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SPACE STARTS **HERE**

SPACE AND MISSILE SYSTEMS CENTER, CALIFORNIA

Toward the Future Space Enterprise

Col Brian Gamble

Senior Material Leader – Multi Domain Awareness Division



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CHIEF OF SPACE OPERATIONS
GEN. JOHN W. "JAY" RAYMOND

PRIORITIES

EMPOWER A Lean and Agile Service

DEVELOP Joint Warfighters in World Class Teams

DELIVER A Digital Service to Accelerate Innovation

EXPAND New Capabilities at Operationally Relevant Speeds

CREATE Cooperation to Enhance Prosperity and Security





SPACE SECURITY

COMBAT POWER PROJECTION

INFORMATION MOBILITY

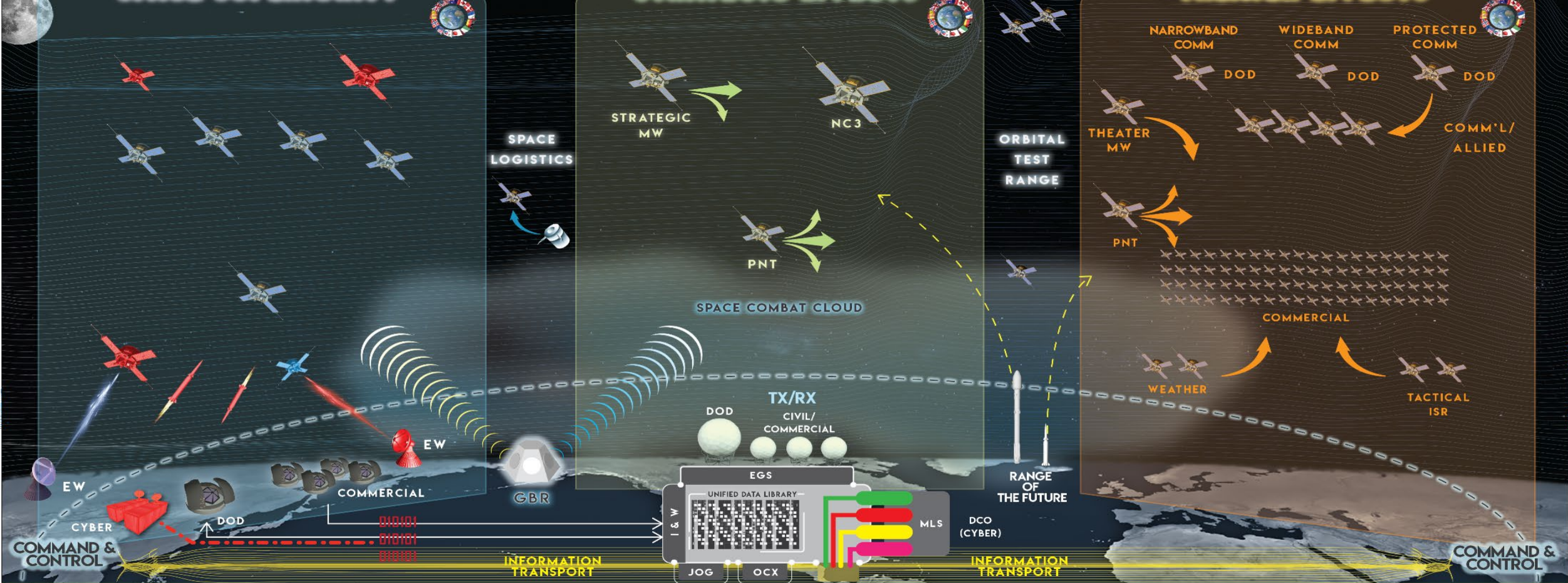
SPACE MOBILITY AND LOGISTICS

SPACE DOMAIN AWARENESS

SPACE SUPERIORITY

STRATEGIC EFFECTS

THEATER EFFECTS





SMC Capabilities

Launch Enterprise Systems

Mission: Guardians of Assured Access:
Launching when & where the Nation needs.



Atlas V



Delta IV



Delta IV
Heavy



Falcon 9



Falcon
Heavy

Missile Warning & Environmental Monitoring

Mission: Provide global, persistent, infrared surveillance and environmental monitoring capabilities to our warfighters and the nation.

SBIRS GEO



SBIRS HEO

DSP



MCS/OBAC



TAP Lab

Positioning, Navigation, & Timing

Mission: Professionals acquiring, delivering and sustaining reliable GPS capabilities to America's warfighters, our allies, and civil users.



SATCOM

Mission: Plan for, acquire and sustain space-enabled, global communications capabilities to support National Objectives.



DSCS



WGS



AEHF





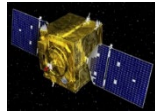
SMC Capabilities

Special Programs

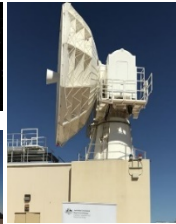
Mission: We develop, deliver and sustain unrivaled space control capabilities to guarantee space superiority for our nation.



Counterspace



Space Situational Awareness



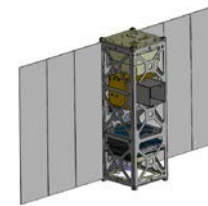
Enterprise Battle Management C2

Innovation & Prototyping

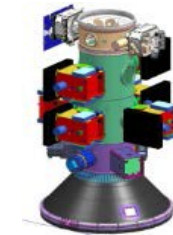
Mission: Drive future Space capabilities through collaborative innovation, development planning, and demonstrations.



Survivable Ground Architecture



Cube / Microsats



Alternative Access to Space

Cross-Mission Ground & Communications

Mission: Modernize and sustain Launch and Test Range System (LTRS) and Air Force Satellite Control Network (AFSCN). Ensure accurate and reliable command, control, telemetry and tracking support to the warfighter as well as provide critical space lift launch capabilities for our DoD, civil and commercial space assets.



Cape 1A & 1B Command CCAFS



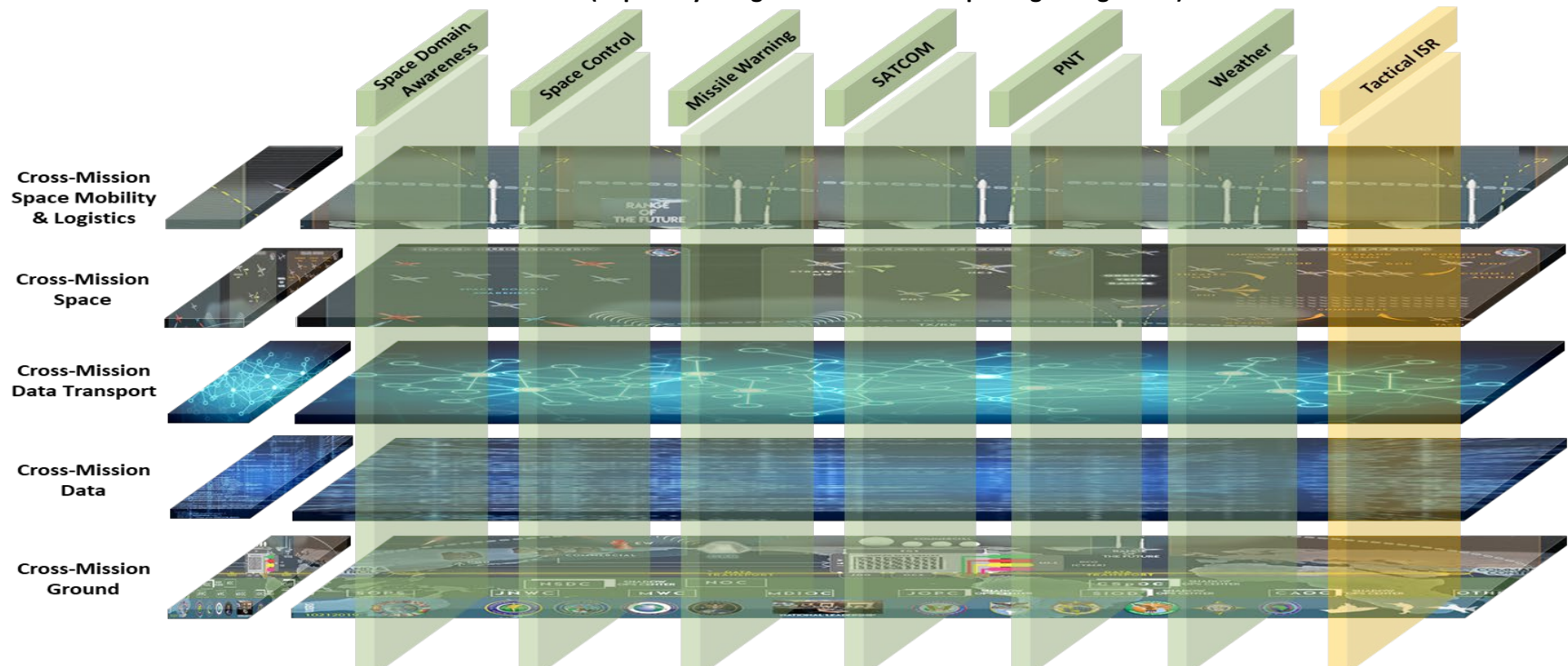


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Portfolio Architect Capability & Cross-Mission Integration

Operational Architecture

(Capability Integration Across Multiple Orgs & Agencies)



Systems Architecture
(System-of-Systems Engineering & Cross-Mission Integration)

USSF/SWAC - Lead Dynamic Force Design

Agile Enterprise Strategies: Set priorities, seek partnerships, identify areas to accept risk

Agile Rqmts/CONOPS Processes: Execute dynamic allocating requirements/updating CONOPS at the speed of partnership opportunities & tech innovation

Enhanced Resiliency: Enhance Mission Assurance of existing architecture through all spectrums of conflict to include direction of enterprise solutions to achieve efficiency

SMC/ZA - Lead Dynamic System Architecting and SoS Engineering

Enterprise MBSE/MS&A: Create digital ecosystem to enable dynamic SoSE w/ Govt & Industry

System-of-Systems Engineering (Cross Mission Teams): Create agile/open architectures enabling dynamic space C3I & Sys-of-Sys interoperability via enterprise products and standards/interfaces.

Rapid Acq / Fielding: Lead USSF Innovation Ecosystem; partner w/ adv tech & commercial disruptors; drive rapid prototypes to enhance transition opportunities thru ops beachheads

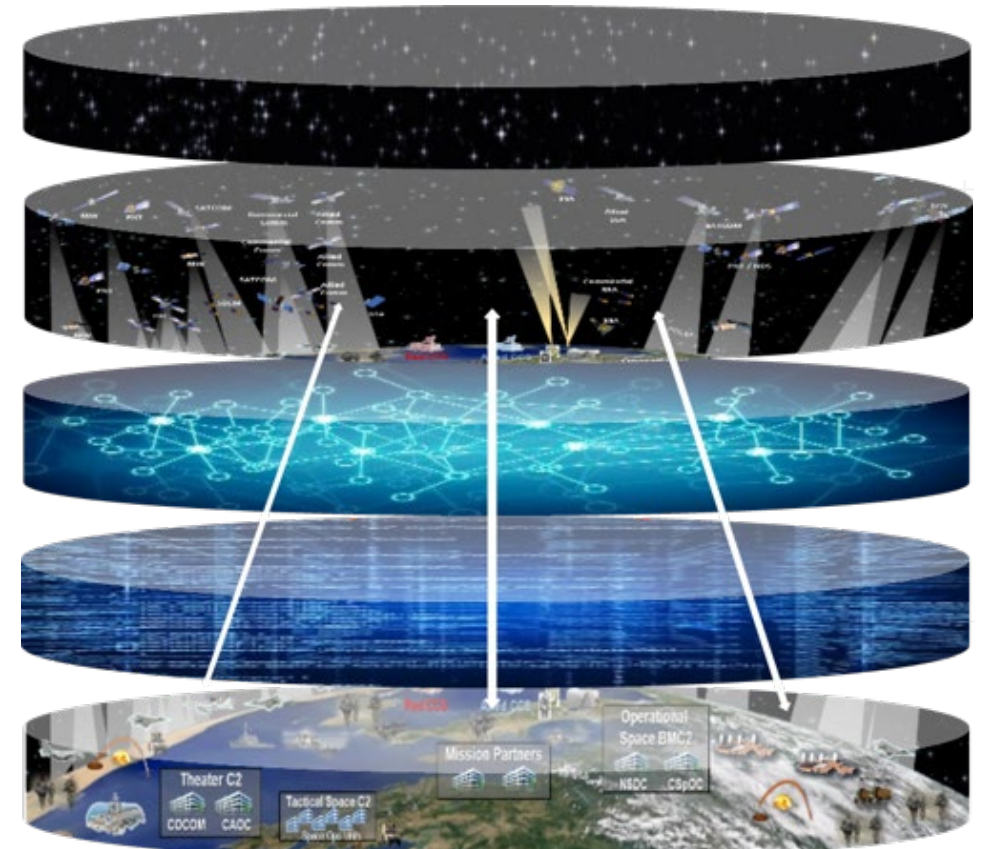
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USSF Architecture - Enterprise Opportunities

- **Cross Mission Space:** Enhance resilience, affordability of a Space Combat Bus; realign missions to alternate orbits; integrate pLEO architectures, flexibility using commercial/allied systems
- **Cross-Mission Data:** Enhance Unified Data Library data environment created initially for Space Domain Awareness and scale it across the USSF
- **Cross Mission Data Transport:** Restructure communication networks to support layered ABMS/JADC2 architecture w/ agile signals/cybersecurity & open terminal architecture
- **Cross Mission Ground:** Implement EGS, ABMS/JADC2 architecture, and effective Kill Chain for Fighting Space
- **Cross Mission Space Mobility & Logistics:** Agile Launch including alternative orbits/cislunar; enabling dynamic logistics via maneuver/servicing



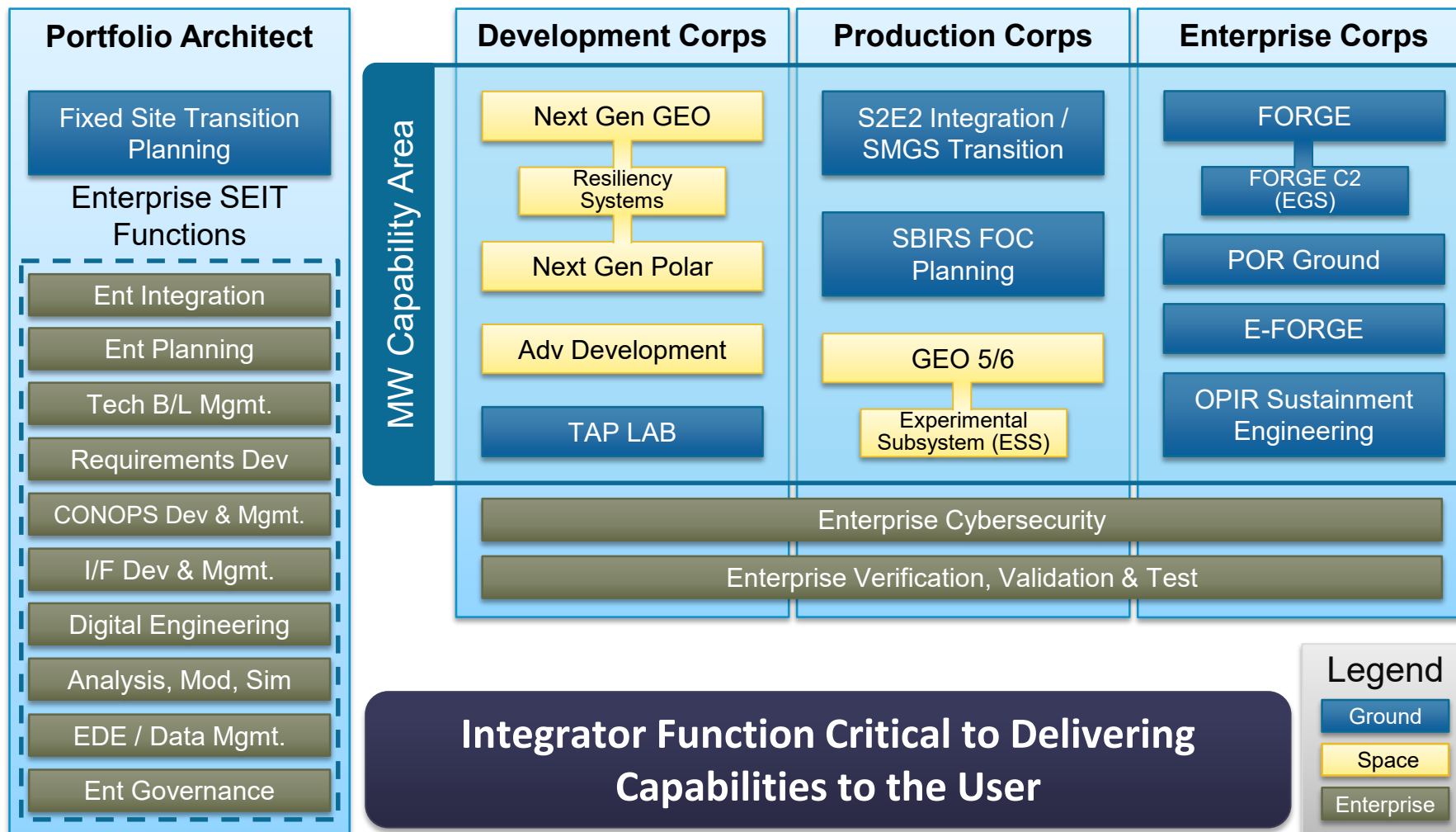
ABMS: Advanced Battle Management System
EGS: Enterprise Ground Services
JADC2: Joint All-Domain Command & Control
pLEO: Proliferated Low Earth Orbit

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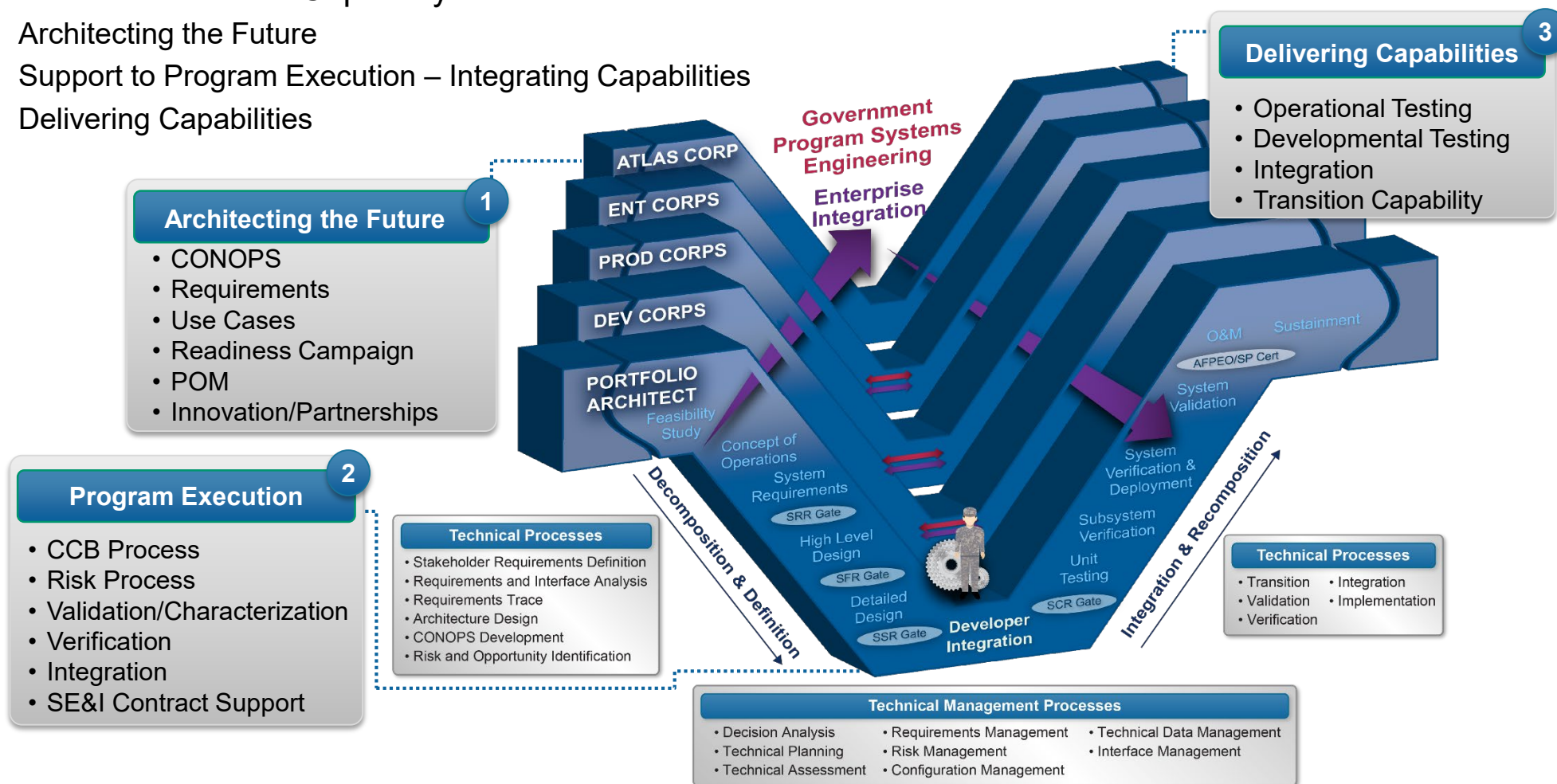
Missile Warning Capability Integration





MW Capability Lines of Effort

- 3 Lines of Effort for MW Capability Area
 - Architecting the Future
 - Support to Program Execution – Integrating Capabilities
 - Delivering Capabilities



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Protecting the Global Commons of Space

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