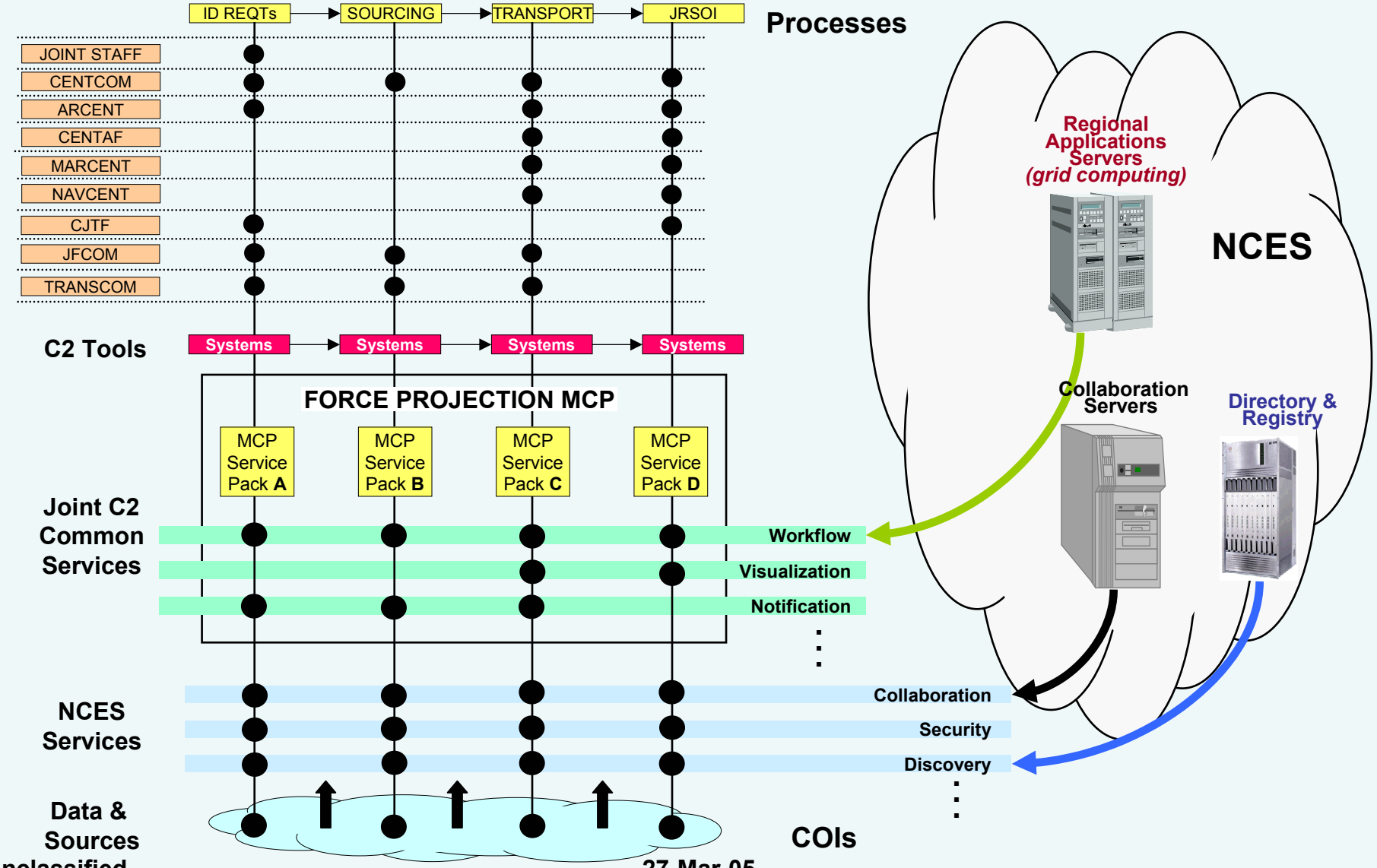
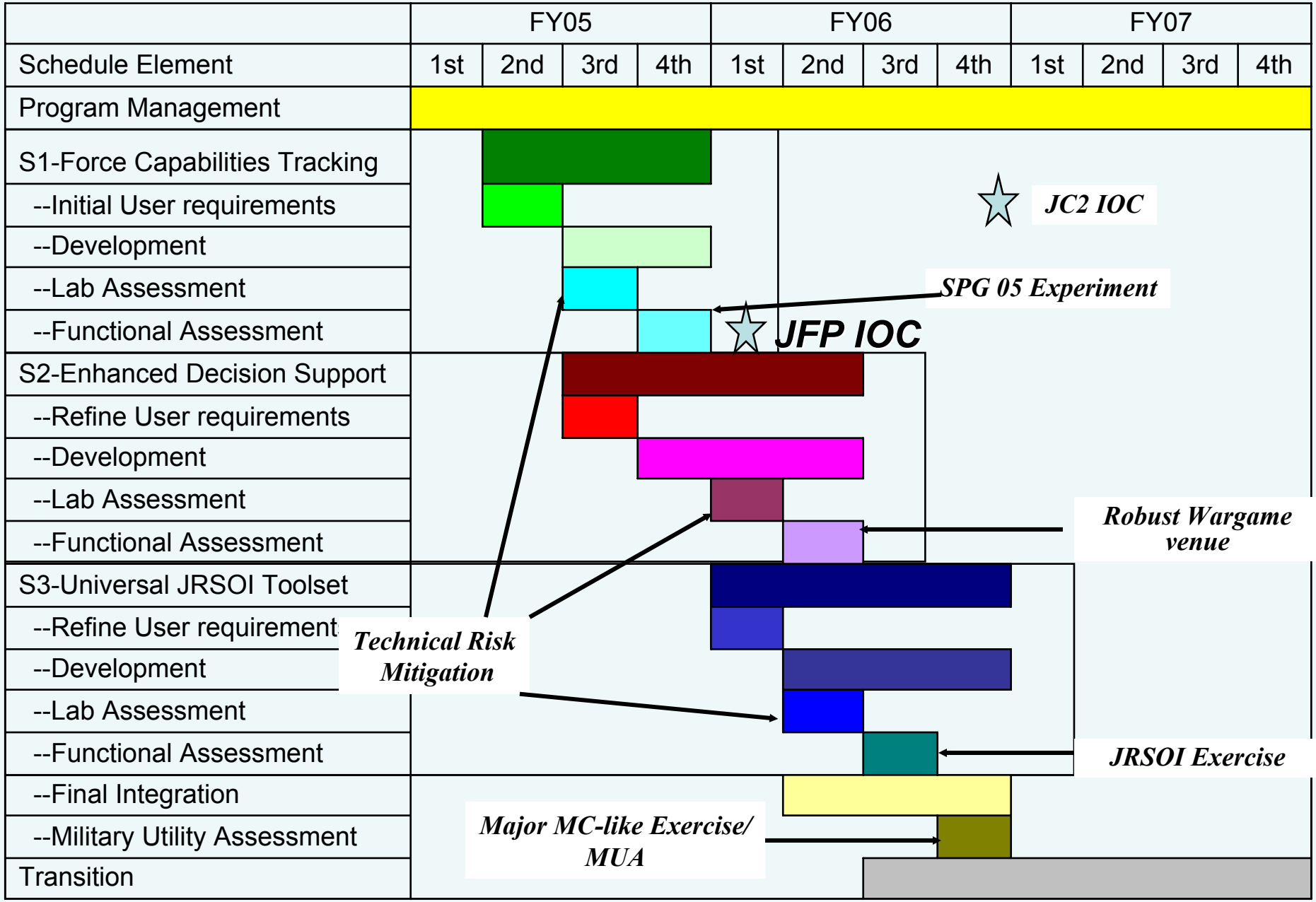
JFP Family of Systems (FOS) & JC2 Web-Centric Processing



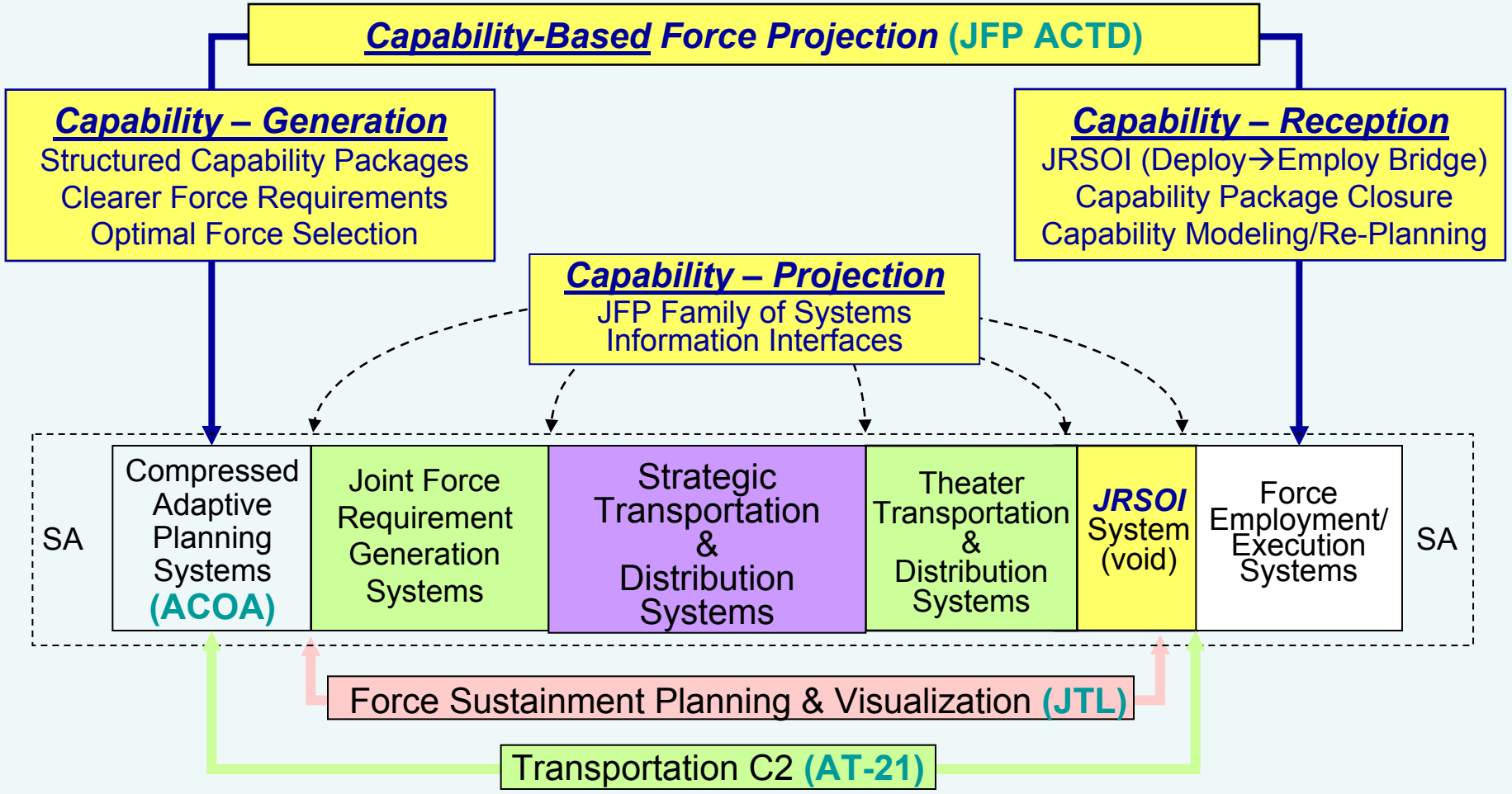
JFP Schedule



JFP Product List (cont)

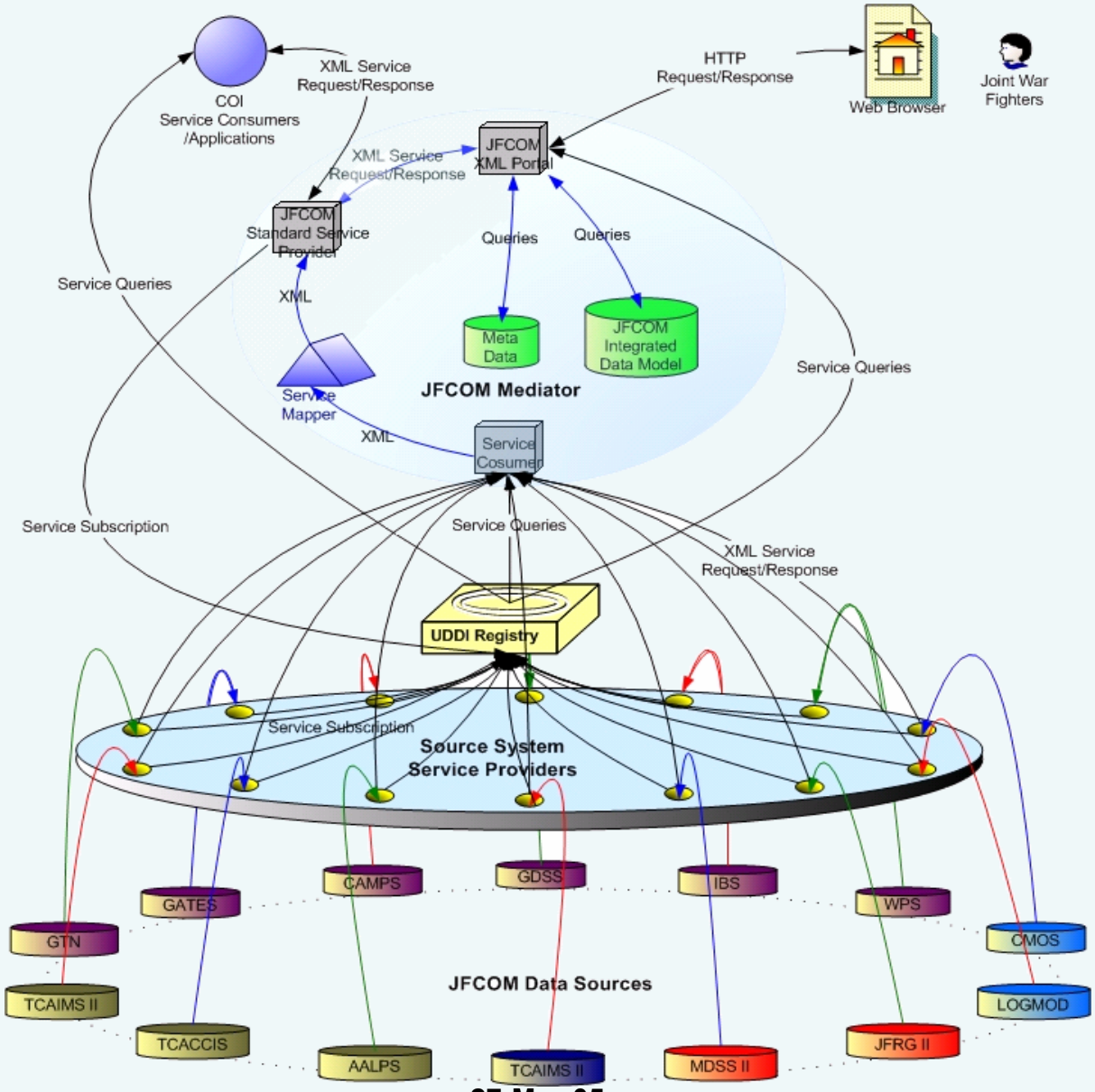
- Single system to gain the full joint perspective
  - Cross reference of base operating support assets
  - Insight into mutual support issues
- User friendly interface with built-in business rules
  - Removes the manpower burden required to perform today's deployments
  - Capture automated technologies for planning, execution, and force sustainment
  - Facilitates standardization of process, procedures, and interoperability
- Tool suite for JRSOI operations
  - Agile enough for any operation, in any theater
  - Smooth the seam between strategic and theater distribution systems

JFP ACTD
-- Related Efforts --



BACKUP Slides
Force Projection COI

Force Projection COI



Force Projection COI

-- *What We Have Learned* --

- Architecture + Data = Process and System Integration & Interoperability
- Prototypes & Experimentation
  - Information Provided Earlier with More Detail
  - Defined, Understood Data Attributes & Data Relationships
  - Much larger step to an operational environment
- Acquisition
  - Delivering the operational capability
  - Effect on the COI (JCIDS, Portfolio Management)
- COI Management
  - Organizational Structure
  - Roles and Responsibilities