A Joint Staff Perspective

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Deputy Director Joint Warfighting Capabilities Assessment, J-8

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PURPOSE

- **Establish a common reference point for where we are and where we're going**
  - Why we need Operational Concepts and Architectures
    - ➢Deliverables
    - ➢Intended use
  - What concepts and architectures are
  - How concepts and architectures work
  - What protocols we need

PROBLEM - PART 1 - RISK MANAGEMENT

FYDP | **Near Term** | **Mid Term** | **+ 10** | **Far Term**

Do you have a way to make resource decisions here ...

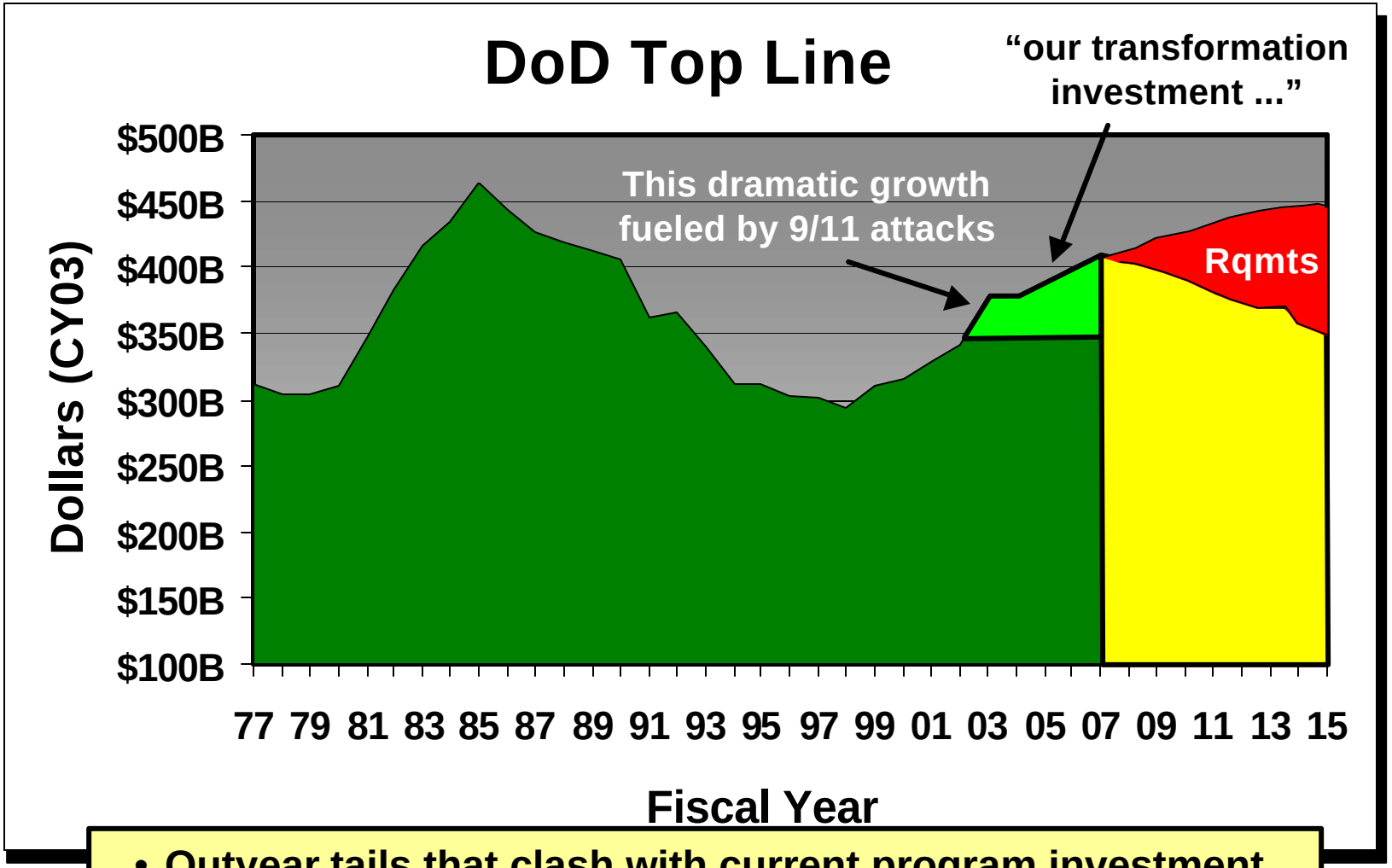
... to support Strategic Vision here?

EA-6B replacement required now

Electronic Warfare

Space Based?
Aerostat?
UAV?

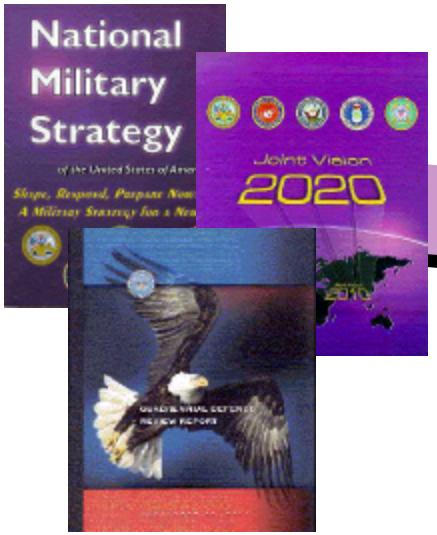
PROBLEM - PART 1 - RISK MANAGEMENT



- Outyear tails that clash with current program investment
- Outyear development crowded out by current program
- … Risk in this decade

PROBLEM - PART 2 - EVOLVING THE JROC

Needs



Interoperability?

Capabilities Based?

QDR, DPG, CPG

Impact on:
Training?
Doctrine?
Leadership?
Facilities?

JROC

This process has served us well so far, but can we make it better?

Systems

PROBLEM - PART 3 - "TRANSFORMATION"

CJCS Priorities

- **Global war on terrorism**
  - Military point man in Interagency process
  - Build, maintain, and sustain military coalitions
  - Develop organizational agility
- **Proponent for Joint warfighting**
  - Advocate for the warfighters
  - Eliminate gaps/seams between CINCs, Services and C4ISR
- **Proponent for transformation**
  - Spread transformation across material and non-material domains
  - Synchronize and support Service modernization
  - Guide and synchronize JFCOM experimentation

JOC/JOA GETS AT ALL 3 PARTS

- **CJCS saw this coming (Apr 00) and directed JROC to:**
  - Advance joint warfighting and interoperability
  - Get out in front of the requirements process
  - Be proactive rather than reactive
  - Adopt a strategic focus
- **JROC chartered JWCAs to develop key Operational Concepts and Operational Architectures (Dec 00)**
  - Dominant Maneuver
  - Precision Engagement
  - Joint Task Force Command and Control

STRATEGIC TOPIC ASSUMPTIONS

- **Timeframe**
  - Originally “target 2020”
  - Adjusted “Two Concepts -- As is (Budget Year) and DPP (2019)”
  - Architecture to support near-term concept
- **Point of view**
  - Joint Force Commander looking one level up and below
- **Range of operations**
  - Joint Force Operational level
- **Force Baseline**
  - Programs of Record within the POM

DELIVERABLES

- **Operational Concepts that describe how we want to conduct future joint operations**
  - Integrating Operational Concept
  - Mission Area Concepts
- **Integrated Joint Operational Architecture**
- **Requirements recommendations based on architectural analysis**
  - 1st order analysis: qualitative capability assessment
  - 2nd order analysis: system interface and interoperability assessment
  - 3rd order analysis: cost-benefit trade-offs

INTENDED USE OF THE ARCHITECTURE

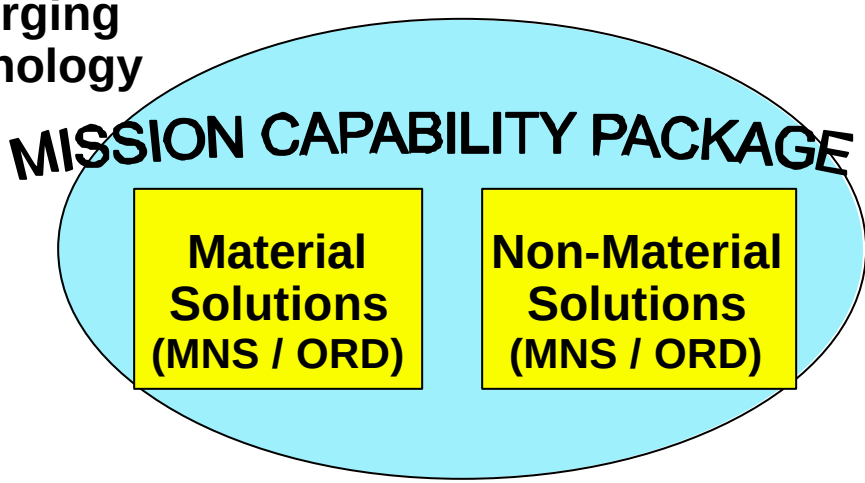
- **Assist JROC in their role as future joint force architects by:**
  - Describing a vision for the future
  - Coordinating modernization efforts
  - Infusing transformation when appropriate
  - Managing risk; Inform decision making
- **Integrate with:**
  - Vision Development
    - J-7/JFCOM
  - Resource management (PPBS)
    - Cost-benefit analysis
  - Requirements system
    - Gaps, duplication, interoperability and opportunities
  - Acquisition system
    - Investment strategy
- **Transform the JROC Process**

ARCHITECTURE FOCUSED ANALYSIS

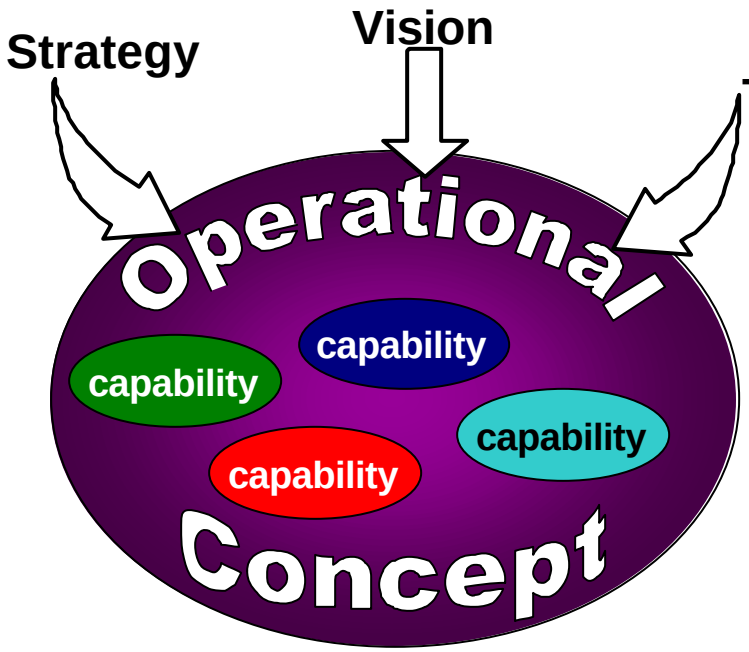
Strategy

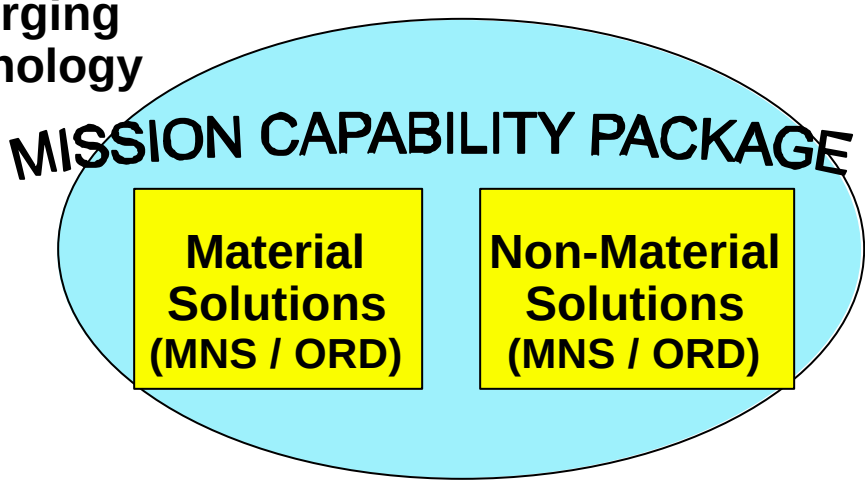
Vision

Emerging Technology

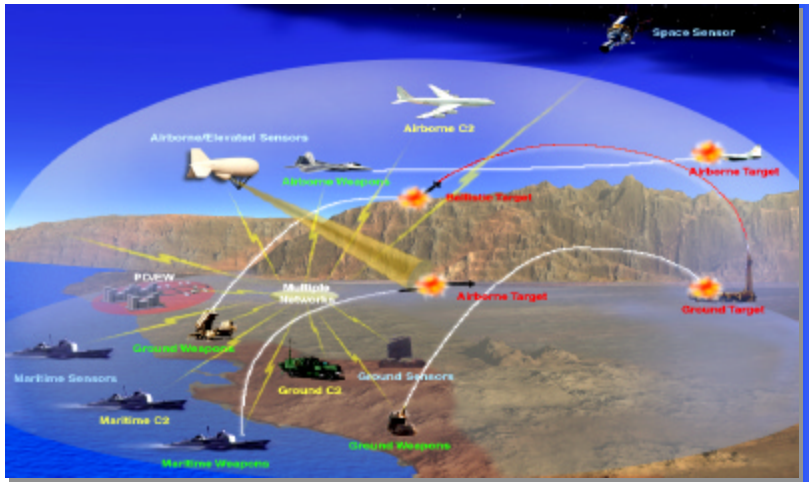


ARCHITECTURE FOCUSED ANALYSIS





OPERATIONAL CONCEPT



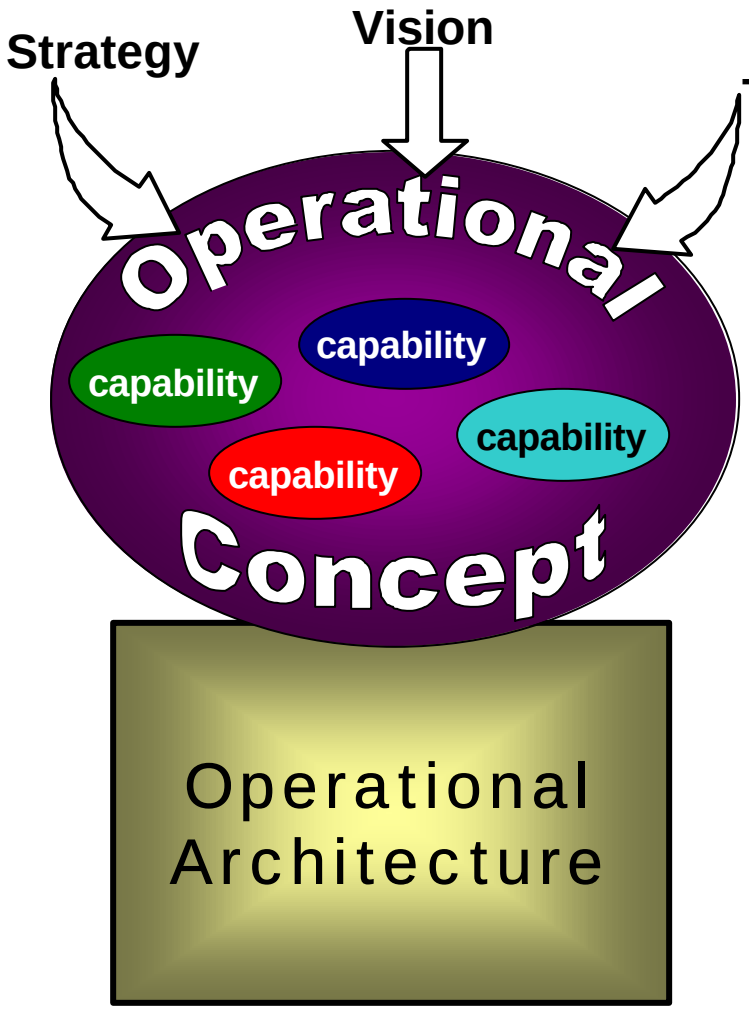
"End-to-end stream of activities that defines how force elements, systems, organizations and tactics combine to accomplish a military task"

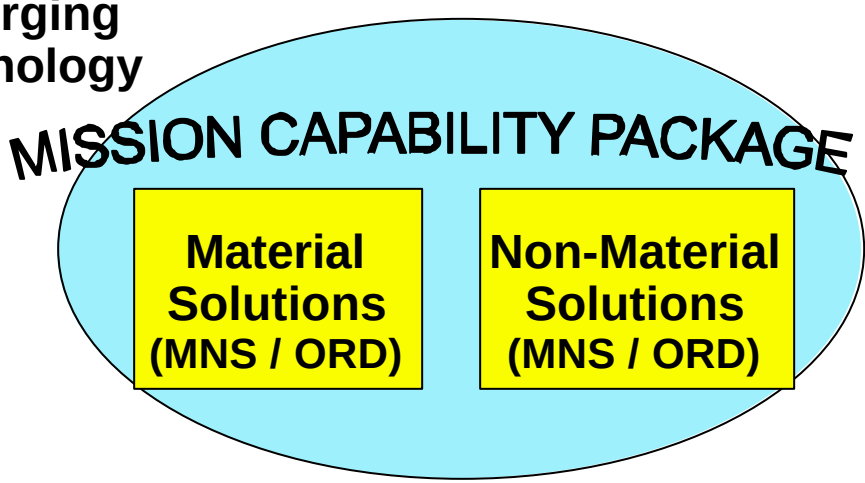
JROC Jul 01

- **Defines fundamental actions and interdependencies that will be used to accomplish the mission**
- **Establishes a common understanding of what must be accomplished and how it should be done**
  - **Not tied to a specific material solution, but based in large part on technological capabilities**

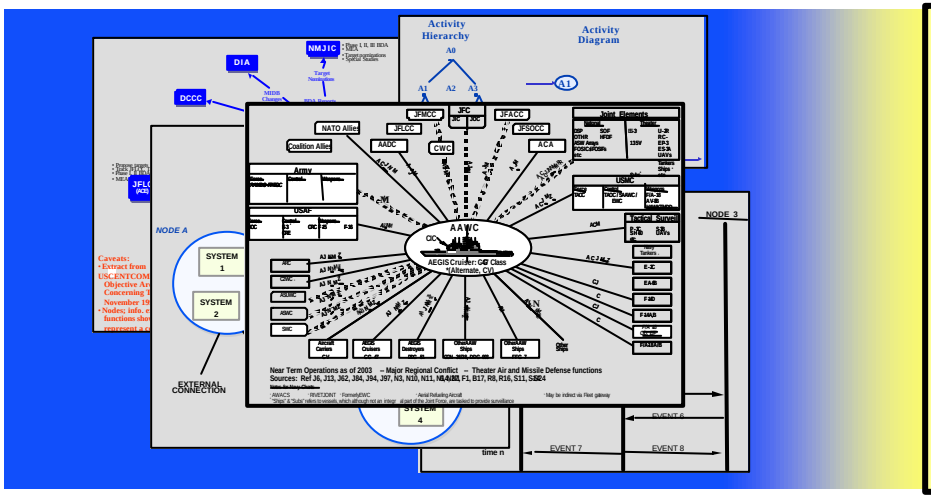
Establishes "How We Want to Operate"

ARCHITECTURE FOCUSED ANALYSIS





OPERATIONAL ARCHITECTURE

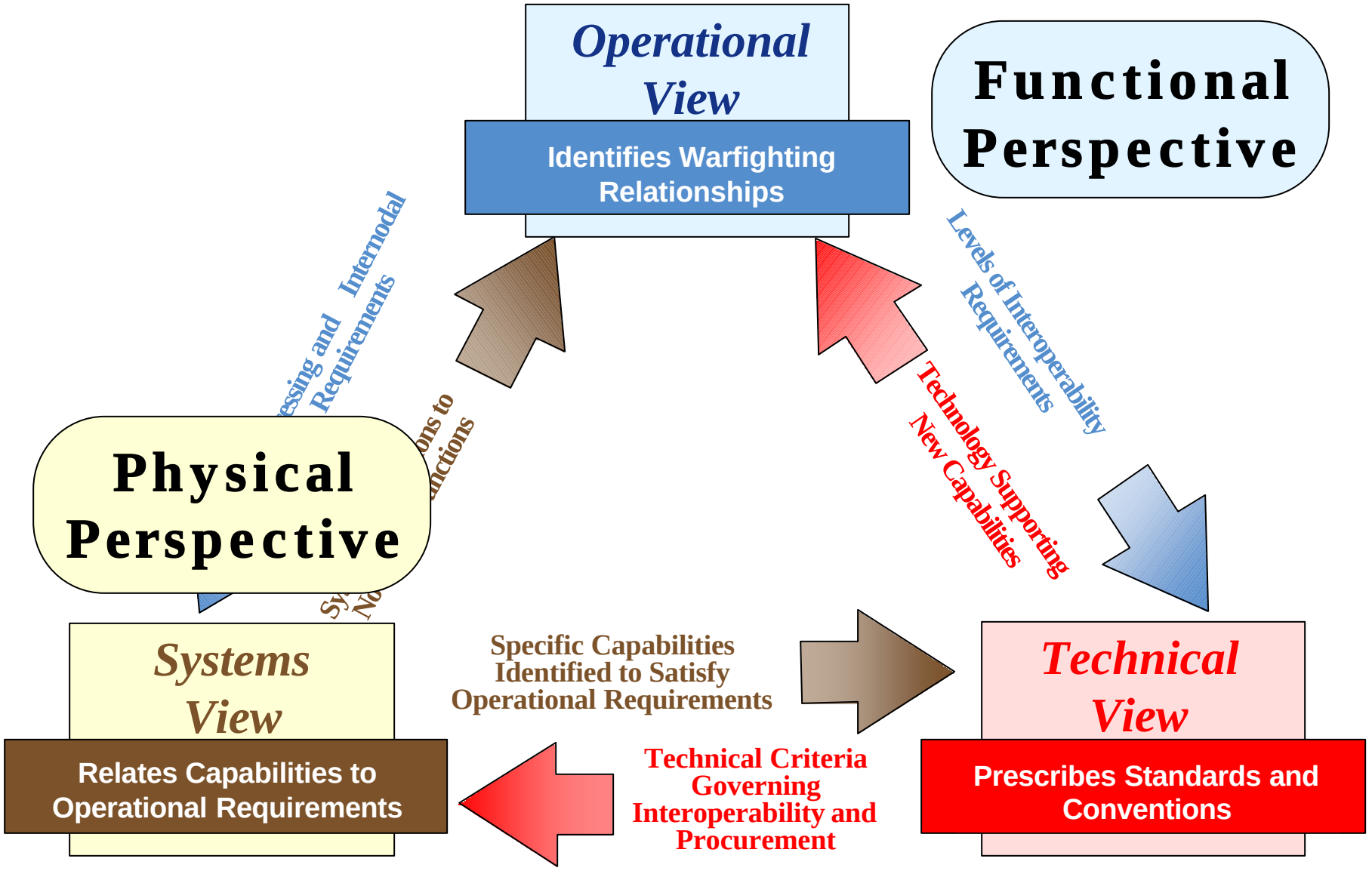


"Description of the tasks and activities, operational nodes and elements, and information flows required to accomplish or support a military operation"

C4ISR Framework

- **Guided by an Operational Concept**
- **Independent of force structure and technology**
- **Operational Architectures are:**
  - **Frameworks for analysis**
  - **Vehicles to promote interoperability**
  - **Methods to identify operational shortfalls**

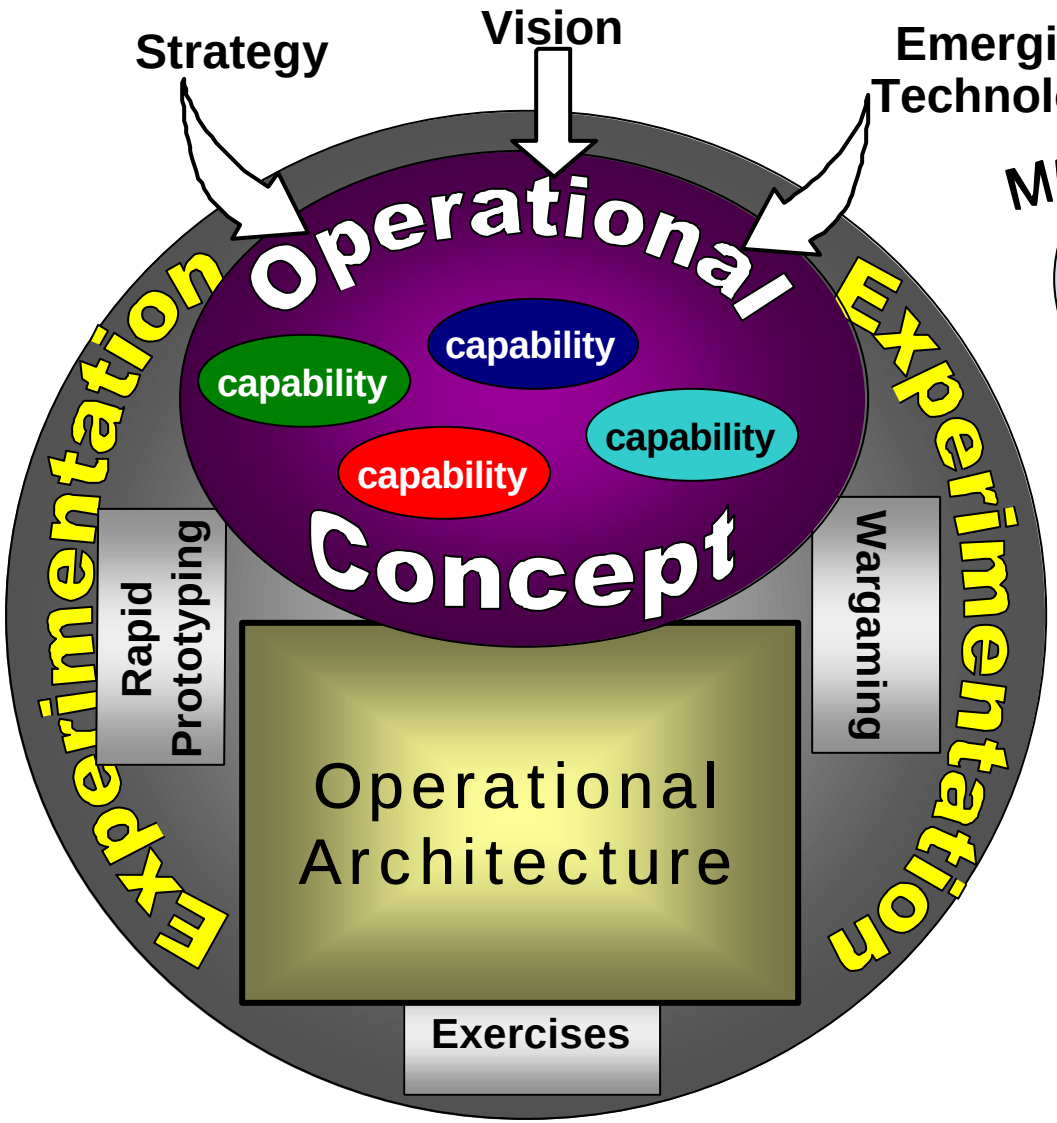
1 ARCHITECTURE ...3 VIEWS

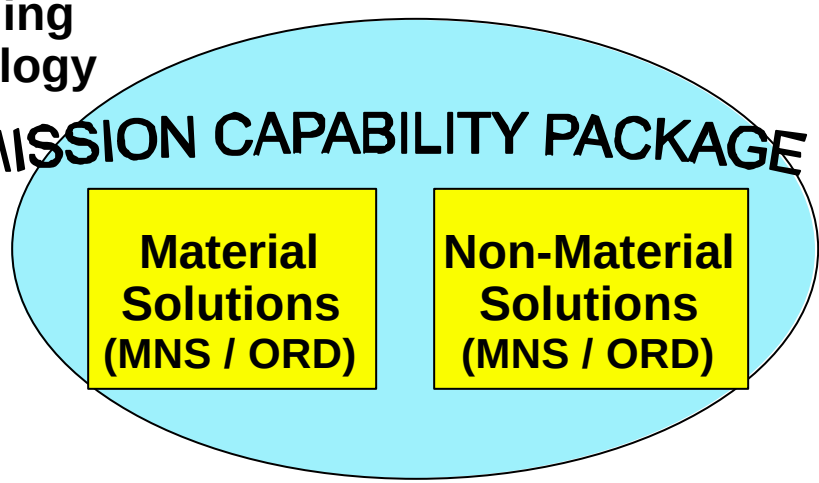


JOINT OPERATIONAL ARCHITECTURE

Service Modernization Efforts

ARCHITECTURE FOCUSED ANALYSIS





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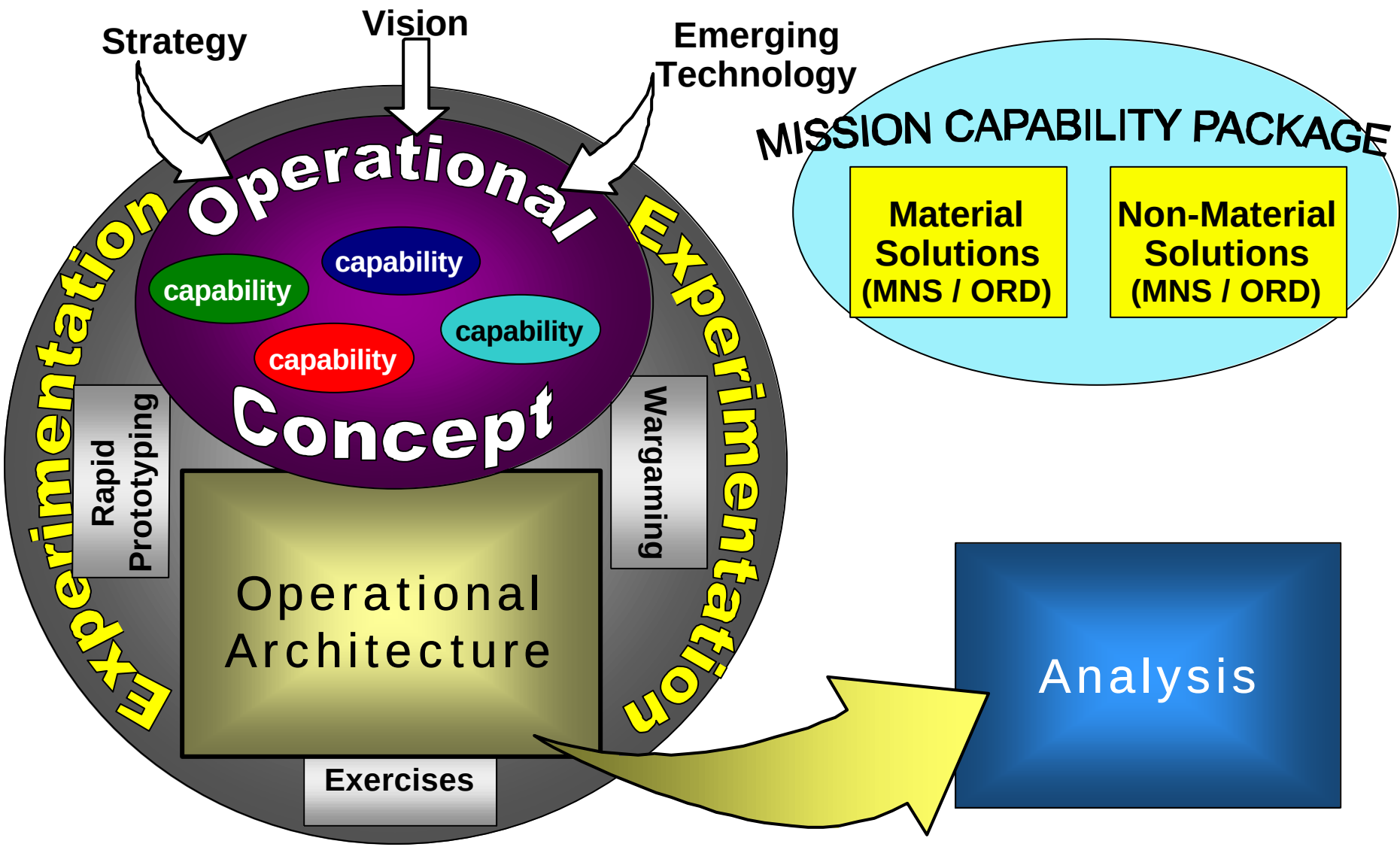
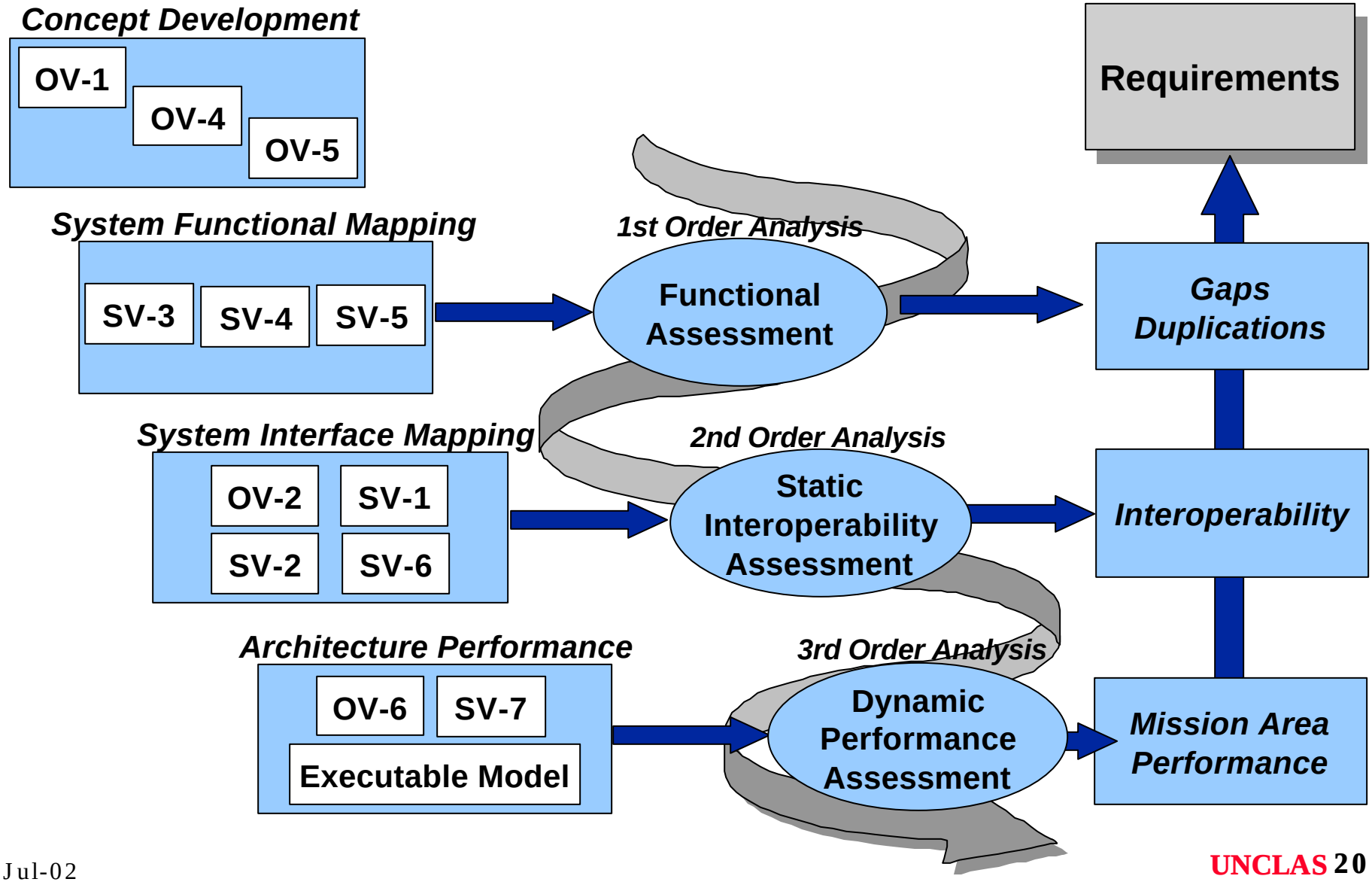


ANALYSIS PROCESS



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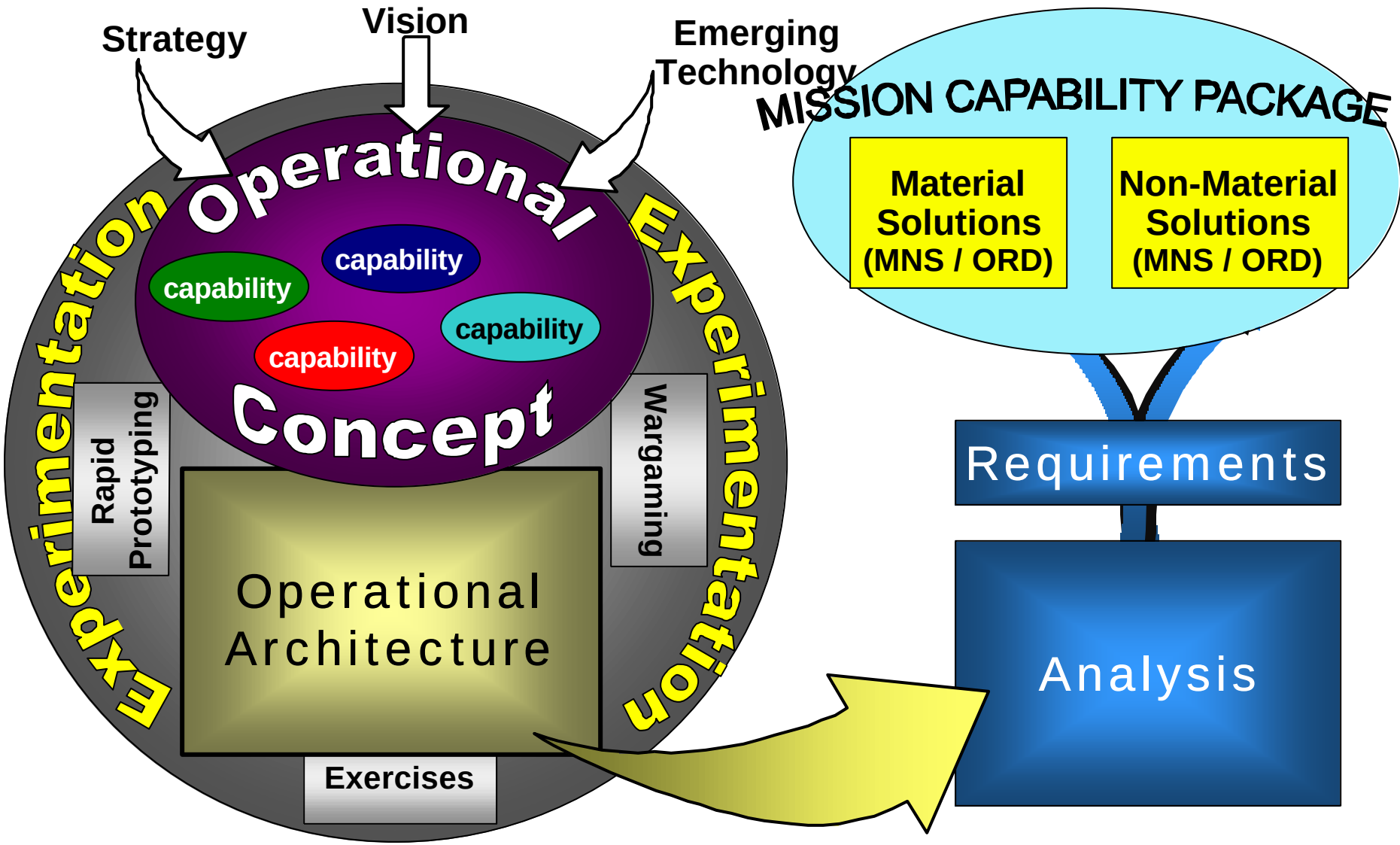
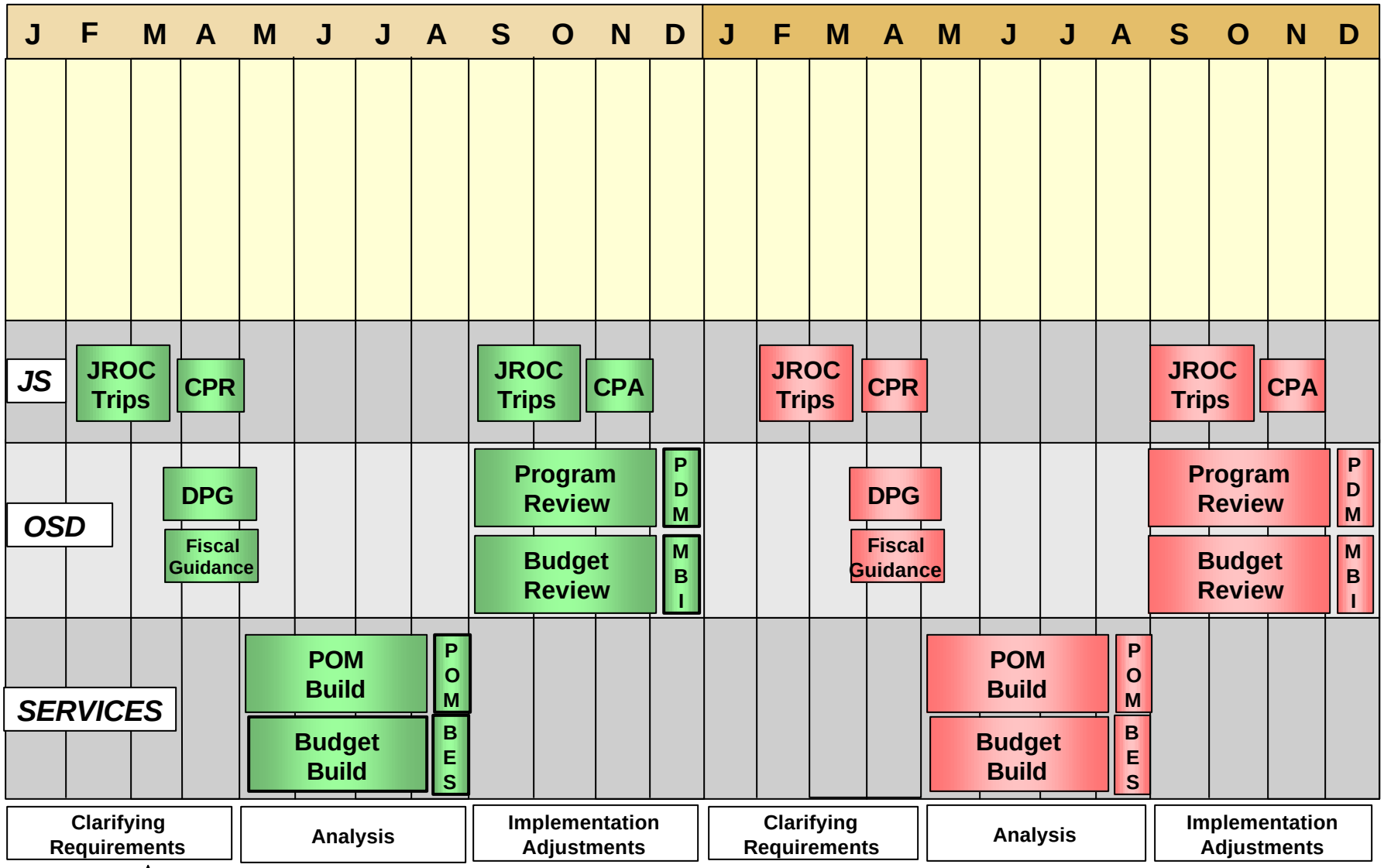
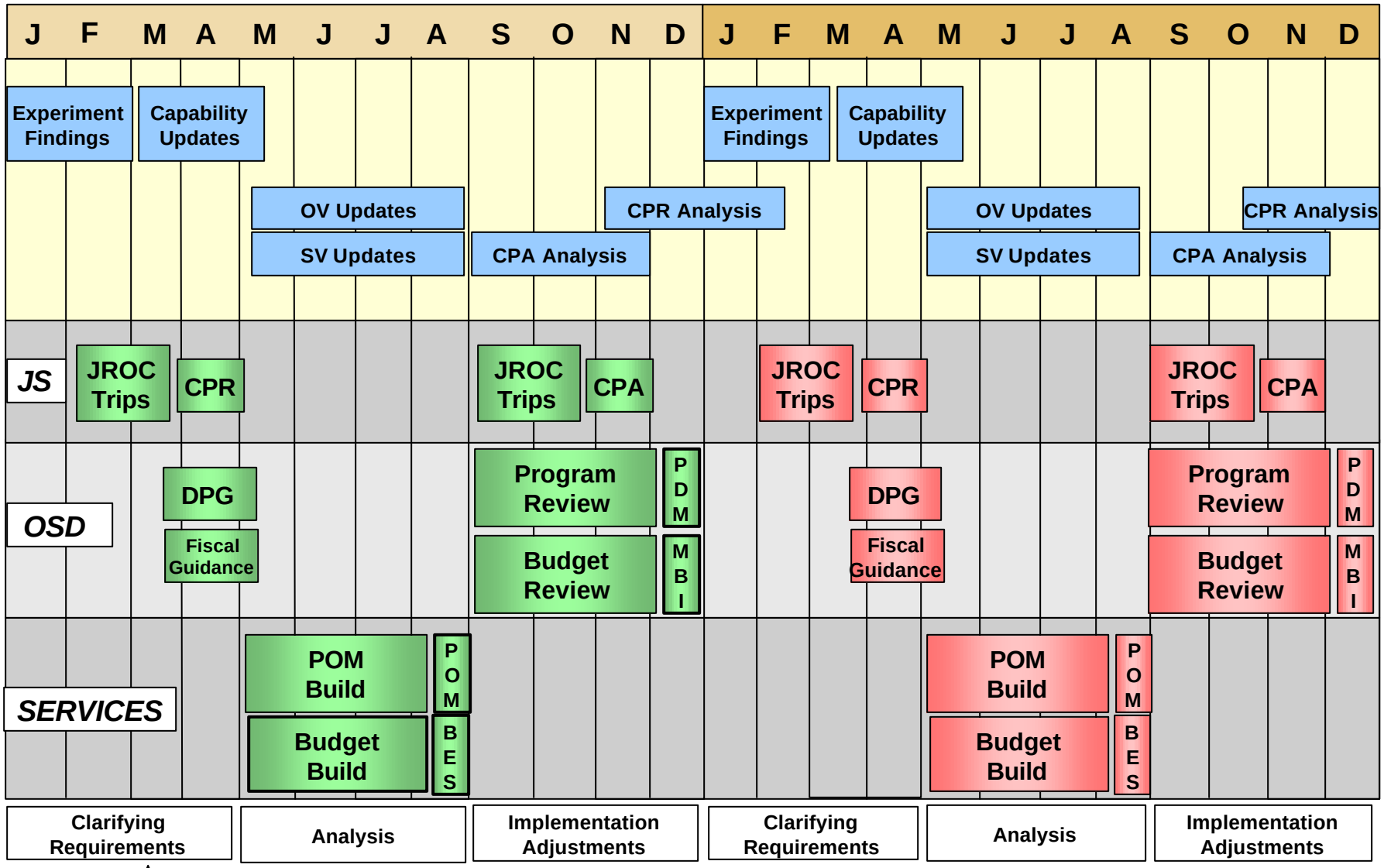


ARCHITECTURE / PPBS CYCLE



ARCHITECTURE / PPBS CYCLE



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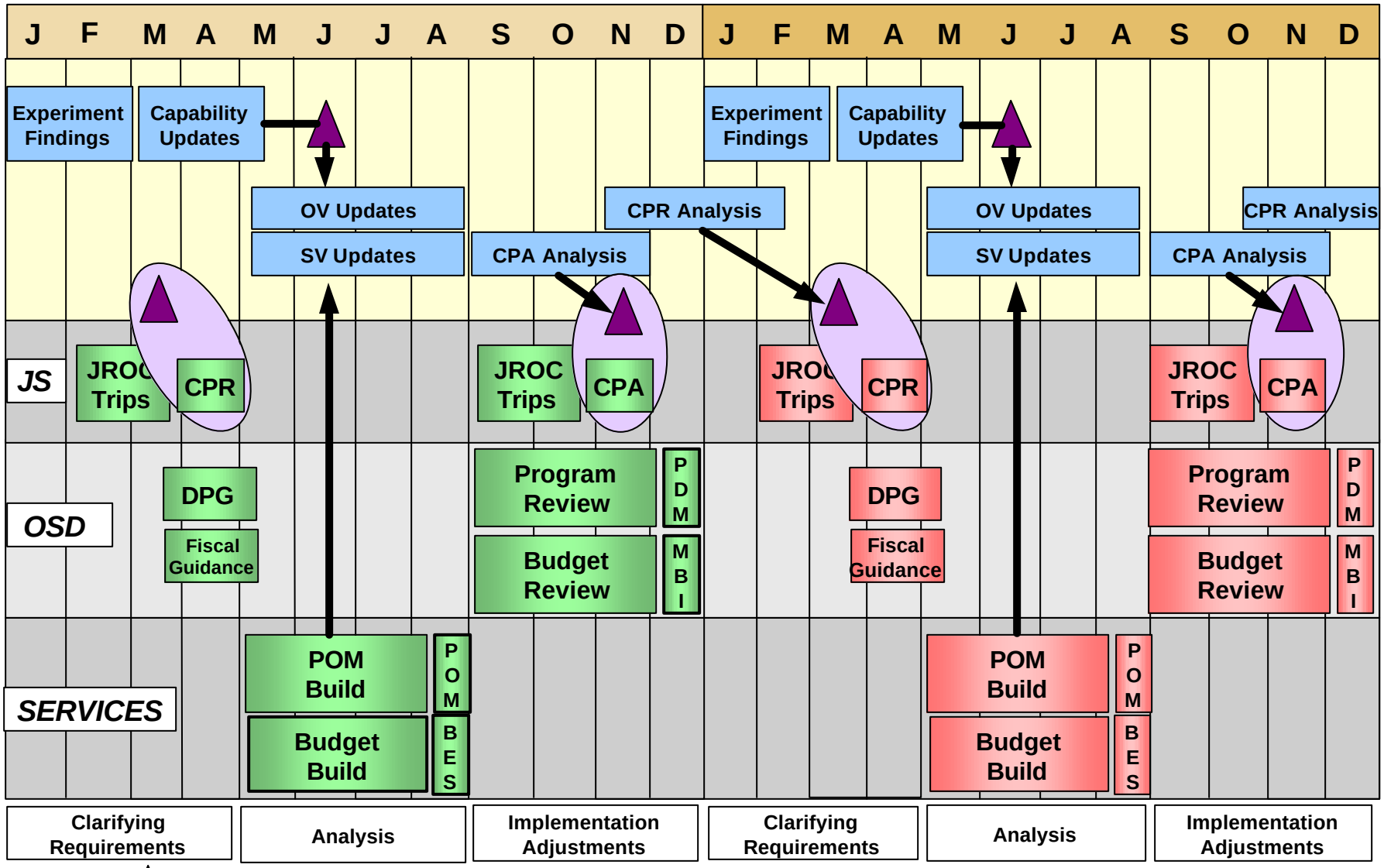
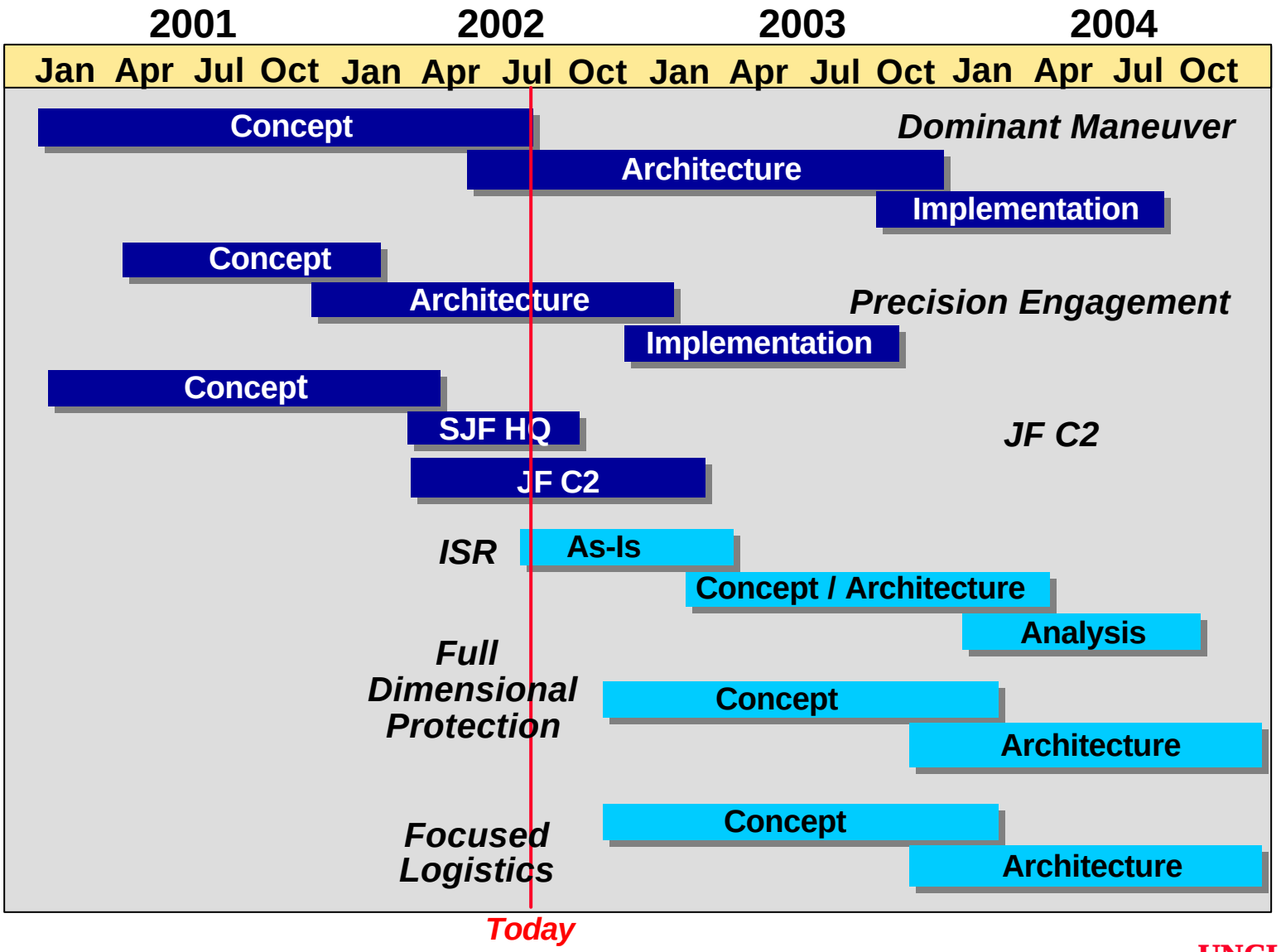


PROTOCOLS

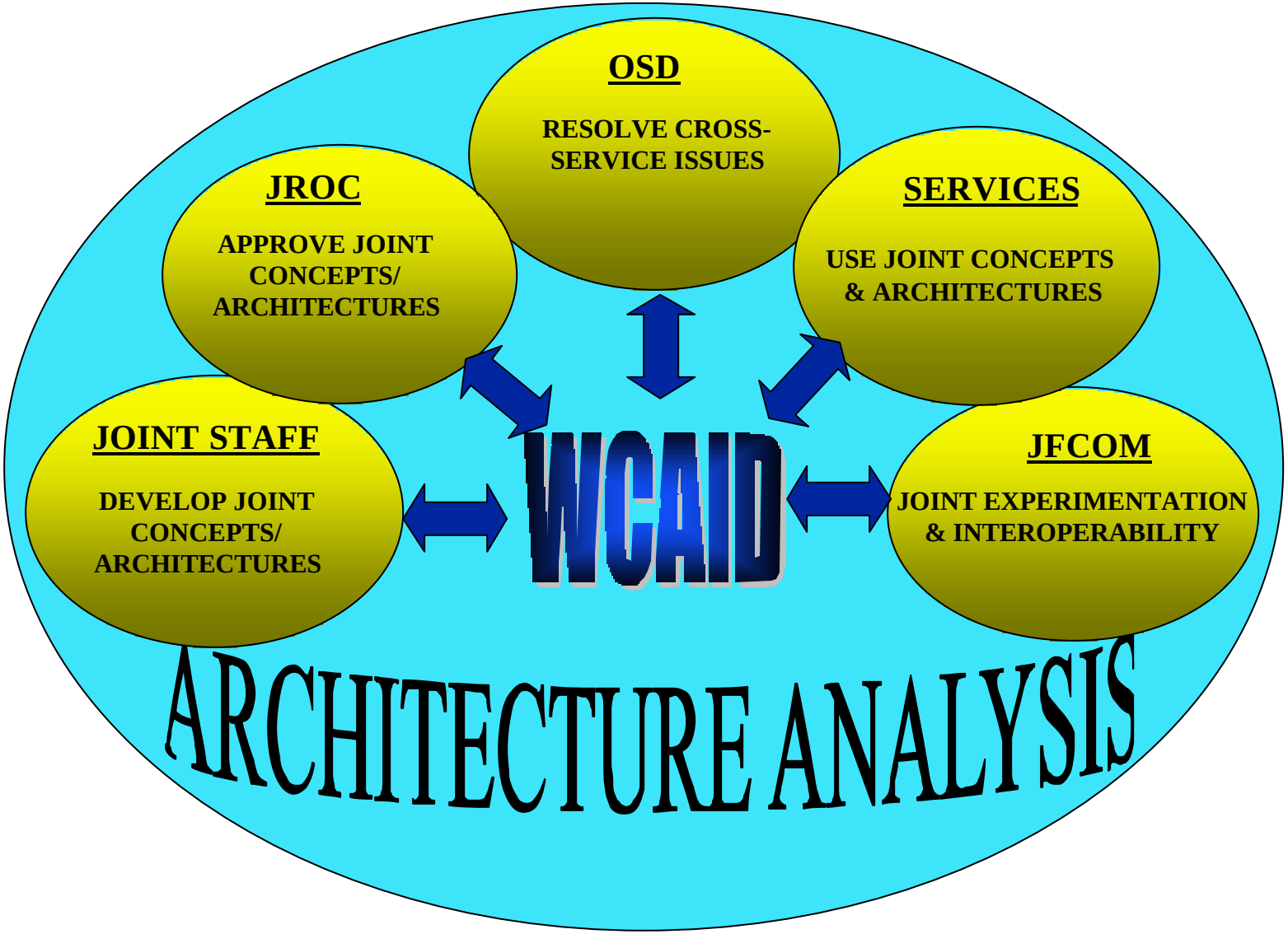
- **Must comply with OSD direction**
  - DoD Architecture Framework
- **Must ensure common:**
  - Format
  - Components
  - Authority
  - Compliance
- **Requires an update to CJCSI 3170 (Requirements Generation System)**
  - Regulatory teeth
  - Proper staffing

Current Status



BACK-UP SLIDES

PRIMARY UNIFYING EFFORTS

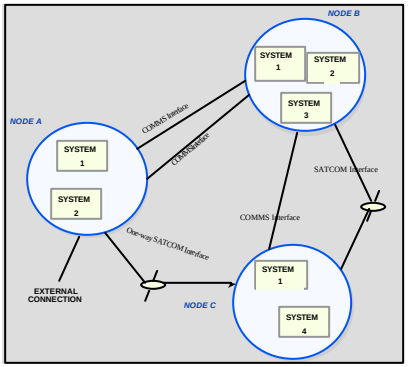


ROLES AND RESPONSIBILITIES

Joint Staff	JROC	JFCOM	Services	OSD
Develop integrating concept	Approve concepts	Develop integrating concept	Use joint architecture as a tool supporting requirements definition	Ensure systems views are developed to support system engineering
Develop mission area concepts	Approve architectures	Validate key capabilities and characteristics of integrating concept	Use joint architecture to identify interoperability requirements	Enforce resolution of cross-service interoperability issues
Develop mission area architectures	Approve architecture validation process	Conduct joint experimentation to validate concepts	Use joint architecture to identify excess infrastructure or systems	
Integrate mission area architectures	Recommend resource allocation based on architecture analysis	Continue effort to correct legacy interoperability issues	Use joint architecture to assess impact of program changes	
Oversee validation of joint architecture	Initiate requirements to satisfy shortfalls			
Ensure ORDs reflect joint requirements	Resolve cross-service requirements			
Maintain and update joint architecture				

INTEROPERABILITY ASSESSMENT

Architecture View



nodal

mapping

Major Defense Systems

Capability Not Required → Cut

Legacy System → Capability Not Required

Capability Required → Interoperable → Keep As Is

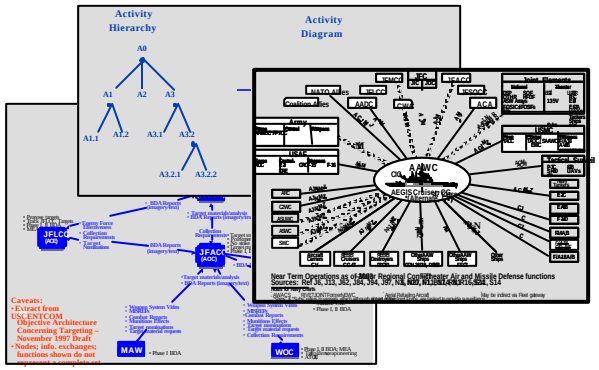
Capability Required → Not Interoperable → Modify (ORDMOD)

Inter-nodal analysis
Intra-nodal analysis

New System → Design Criteria → ORD

FUNCTIONAL ASSESSMENT

Architecture Views



functional mapping

Major Defense Systems

Develop

Improve

Maintain

Delete

Necessary

Unnecessary

Capability Gaps

Deficient Capability

Sole Capability

Duplicate Capability

Non-Critical Capability

Assessments