
# *Joint Command and Control In a Net-Centric Environment*

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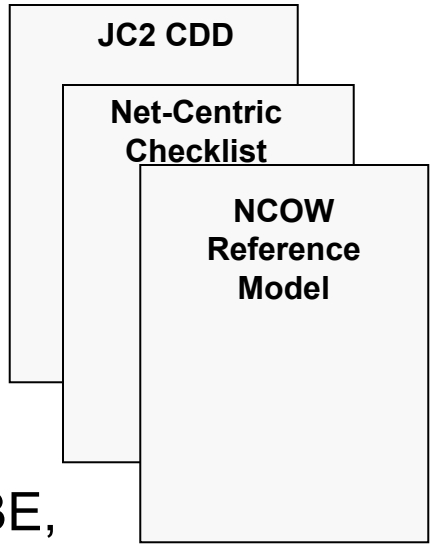
# JC2 Concept

- JC2 will be a key Contributor to building the DoD C2 Domain…but not the only Contributor
- JC2 will use/integrate with GIG Enterprise Services
- JC2 will be implemented using a Service Oriented Architecture that is monitored and managed
- JC2 will allow Operational Users to link services to create managed workflows and processes
  - Process-centric, not application centric
- The GCCS Family of Systems will evolve to the JC2 Family of Capabilities using a spiral process to reduce risk
  - Federated development
  - Pilot service

# *What's Transformational About This Approach?*

## JC2 should:

- Employ a single, joint architecture
  - Network centric
  - service-oriented (providing re-usable functional utilities)
  - monitored & managed
- Employ NCES core enterprise services
- Leverage the transformational bandwidth gains of GIG-BE, TC and JTRS
- Deliver warfighter-relevant Mission Capability Packages (MCP)
  - Warfighter's Processes orchestrate data and applications
  - Dynamic workflow through the process
  - Re-usable services



# JC2 Capability Transformational Vision

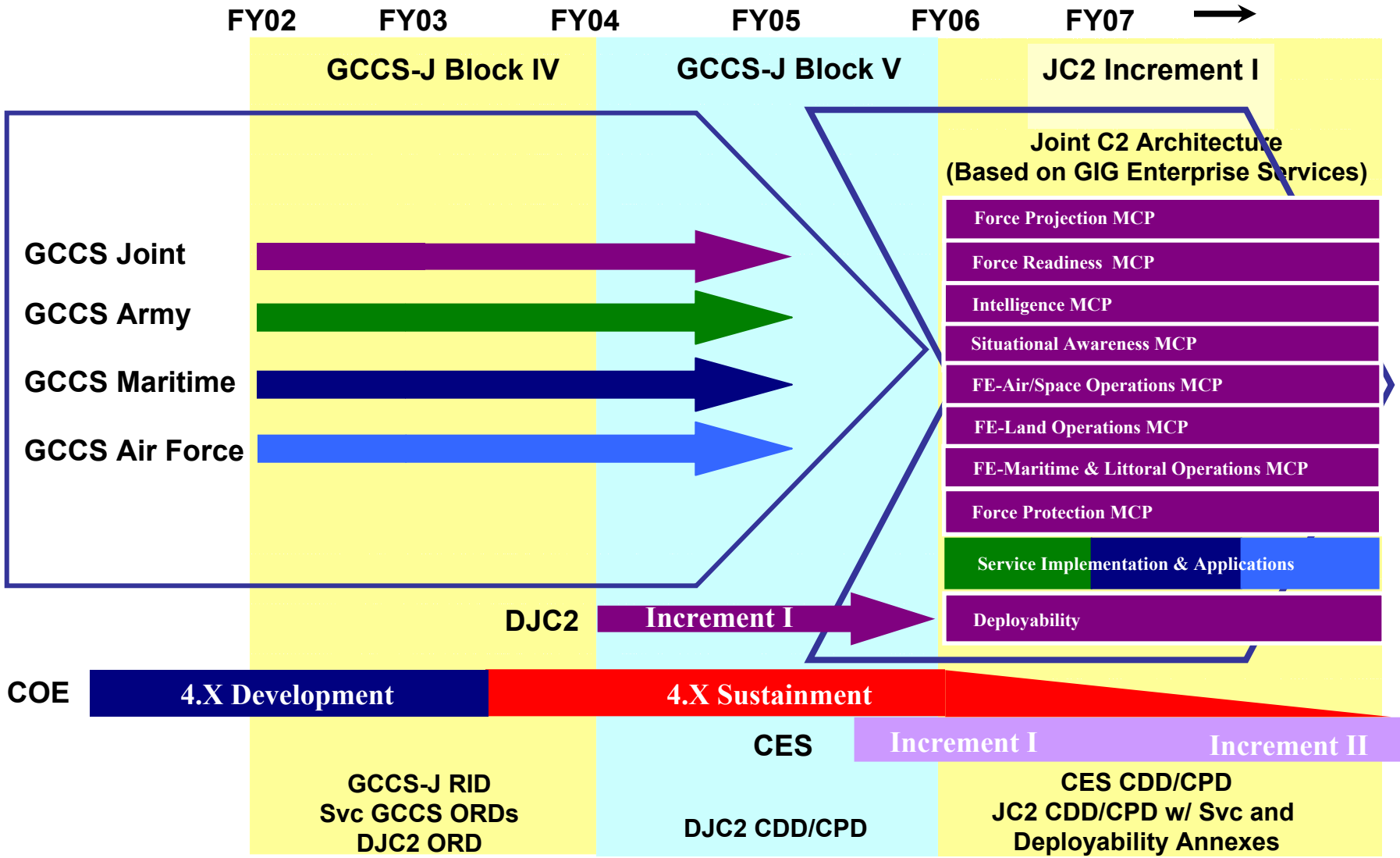
- GCCS will evolve from its current state of joint and Service variants to a single Joint C2 architecture and capabilities-based implementation
  - Trained personnel, policy, procedures and joint mission capability packages based on GIG/NCES infrastructure required to plan, execute, monitor, and assess joint and multinational operations
  - Operate in garrison/deployed network environments providing secure access to Service/Agency/joint-provided data sources and applications (e.g. GCSS) and will support information exchange across multiple security domains

*Note: Services, STRATCOM, etc may eventually define other similar JC2 capabilities subset packages -- augmented by unique, custom capabilities*

**What is Transformational about this?**
**Knitting the applications, services and data into a *Complete, Managed Process***

# JC2 Capabilities-Based Need

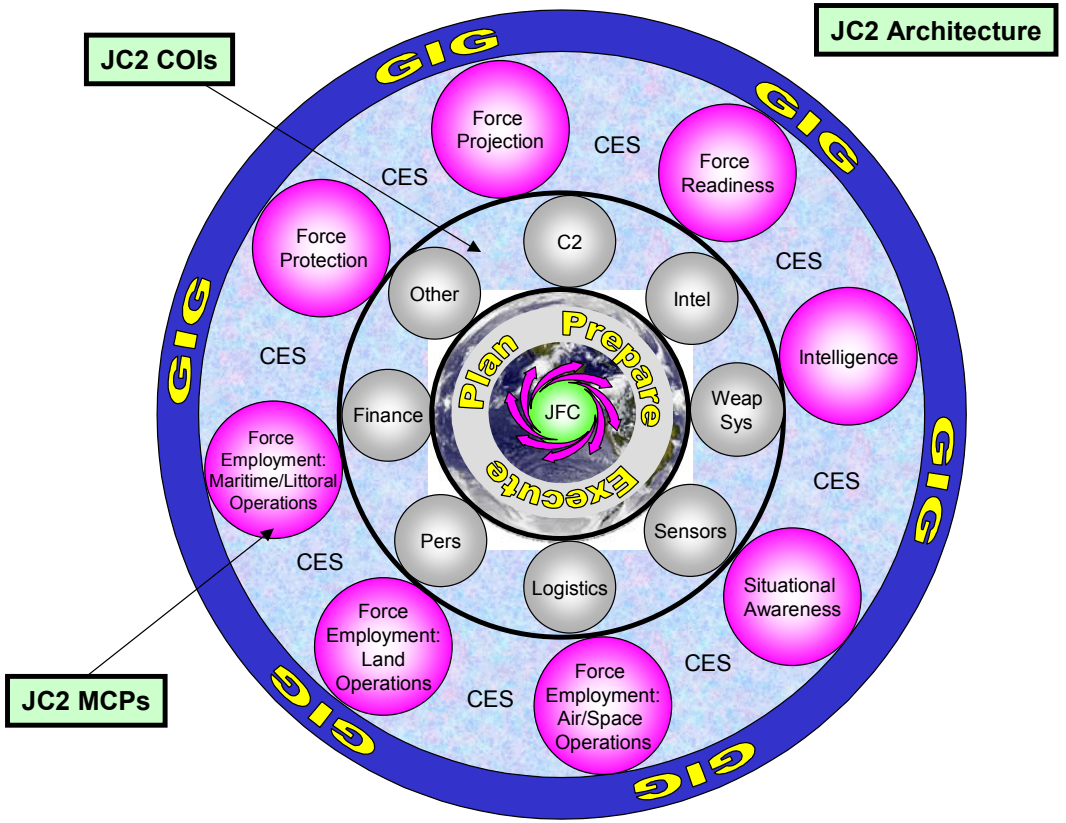
## JC2 CDD




COE: Common Operating Environment CES: Centric Enterprise Services MCP: Joint Mission Capability Packages

# JC2 Capability

- **USJFCOM provides oversight and sponsorship of Joint C2 requirements/ capabilities**
  - JROCM 167-03, 22Aug03 -- ORD approval authority, for non-KPP adjustments, delegated to USJFCOM
- **Migrate to a single joint C2 architecture**
- **Support joint C2 rqmnts from NMCS thru Joint Force commander to components**
- **Organized along 8 joint Mission Capability Packages and cross-functional services**




**JC2 OV-1**

NMCS: National Military Command System

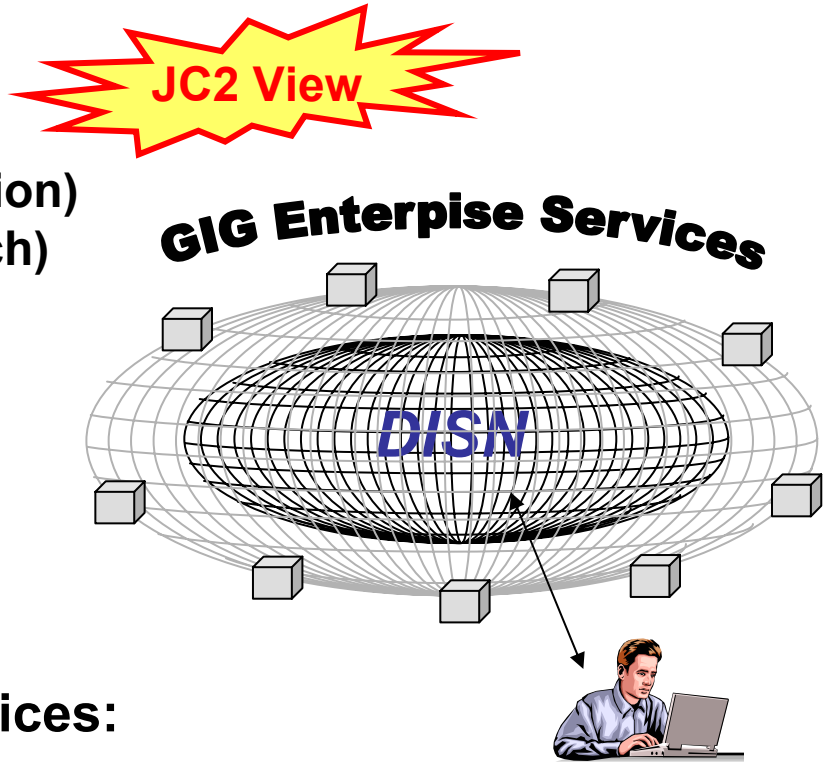
# *Back-up Slides*

# JC2 Will Run on GES

- **Essential** Core Services:
  - Security (access and authentication)
  - Discovery (registration and search)
  - Enterprise System Management
- Leveraged Core Services:
  - Messaging
  - Collaboration
  - Mediation
  - User Assistant
- Leveraged Core Computing Services:
  - Storage
  - Application Processing

- **Essential** C2 Common Service
  - Mission Tailorable Operational Picture
  - Others TBD

(Not GES)



# *Service Oriented Architecture*

***Service Oriented Architectures provide greater capabilities and more flexibility then today's Platform Oriented Architectures***

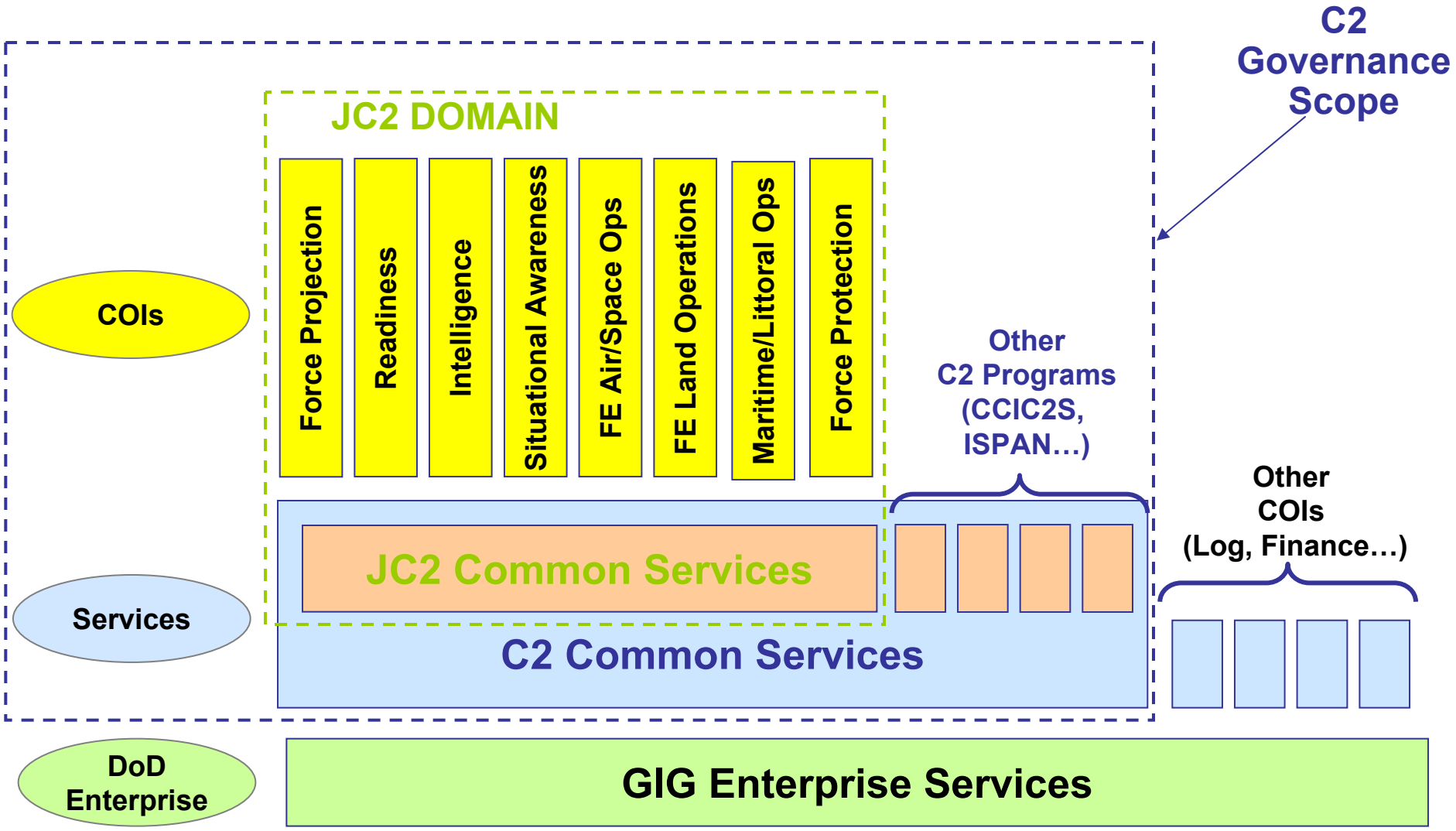
- **A service provider can be:**
  - A source of data to DoD end-users and systems or MCPs
  - A provider of a value-added service, such as multiple source data fusion, track management, translation, syndication, or content filtering;
  - or a provider of a core enabling service for the enterprise
- **From the consumer's point of view services are:**
  - "Black boxes" on the network, in the sense that their internal implementation is hidden.
  - A service's inputs are specified and its outputs are returned, however, from the consumer's point of view on the outside, the service implementation remains unknown.

# *Implications of Service Oriented Architectures*

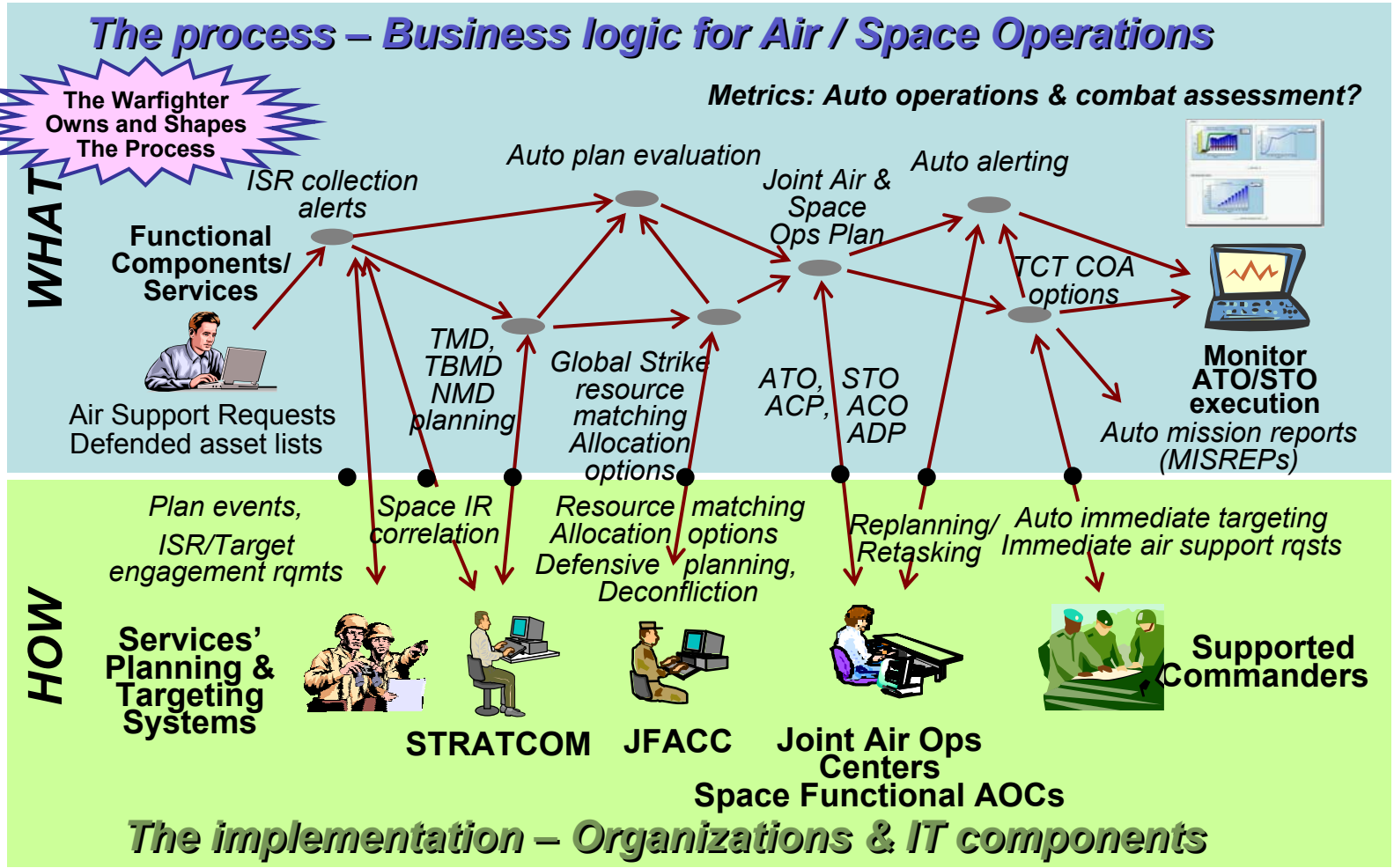
- **Services provide many Operational Benefits**
  - Faster delivery of new capabilities
  - Improved Backwards Compatibility
  - Competition/best of breed among Service Providers
  - Service Providers do not control the End User computing environment
  - Less risk in migrating from GCCS Family of Systems to JC2
- **There is nothing to do with specific technologies here**
  - Some technologies may help
  - But providing you implement these principles, anything will do – *messaging, FTP, e-mail, batch tables, etc*
- **And note the implication for business processes:**
  - Service oriented architectures are most consistent with homogenized, streamlined business process across the enterprise
  - **Full scale implementation will involve process re-engineering**

***A Service Oriented JC2 Architectures will enable a quantum leap in Warfighter decision superiority***

# Conceptual JC2 in Context

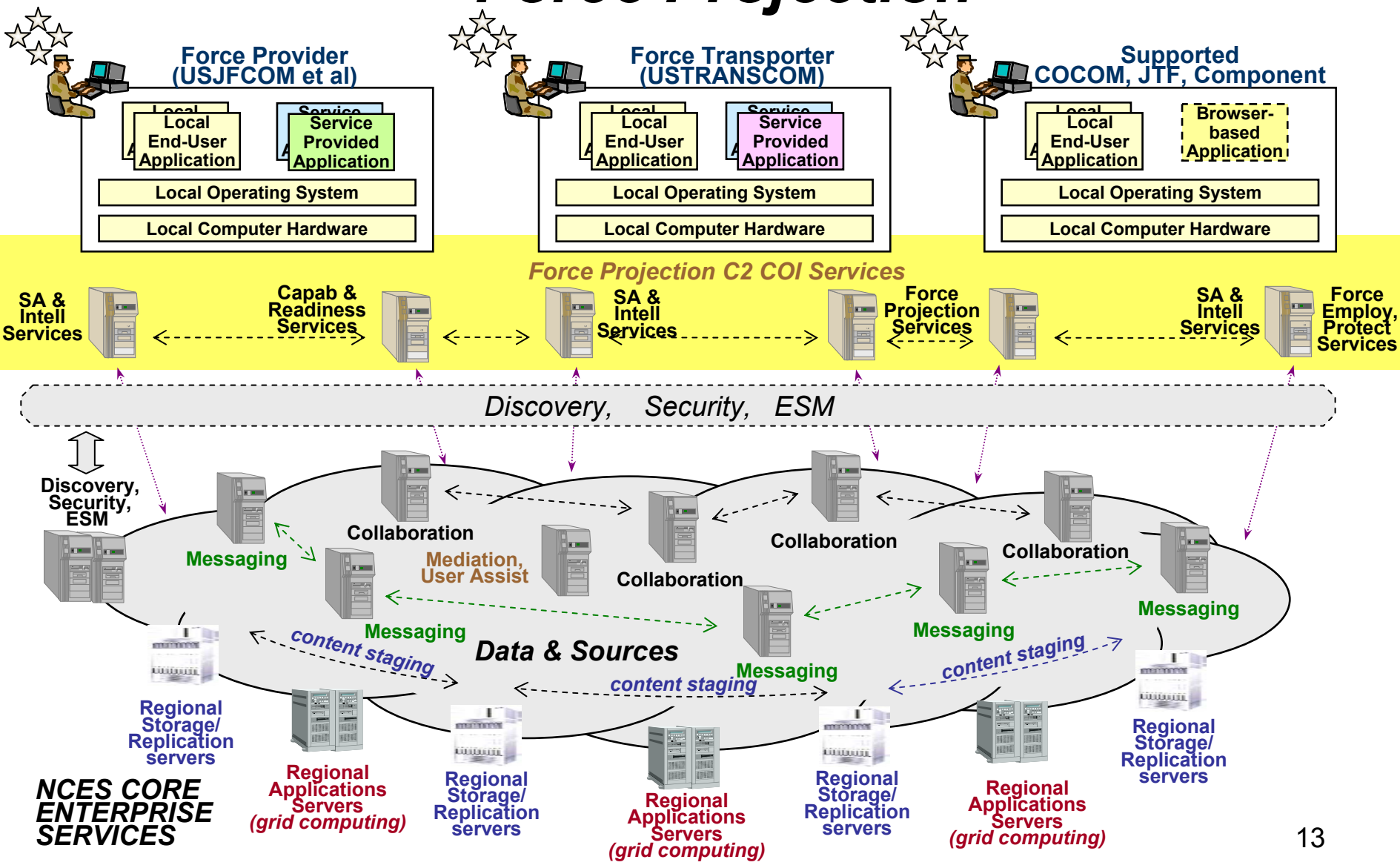


# JC2 Operational Concept
# Air/Space Operations MCP

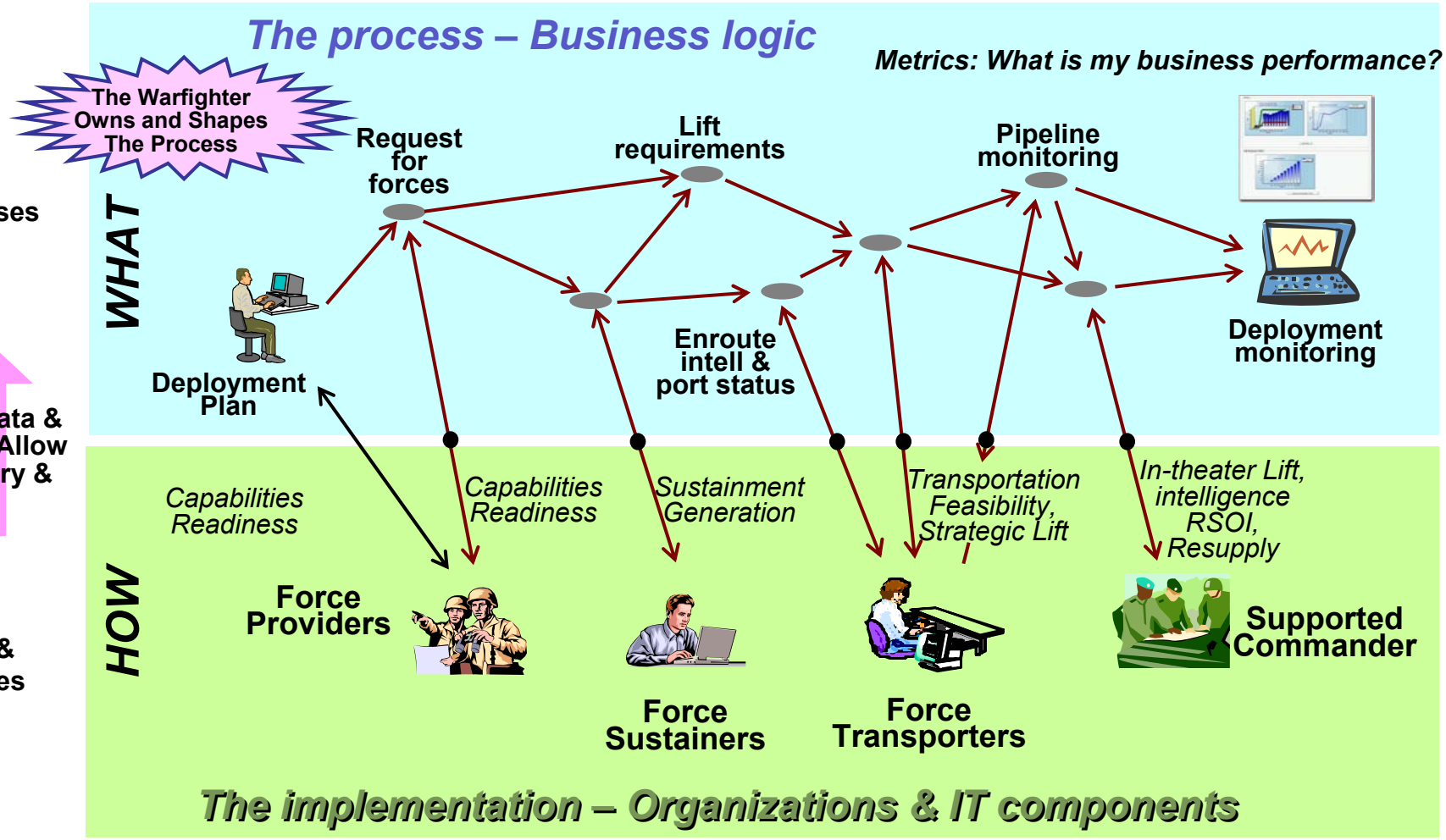



**Net & Data Centric, Process Oriented**

# Possible JC2/NCES Architecture for Force Projection



# JC2 Operational Concept
# Joint Deployment MCP




## Net & Data Centric, Process Oriented

# Force Projection Web-Centric Process