



Headquarters Air Combat Command

AF C2 Capability Modernization

***Leveraging Architectures to
Achieve Warfighting Integration***



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This Briefing is:
UNCLASSIFIED



Purpose

**Discuss the application of Architectures
in C2 Modernization and Integration**



AF C2 Integration Center Organization & Mission Areas



STRATEGY & PLAN

- Core Function Lead Integrator
- C2 Gaps & Seams Assessment (CAR)
- C2 Architecture Development and Management
- C2 S&T Prioritization

INNOVATE & EXPERIMENT

- C2 Concept Development
- Advanced Technology Initiatives & Prototyping
- Limited Objective Experiments
- Technology Transition

MODERNIZE

- Tactical Data Links
- Advanced Comm
- Combined Air Operations Center (CAOC)
- Agile Combat Support Command and Control (ACS C2); AFFOR and Deliberate and Crisis Action Planning and Execution Segments (DCAPES)

STANDARDIZE

- Air Operations Center- Weapon System (AOC-WS) Test Support
- Joint and Coalition interoperability of C2 systems
- C2 Horizontal Integration
- Data and Message Standards



C2 Vision

Airborne



**Smart
Knee
Board**



**Decision
Makers**



War Fighters

Afloat



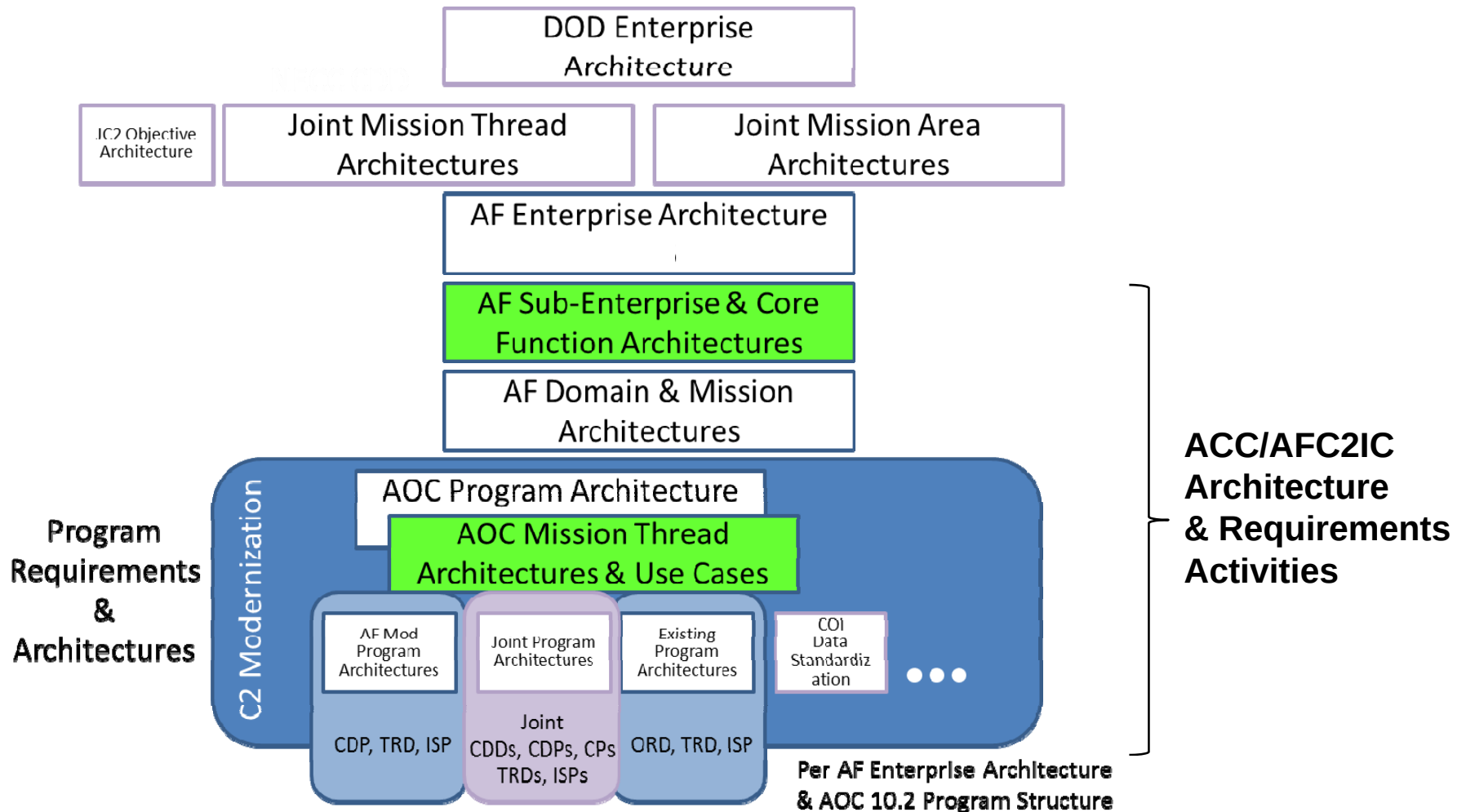
Deployed



**Seamless Information
Between Sensors, Decision Makers, and Shooters**



AF Architecture and Requirements Tiers of Influence

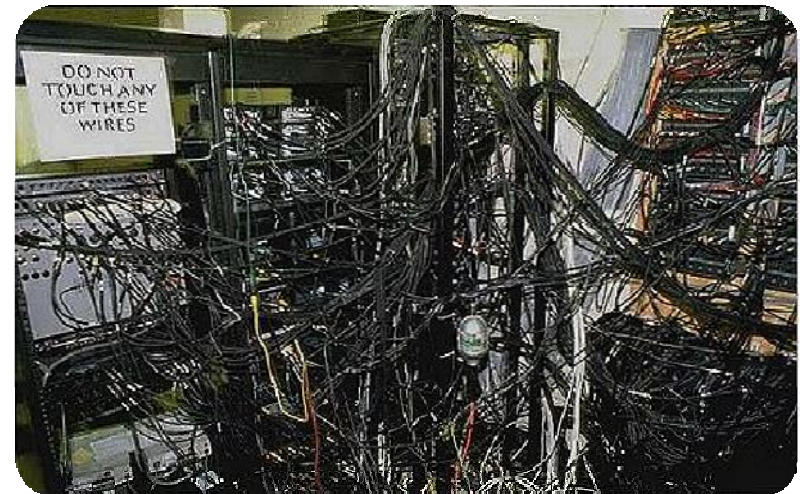
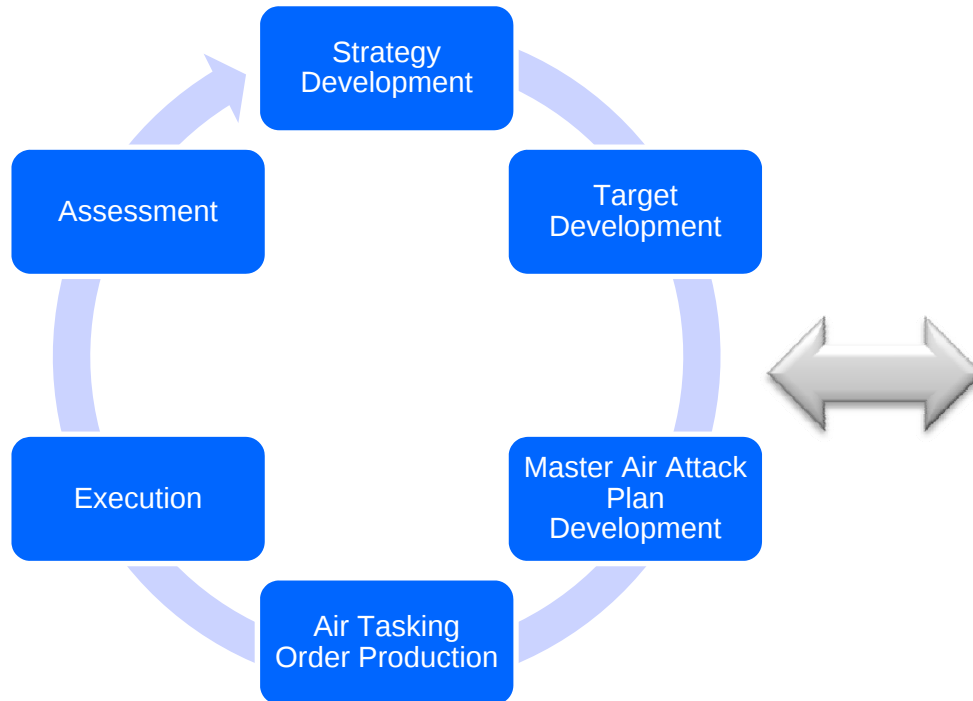




-
- OV-2/3**
- LNO SC C2 BASELINE**
- Wing C2 Baseline**
- Component NAF Wing**
- Air Operations Center**
- Air & Space Operations Center C2**
- Master OV-3**
- Back**



Challenge

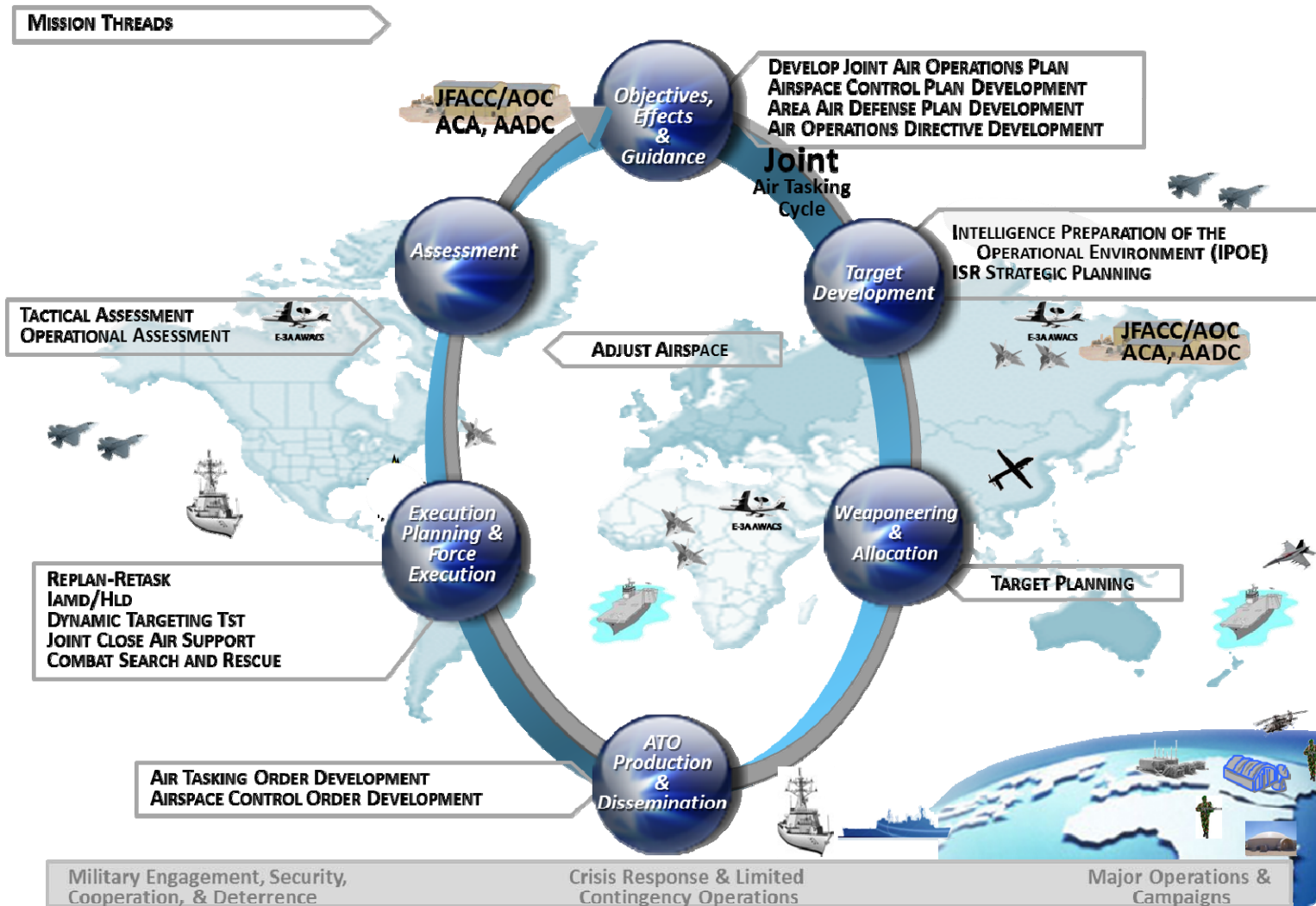


Business Process “Should” Drive Our IT Process



Air, Space & Cyber Operations Mission Threads

Workflow Descriptions





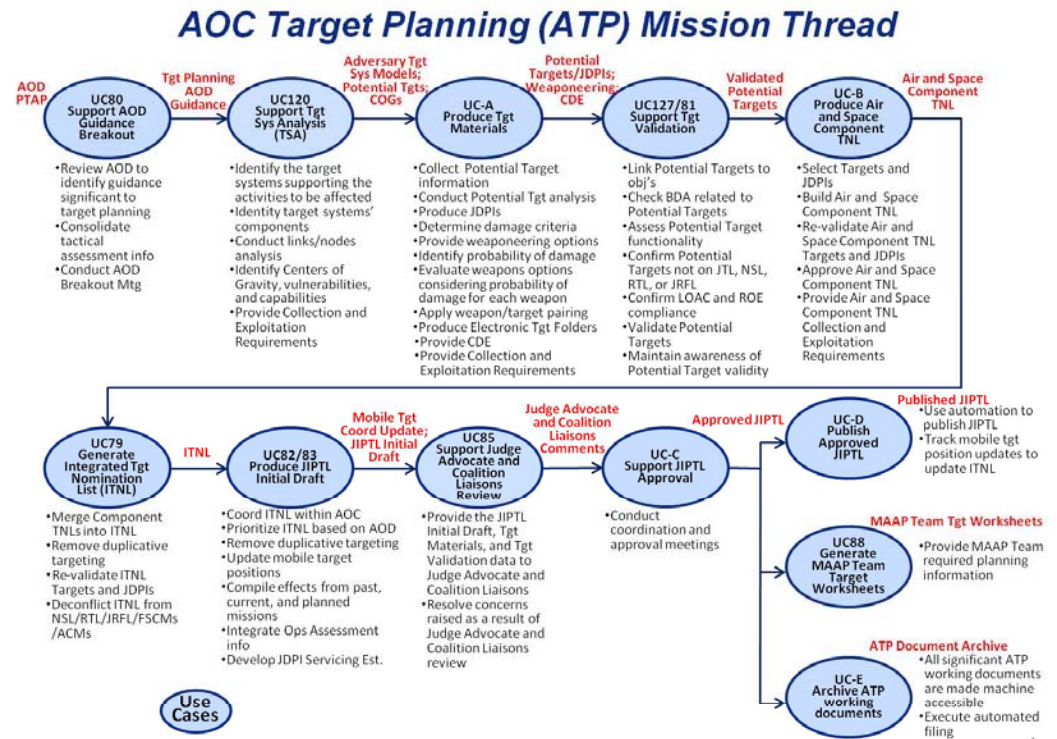
AOC Mission Thread Development

Overview:

- Based on AOC 10.2 requirements
- Defines AOC 10.2 application
- Represents “to be” architecture
- Will guide future capability development

Build Process:

- Research / Analyze / Collaborate
- Use-Case Dev / Build Arch Prod
 - AV-1, 2; OV-1, 2,3,5,6c; DIV-2
- Post Products to INTELINK
 - Capture user comments
 - Incorporate SME Feedback
- Validation / Certification





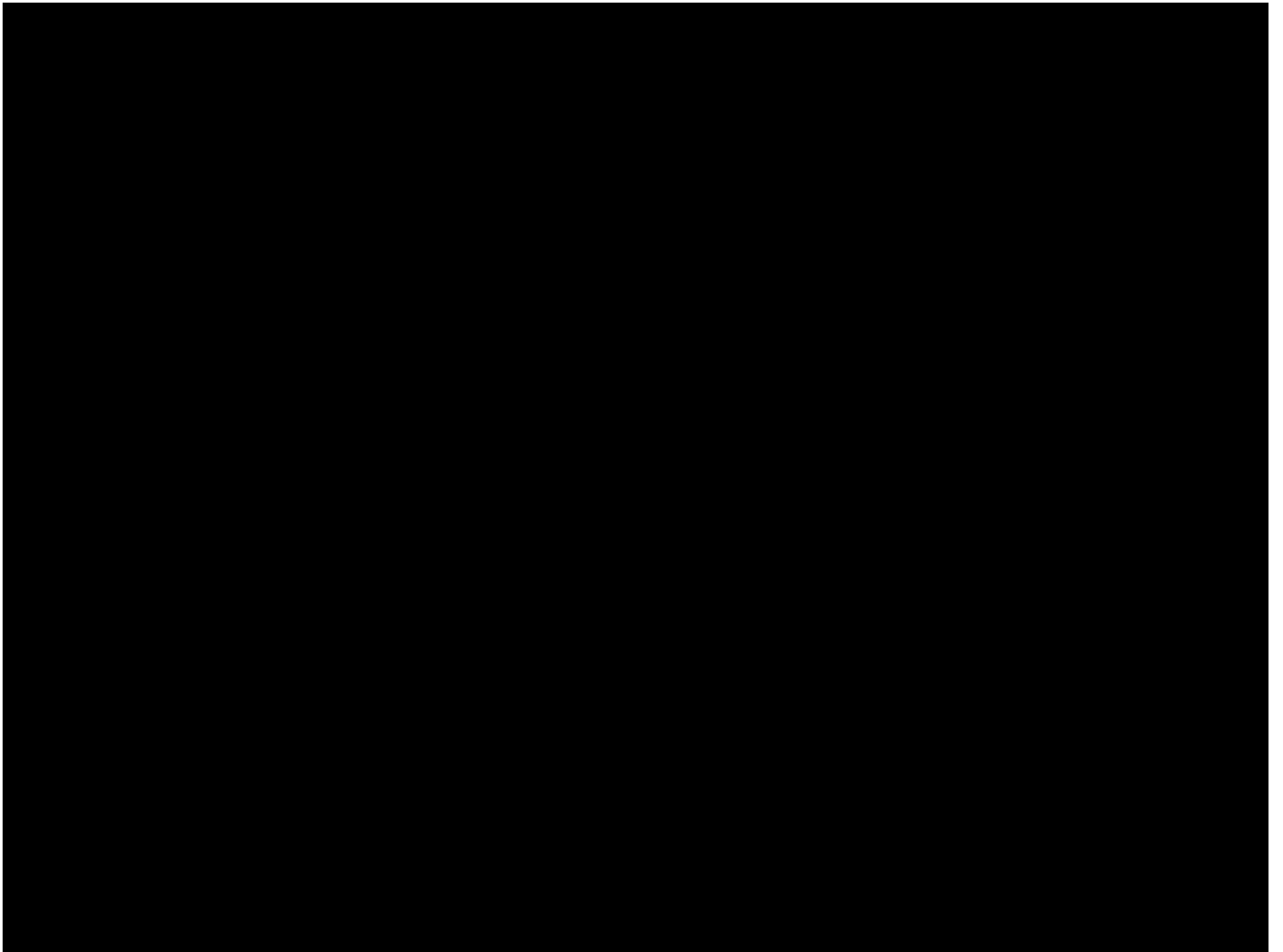
Why AOC Mission Thread?

- **Mission Threads provide the operational business activities and enabling functions context for AOC requirements**
 - **Use Cases provide work flow descriptions that define the interactions between a set of actors and a set of automation tools ("Machine" includes infrastructure, workflow engines, systems, services) to produce an outcome or product**
 - **Use cases articulate intended requirements outcomes (the "what" is required) that drive the system development process**
- **Support the following activities, *underpinned by Architecture discipline & rigor***
 - **Systems engineering**
 - **Prototyping/Development**
 - **Contracting**
 - **Interoperability & Supportability**
 - **Test and delivery of capability**



Summary

- **Warfighting integration challenges require structured approaches**
- **Architectures provide the overarching framework to facilitate repeatable, corporate analysis**
- **Mission Threads enable detailed, solution & standardization analysis linked to the enterprise construct**
- **Cohesive information management approach and strong governance processes required for success**





Mission Threads Focus Capability Development

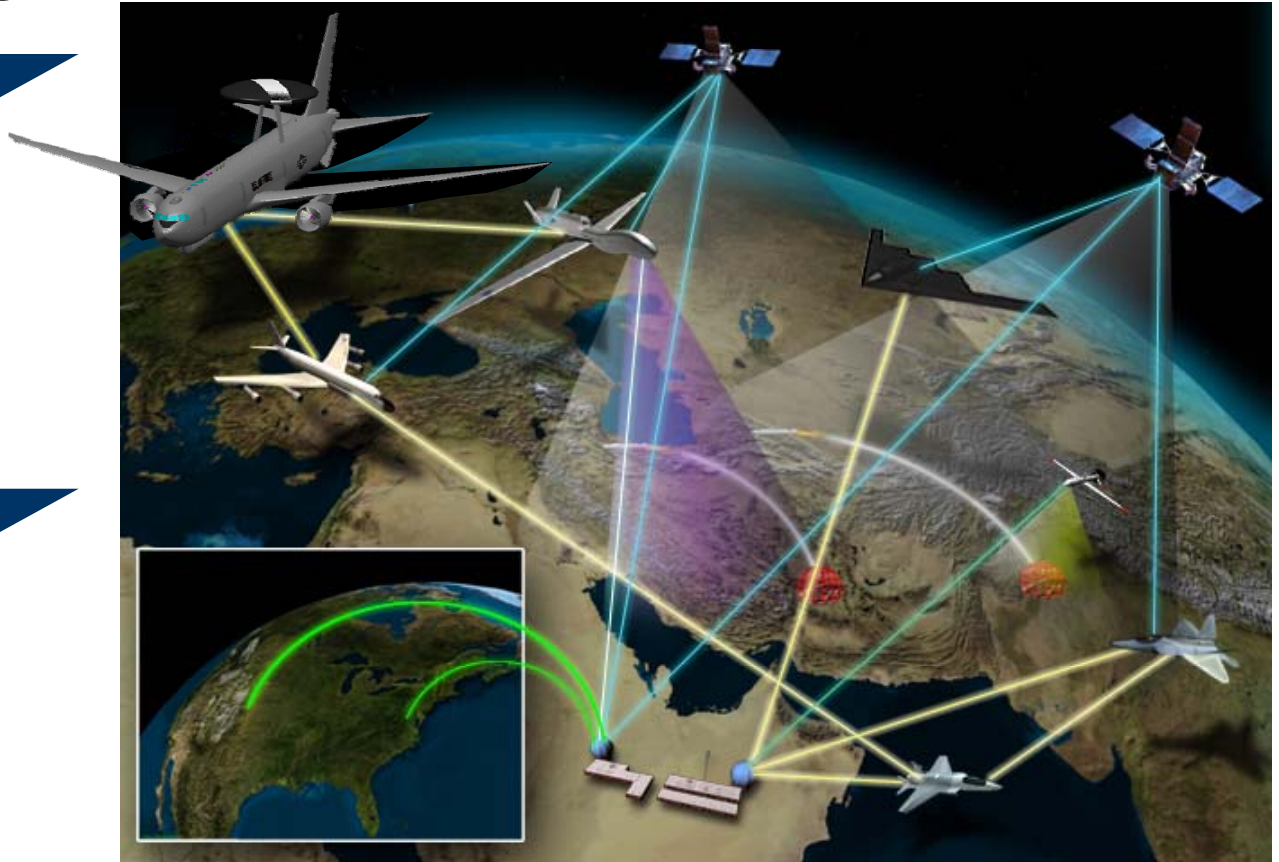
Mission Threads

Drive

**System/services
Designs &
Development**

Facilitate

**Integration and
Interoperability**

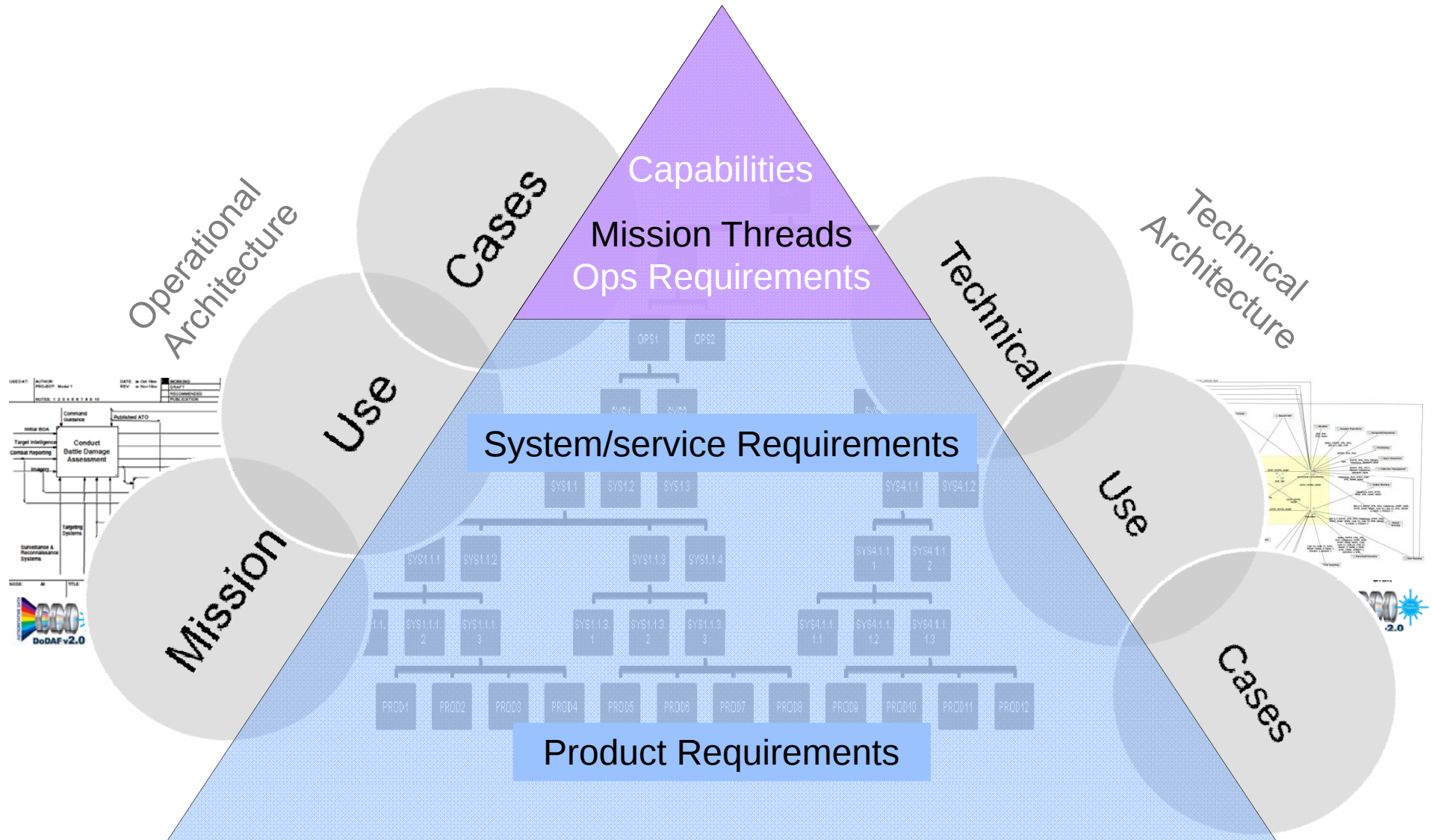


***Decision-Quality Information To the Right People ...
At the Right Time ... In the Right Context***



DRAFT 22 Nov 2011

Mission Thread Composition





Mission Threads

Provide Context for Modernization

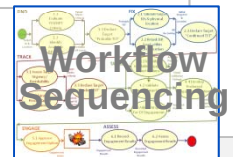
Adaptable

**Solutions for
Process & Info
Automation**

Responsive

**Iterative Deliveries &
Capability Increments**

AOC Mission Thread Description Packages



**Information
Object
Catalogue**

**Modular
Workflow
Use Case
Specifications**

**Workflow
Architecture
Descriptions**

- ❑ Applicable Data format & interoperability requirements & standards (AF, Joint, Coalition)

- ❑ Acquisition Requirements
- ❑ Metrics

- ❑ Logical / Operational Relationships between info based on use(s) in operational processes
- ❑ Use & Reuse of Info & Sub-Processes

Leverage IT Industry Best Practices for IT Modernization