



Nuclear Command, Control & Communications (NC3) Integration Directorate Mission Overview

Mr. Scott Hardiman
Director, AFNWC NC3 Integration Directorate
Air Force Program Executive Officer, NC3

Never Doubted, Always Feared



AFNWC NC3 Integration Directorate

Mission Overview

"Drive unquestioned deterrence through integrated NC3 systems – sustained today, modernized for tomorrow."

Expected Outcomes

- An understanding of AFNWC/NC, AF NC3 Weapon System, and the AFPEO NC3
- Awareness of NC3 integration challenges and the need for smart modernization

1. NC3 Integration Directorate Overview

2. Air Force NC3 Weapon System

3. Air Force Program Executive Officer (AFPEO) NC3 Overview

4. The Future of NC3 & Upcoming Opportunities



AFNWC NC3 Integration Directorate

Purpose

To integrate the Air Force (AF) NC3 (Nuclear Command, Control, and Communications) Weapon System (WS) across the Department of the Air Force, to ensure our Nation's leaders and warfighters have assured communications anytime, under any conditions

"NC3 is a no-fail mission...we aim to highlight its importance as we continue striving to bring visibility to NC3."

*—General Thomas Bussiere
At the 2023 AFGSC Congressional Posture Statement to HASC-SF*



Space-Based Capabilities



Air-Delivered Capabilities



ICBM System Capabilities

Directorate's Background

- AFNWC/NC was created in 2015 through AFI 13-550 to unify and integrate the entire AF NC3 Weapon System, combatting the past's fragmented management and stove-piped perspectives of NC3 systems
- Integrating programs and capabilities fielded over decades, with widely varying technology generations, compatibility, and operating philosophies
- Critical to connecting the Nuclear Enterprise's internal and external stakeholders; including the White House, USSTRATCOM, USAF, USSF, USN, and others



NC3 Integration Directorate Delivers Unquestioned Deterrence

Not Your Typical Directorate

Integrates the AF NC3 Weapon System (AN/USQ-225)

Integration of the system of systems to enable smart modernization and adaption across the Department of the Air Force (DAF)

Serves as AF NC3 Program Executive Officer (PEO)

Developing and fielding DAF NC3 systems across the Nuclear Enterprise—delivering a diverse set of **29 programs**, including terminals, radios, communication devices, and conferencing equipment



NC Director and AFPEO NC3 has been appointed as the AF Integrating Program Executive Officer (IPEO) for NC3



NC3 Integration Directorate

Vital to National Security



"Our threats are not isolated to one command or nation. These global challenges require a concerted effort to strengthen not only deterrence but also partnerships with our allies and partners."

- Gen Anthony J. Cotton, Commander, U.S. Strategic Command

Air Force Global Strike Command (AFGSC) and Space Operations Command (SpOC)



Supported MAJCOM



Air Force Materiel Command (AFMC)

Supporting MAJCOM

AFNWC NC3 Integration Directorate
directly advises AFGSC
on technical architecture, investment
decisions, modernization,
configuration management, system
verification, and certification of the
AF NC3 Weapon System

Provides Direct Support to AFGSC, codified in Air Force Policy Directive



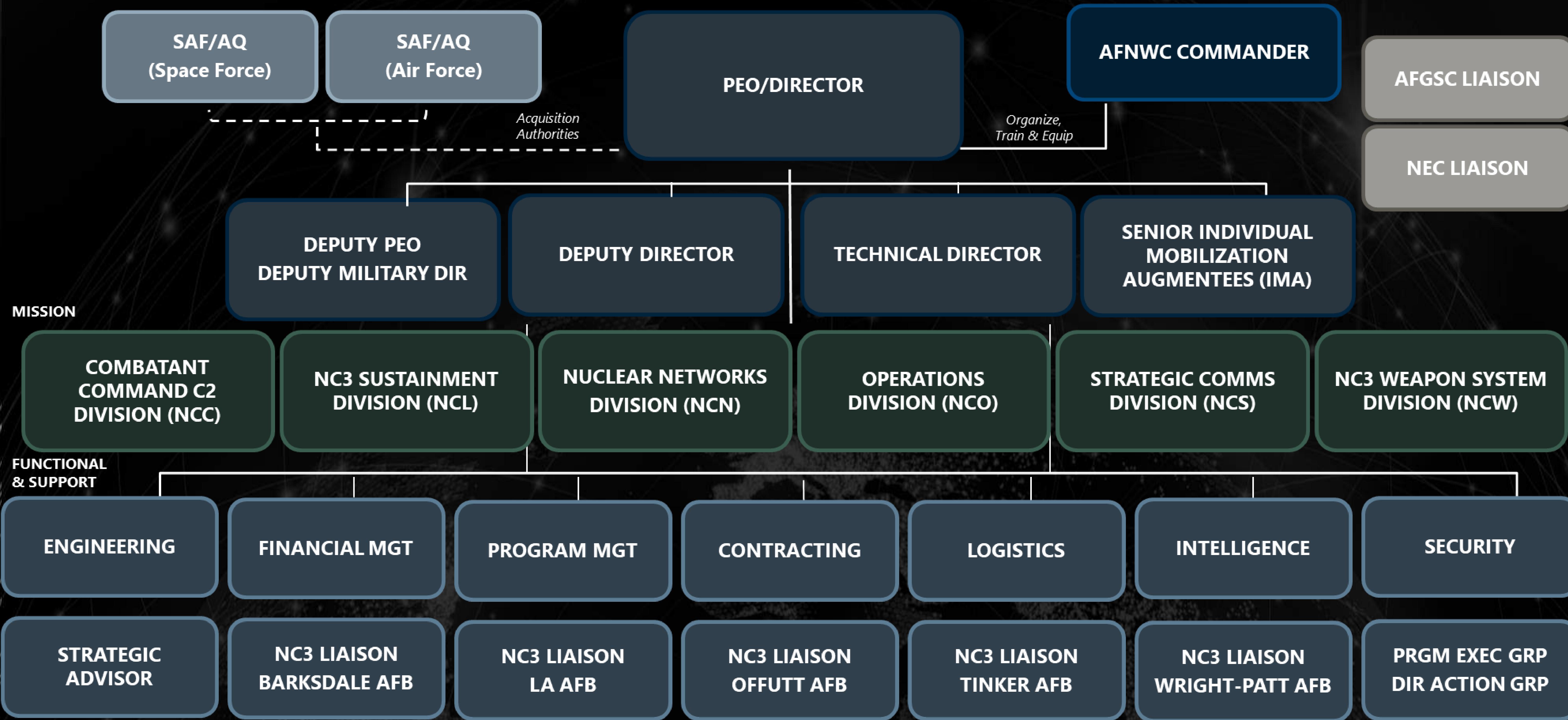
AFNWC/NC
NC3 Integration Directorate
• AFPEO for NC3
• Integration and management of AF NC3 Weapon System



AFNWC
Air Force Nuclear Weapons Center
• Nuclear Weapons Systems Management
• AFNWC/NC Organize, Train & Equip Responsibilities (OT&E)

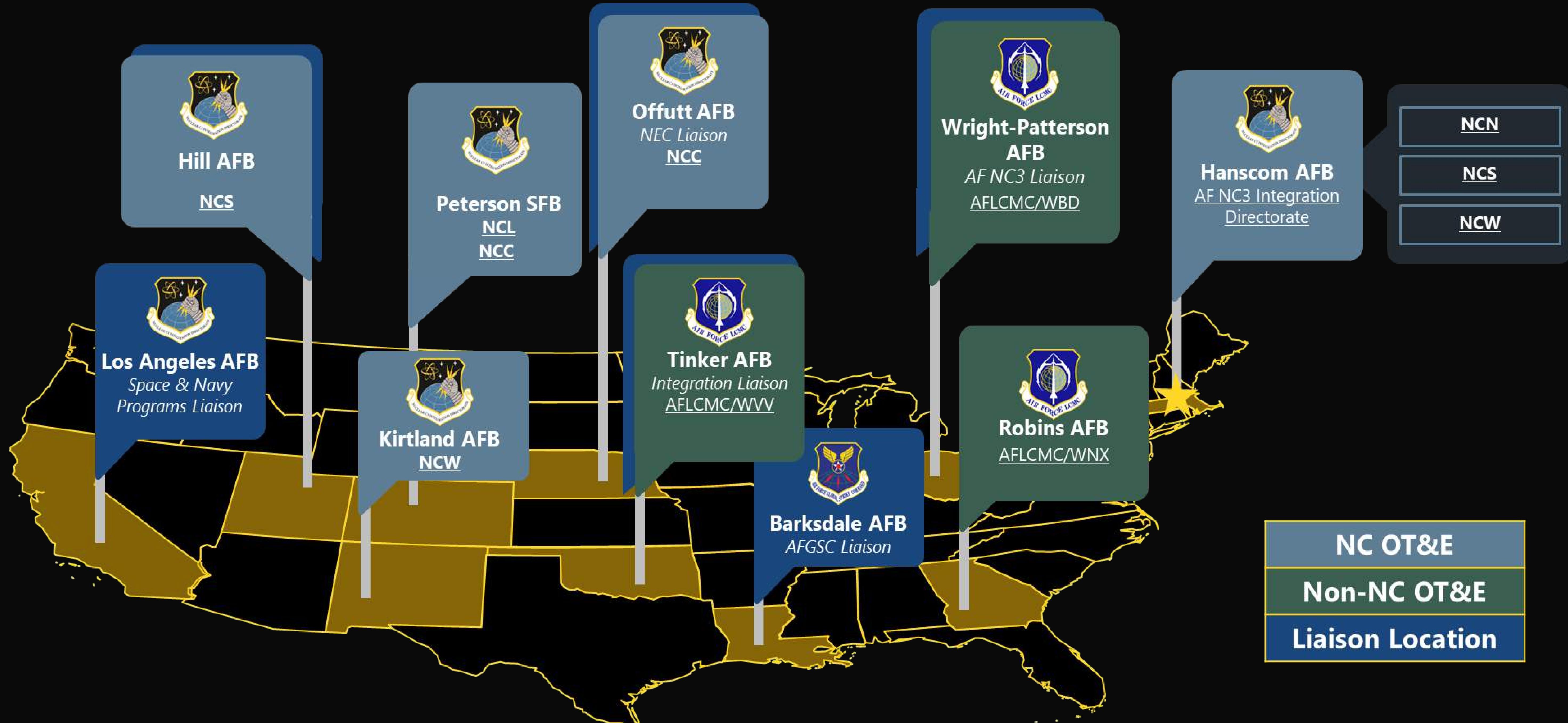


AFNWC/NC Organization





AFNWC/NC Locations



Nationwide Workforce – Global Impact



AFNWC NC3 Integration Directorate

Welcoming Change

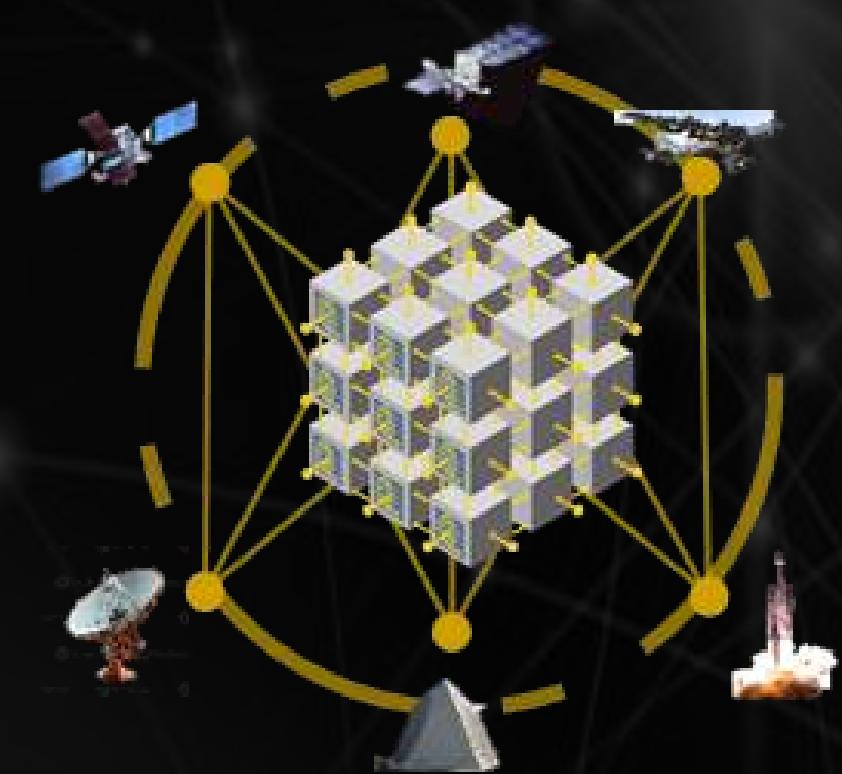
Recent changes have provided growth in three distinct and significant ways



Inclusion of the Digital Directorate's (HB) Combatant Command C2 (HBC), now NCC

50% Increase of the NC Workforce

\$1.1B AF NC3 PEO portfolio growth
• 10% increase in number of programs



AF Integrating IPEO For NC3

Responsible for **driving greater interoperability** by leveraging the technical authority to develop and enforce NC3 design requirements and solutions for USAF NC3 systems and subsystems



Air Force NC3 Weapon System

Never Doubted, Always Feared



What is NC3?

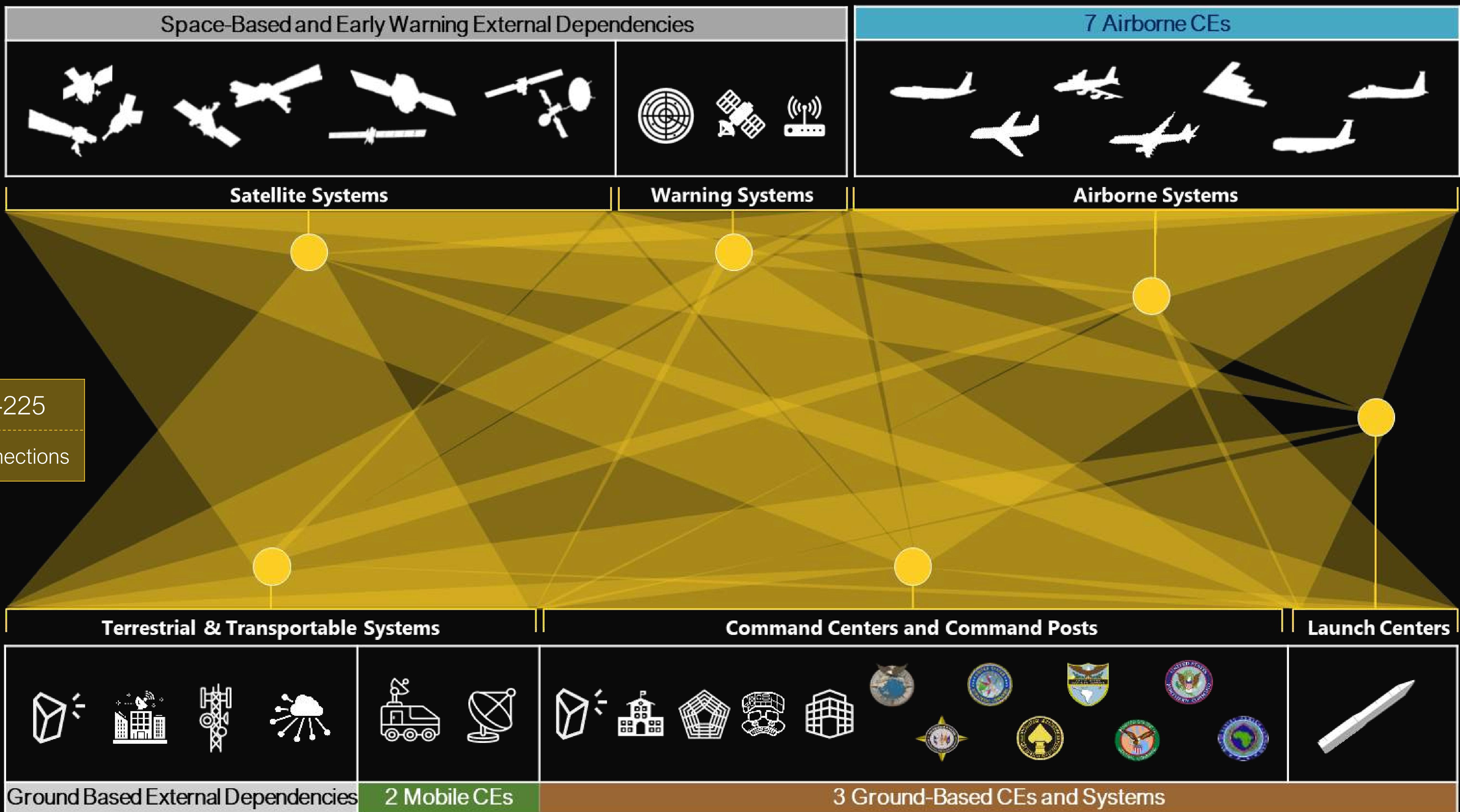


*NC3 connects the Nuclear Enterprise, from situation monitoring to force execution
A break anywhere along the line jeopardizes mission execution*



AF NC3 Weapon System (AN/USQ-225)

12 Configuration Elements, **60+** CE Versions (CEVs), **1,000s** of Constituent Systems & Sub-Systems,
All connected to Multiple External Dependencies and their Systems

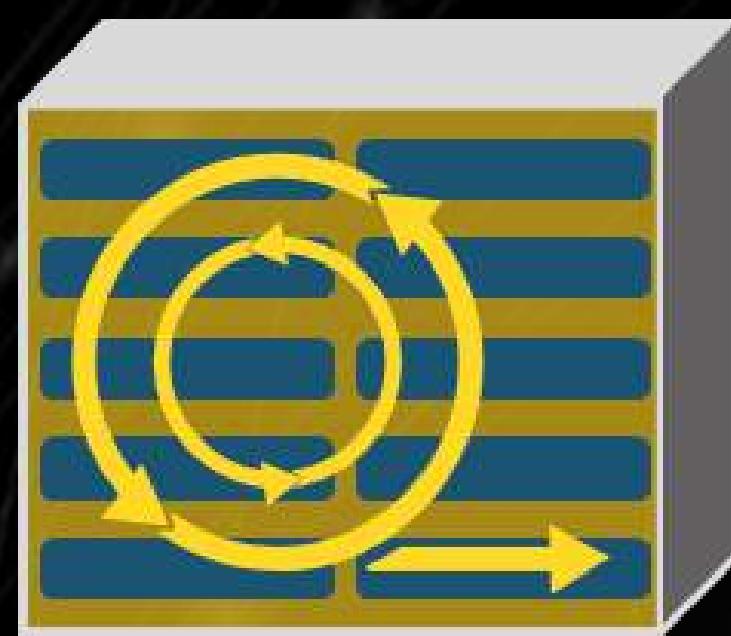




AFNWC NC3 Integration Directorate

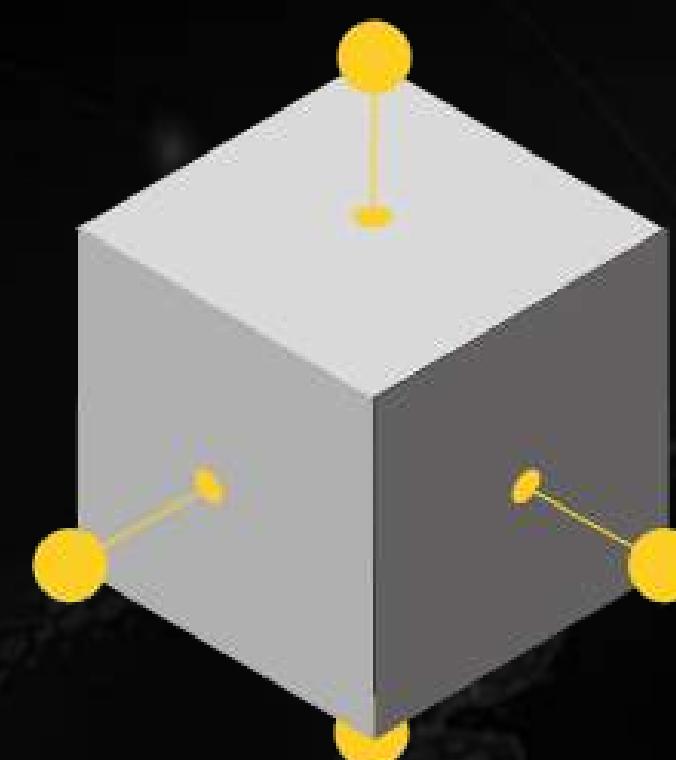
Principal Integrator Across the DAF

CAPABILITIES DEVELOPMENT, MANAGEMENT, & MODERNIZATION



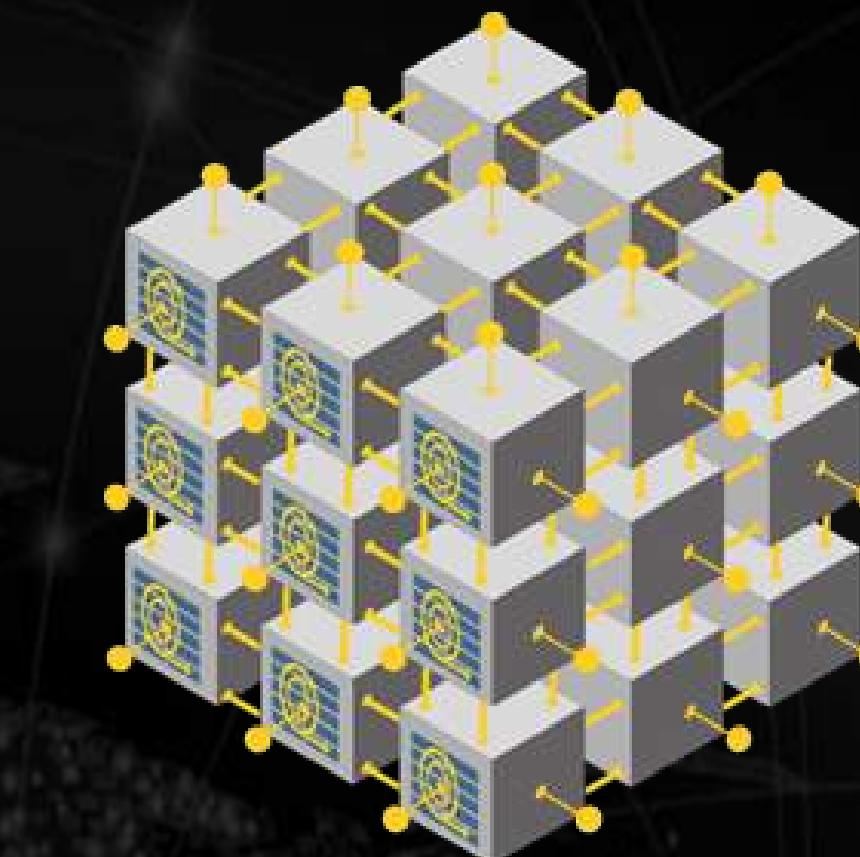
Envision, develop, and manage the acquisition lifecycles

SYSTEM INTEGRATION



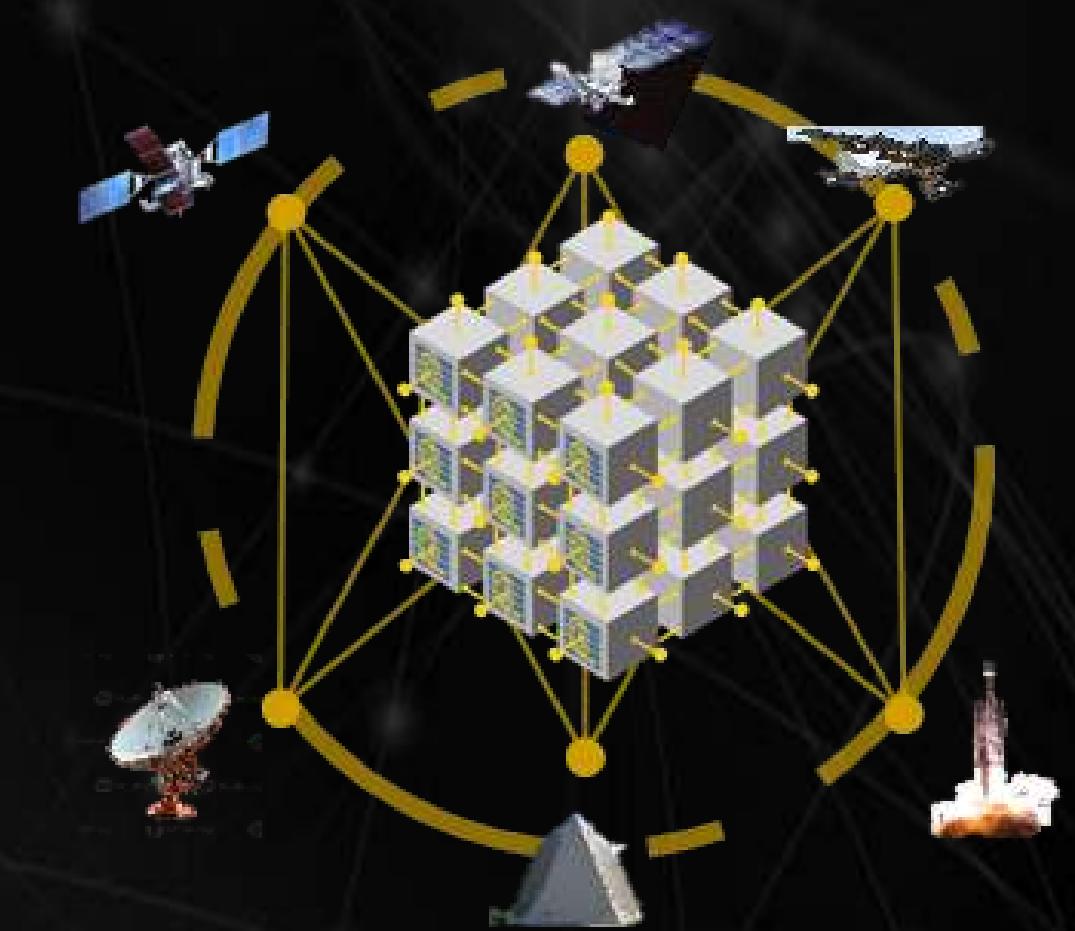
Modernize and integrate functional capabilities within the thousands of AF NC3 systems

SYSTEM OF SYSTEM INTEGRATION



Integrate the AF NC3 systems across all sub-systems, platforms, facilities and containers

ENTERPRISE INTEGRATION



Integrate the AF NC3 WS with Enterprise dependent systems

Principal Integrator of the AF NC3 WS, responsible for integrating the system of systems to enable smart modernization adaption, and integration across the enterprise... **We serve as the Prime Contractor**



AFPEO NC3 Overview

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AFPEO NC3 Portfolio

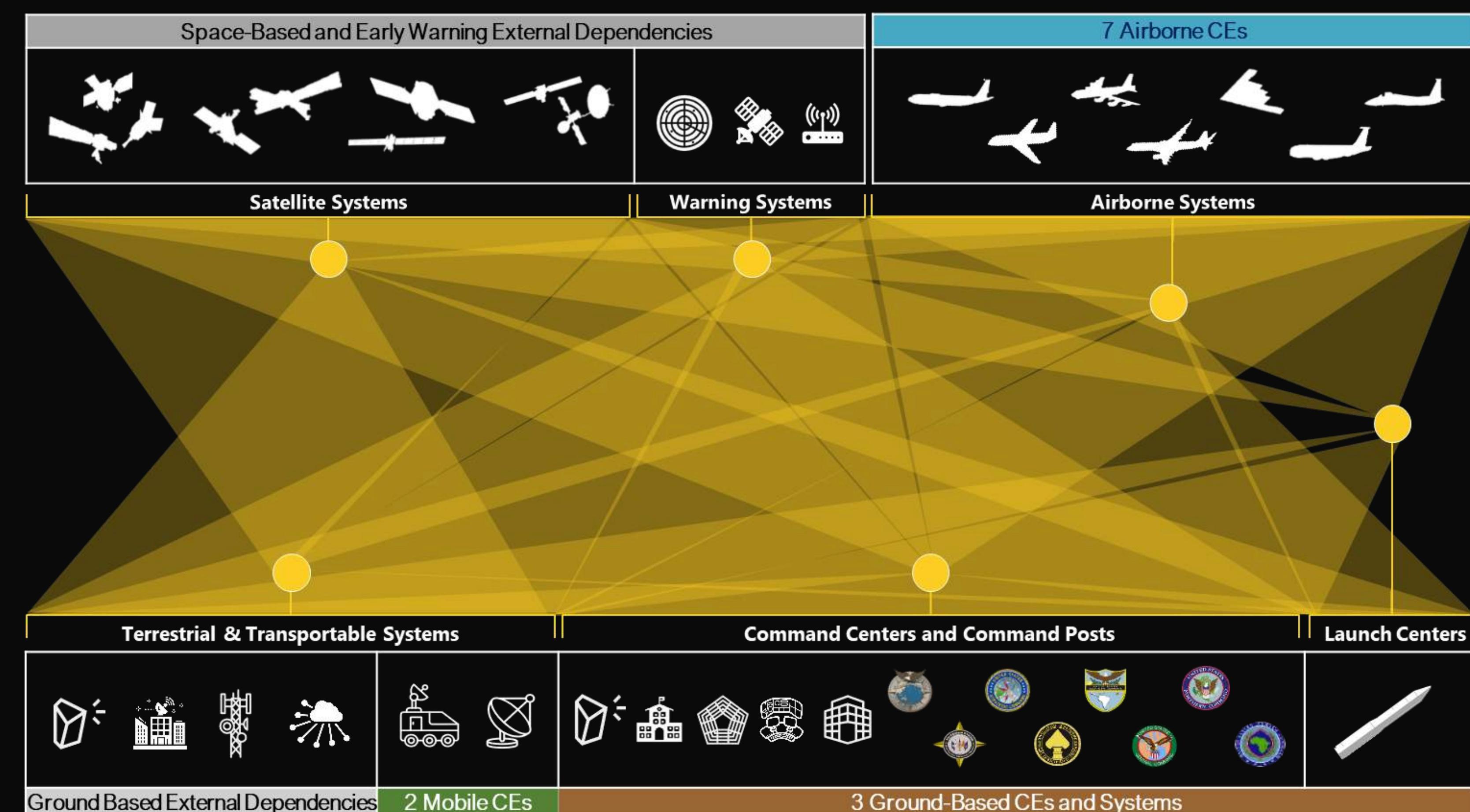
Overview

*Developing, producing, fielding and sustaining the AF NC3 Enterprise
As the AFPEO for AF NC3*

AF NC3 PEO Responsibilities

AFPEO for 29 AF NC3 Programs activities,
which include:

- 1 ACAT I
- 3 MTAs
- 3 ACAT II
- 11 O&S
- 5 ACAT III
- 4 Investment Activities
- 1 SWP

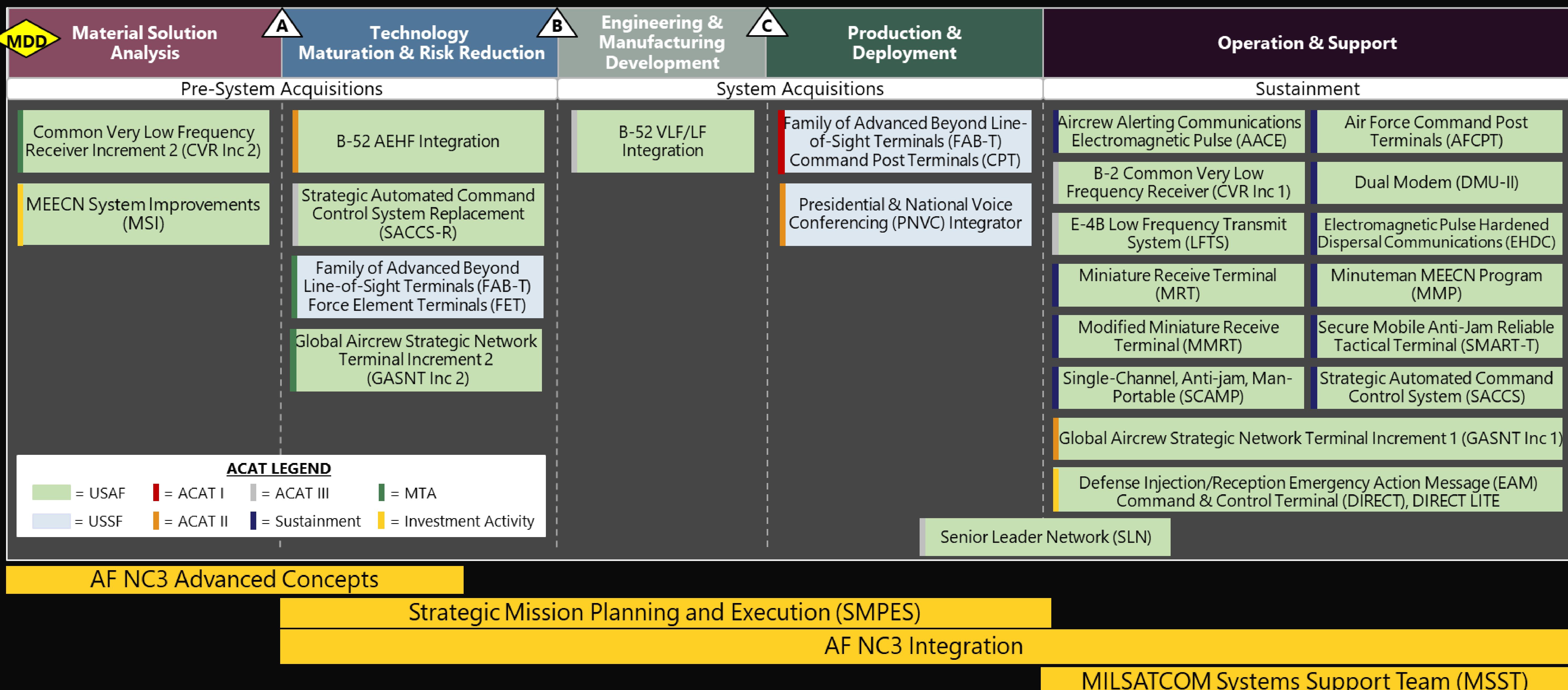


NC3 PEO programs integrate into the NC3 Weapon System



AFPEO NC3 Portfolio

AFPEO NC3 Portfolio includes **29 programs/activities** that provide capability to Air Force and Space Force, working in sync with the AF NC3 WS





Funding Challenges

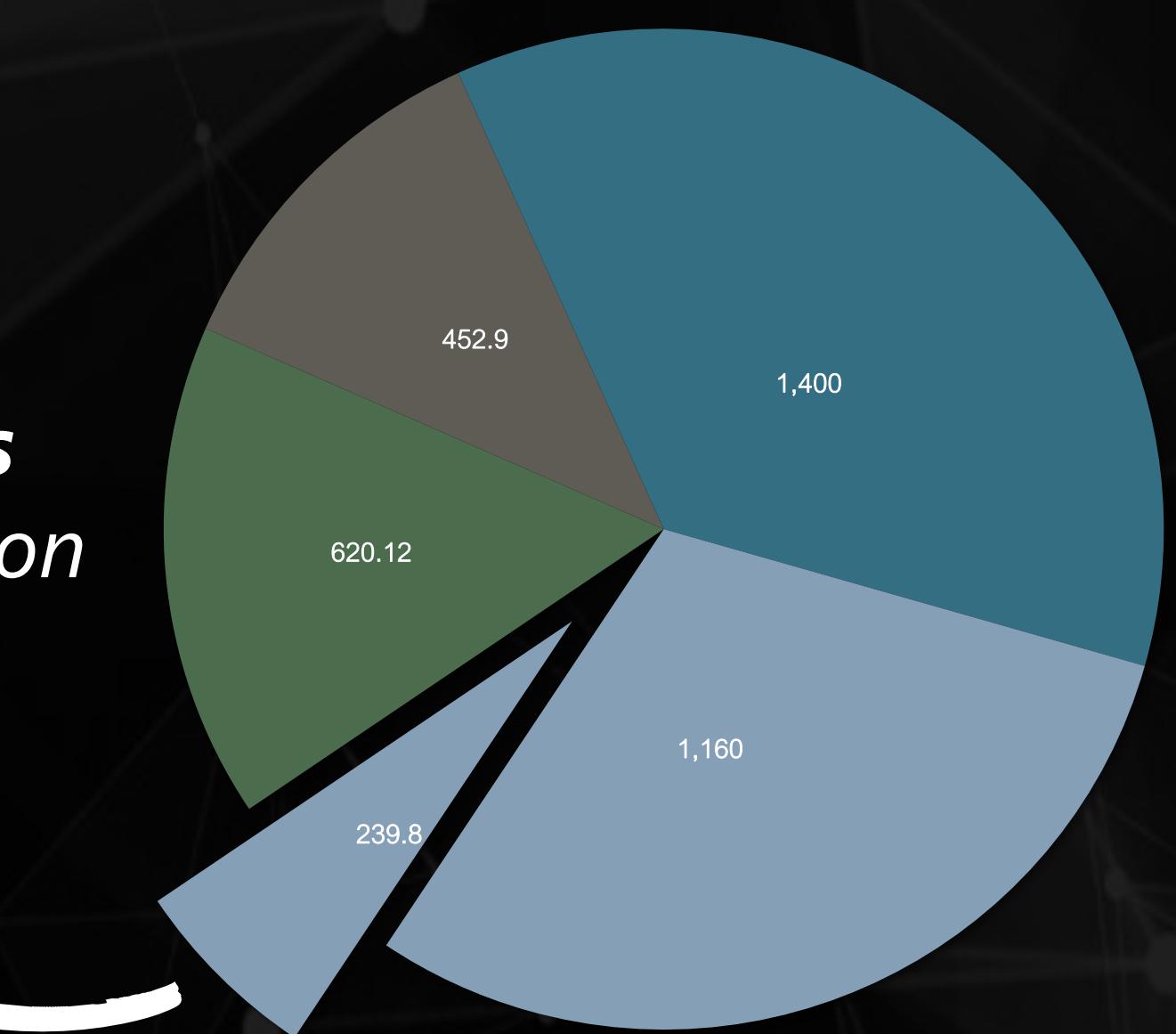
Funding gaps jeopardize Weapon System Sustainment, Integration, Modernization, and Next Gen NC3 Advancements

Impacts of Funding Shortfalls

- ✓ Inability to Fully Sustain and Integrate Current NC3 Weapon Systems
- ✓ Limited Modernization of NC3 Systems
- ✓ Restricted Pursuit of RDT&E and New Technology Development
- ✓ Cybersecurity and Infrastructure Gaps

FY23-28 Approved (\$M) Funding

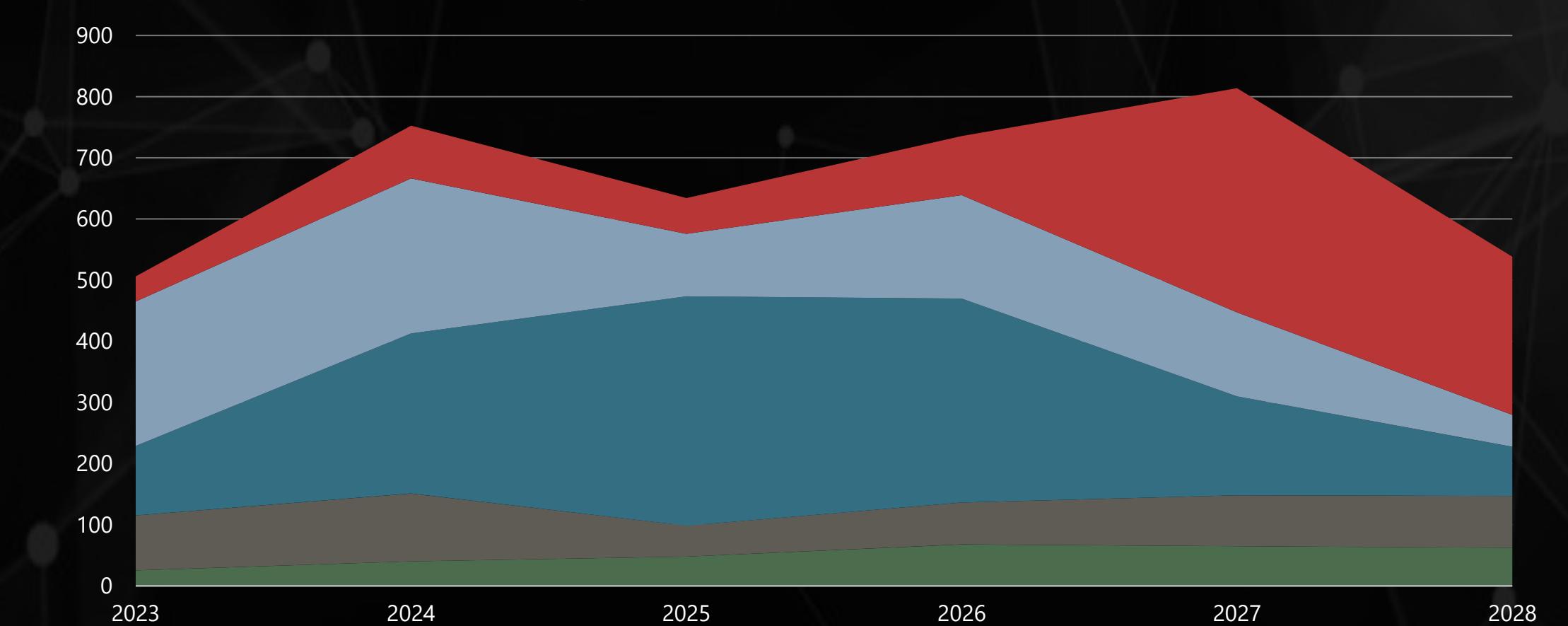
CAM O&M Procurement RDT&E



*Only ~6% of funds
allocated for Integration*

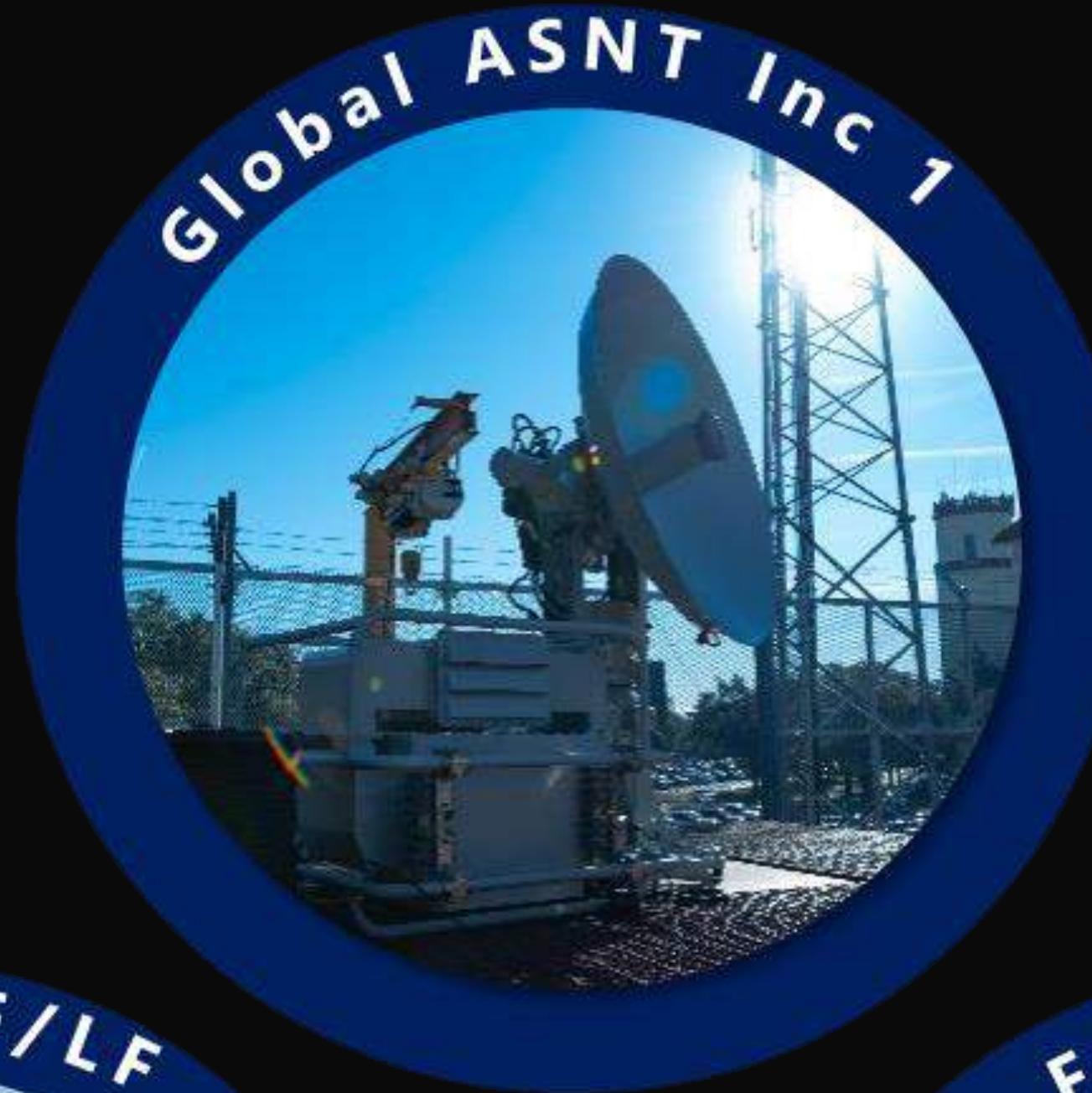
FY23-28 NC (\$M) Funding Requirements

Funding Shortfall





AF NC3 System Development & Fielding



AFNWC/NC is developing, producing, sustaining, and fielding AF NC3 systems across the Nuclear Enterprise



Future of NC3 & Upcoming Opportunities

Never Doubted, Always Feared



AF NC3 Weapon System

Security through Diversity

NC3-WS is the backbone of post-attack communication, designed to survive and operate under nuclear conditions
Failure of NC3-WS jeopardizes nuclear deterrence, impacting all other national defense plans

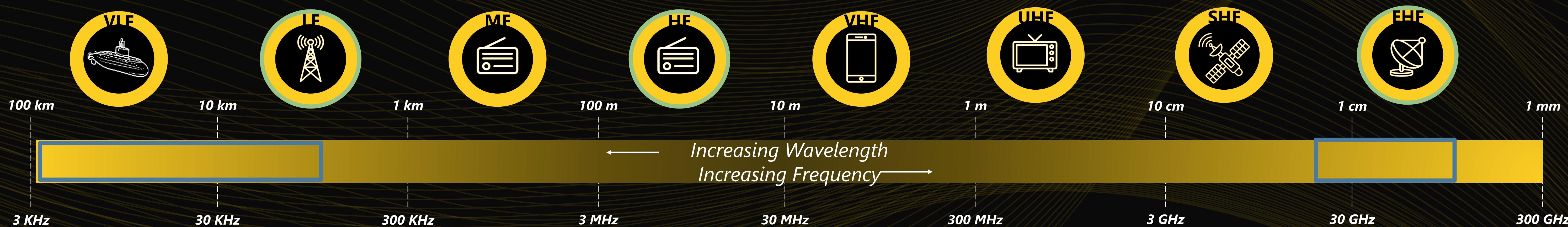
Challenges

- **Competition:** Finite spectrum contested
- **Interference:** RF signals disrupted
- **Modernization:** Legacy systems require update

Solutions

- **Waveform Diversity:** Enable adaptive operations
- **Redundancy:** Ensures continuous communication
- **Adaptive Waveforms:** Dynamically optimize performance

Trusted NC3-WS connects the Nuclear Enterprise—ensuring mission continuity from monitoring to force direction. Failure jeopardizes all other DoD operations.





Advanced Concepts

AFNWC NC3 Integration Directorate is currently utilizing Broad Agency Announcements to team with industry partners for the development of Next Generation AF NC3

Proactive

Industry involvement to pioneer Next Gen AF NC3 capabilities with AFNWC/NC to define future-state WS and the requirements necessary to integrate and achieve smart modernization

Secure

AF NC3 WS requires contractors to work in highly secure environments to safeguard the pursuit of Next Gen AF NC3

Innovate

AFNWC/NC is pre-vetting vendors and industry partners in advance of requirements to streamline contract awards through Broad Agency Announcements

I would like to see more assistance from industry partners, with stronger side by side working relationships, to help figure out our operational problems and drive more industry investment in RDT&E

– Former SECAF Frank Kendall
AFA Warfare Symposium 2024



NC3 Advanced Concepts

Broad Agency Announcement

The NC3 Advanced Concepts Broad Agency Announcement (BAA) is a **solicitation tool** used to evaluate and advance cutting-edge technologies to fulfill NC3 modernization requirements. This BAA provides an opportunity to conduct **studies** and develop and demonstrate **prototypes** focused on NC3 while ensuring execution is accomplished at the appropriate security classification levels.

Details

- **\$75M** Ceiling Value
- **5-Year** Period of Availability (01 Feb 24 – 30 Jan 29)
- **33** Current Approved Companies

Key Dates

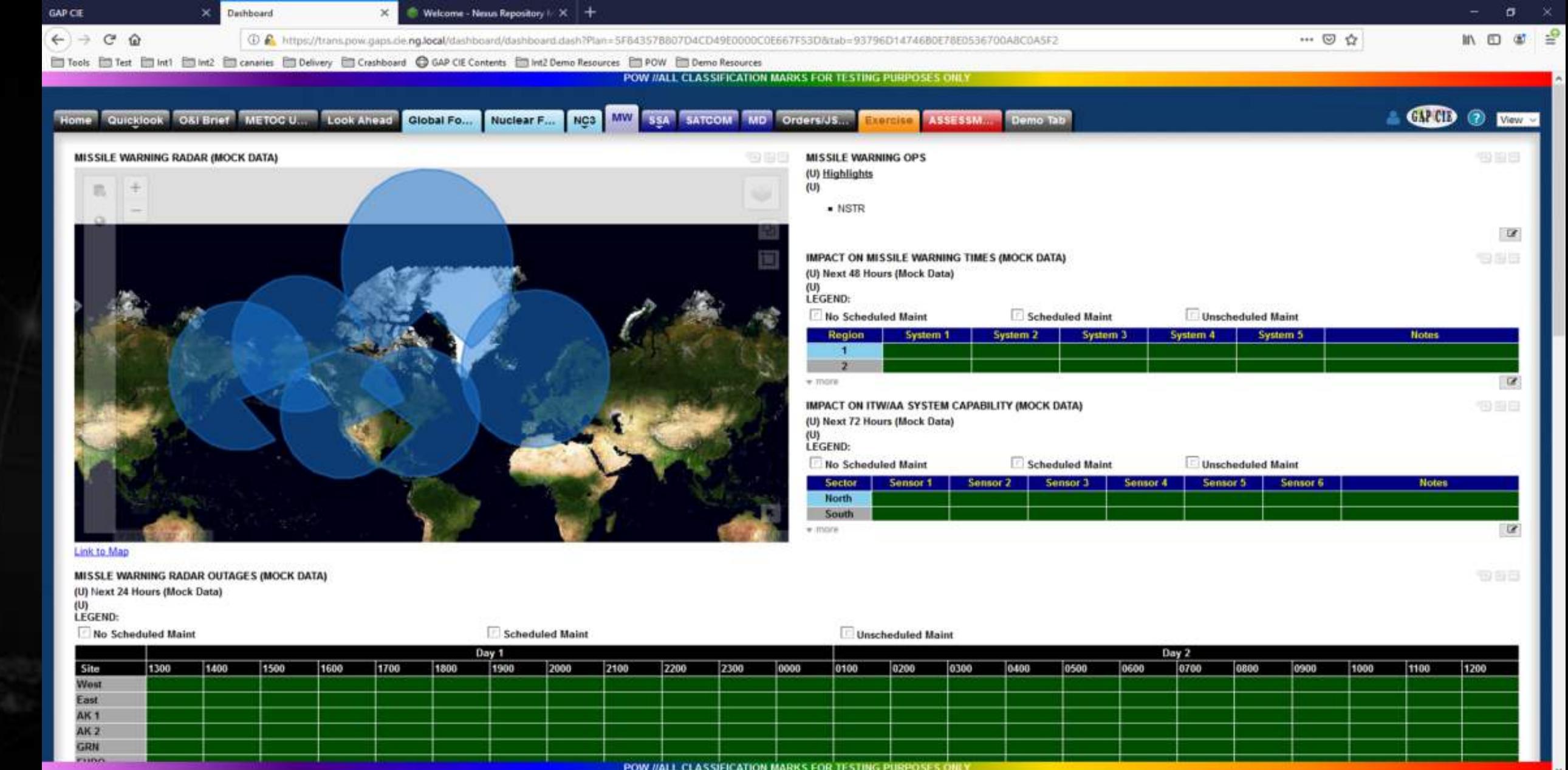
- BAA **Establishment** - Jan 2024
- Release of **BAA Solicitation #1** - Jun 2024
- **RFP** for BAA Solicitation #1 - Oct 2024
- **Annual Unclassified RFI** on SAM.gov - 2QFY25
- **Contract Award** for BAA Solicitation #1 - 3QFY25
- **BAA On-Boarding of additional companies** - **3QFY25**
- Release of **BAA Solicitation #2** - 3QFY25





Strategic Mission Planning and Execution System (SMPES) Data Fusion & Visualization

- Formerly Global Adaptive Planning Collaborative Information Environment (GAP CIE)
- Commercial Agile Software Development Services
- Software sustainment and modernization for data fusion and display application
- Focus on Agile and Development Security Operations (DevSecOps)
- Scope includes potential future software development



Funding and Contract Information

Dollar Value ~\$50M

Contract Type – Time & Materials (T&M), Firm Fixed Price (FFP)

Contract Vehicle – Defense Information Systems Agency (DISA)

Systems Engineering Technology and Innovation (SETI)
Government-Wide Acquisition Contract (GWAC)

Schedule & Upcoming Dates

Sources Sought - Complete

Industry Day - Complete

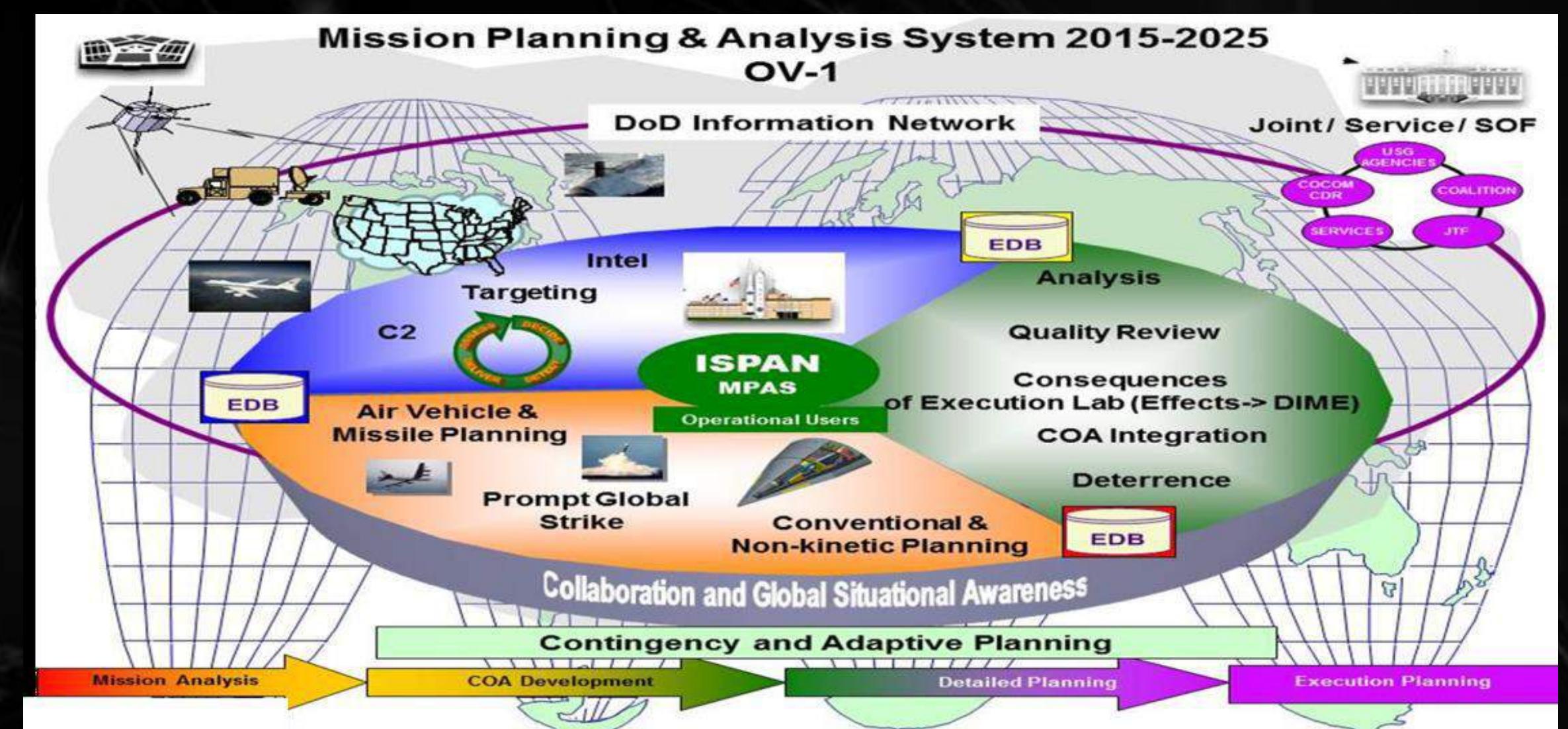
Fair Opportunity Proposal Request (FOPR) – Mar 2025

Contract Award – Aug 2025



Strategic Mission Planning and Execution System (SMPES) Ballistic Missile and Analysis Services

- Formerly Missile Application Software Support (MASS)
- Commercial Agile Software Development Services
- Software sustainment and modernization for Nuclear Missile Planning software applications
- Focus on Agile and DevSecOps
- Scope includes potential future software development



Funding and Contract Information

Dollar Value ~\$55M (Pre-Decisional)

Contract Type – Time & Materials, Firm Fixed

Price (Pre-Decisional)

Contract Vehicle – DISA SETI GWAC (Pre-Decisional)

Schedule & Upcoming Dates

Sources Sought - Complete

Industry Day – Feb 2025

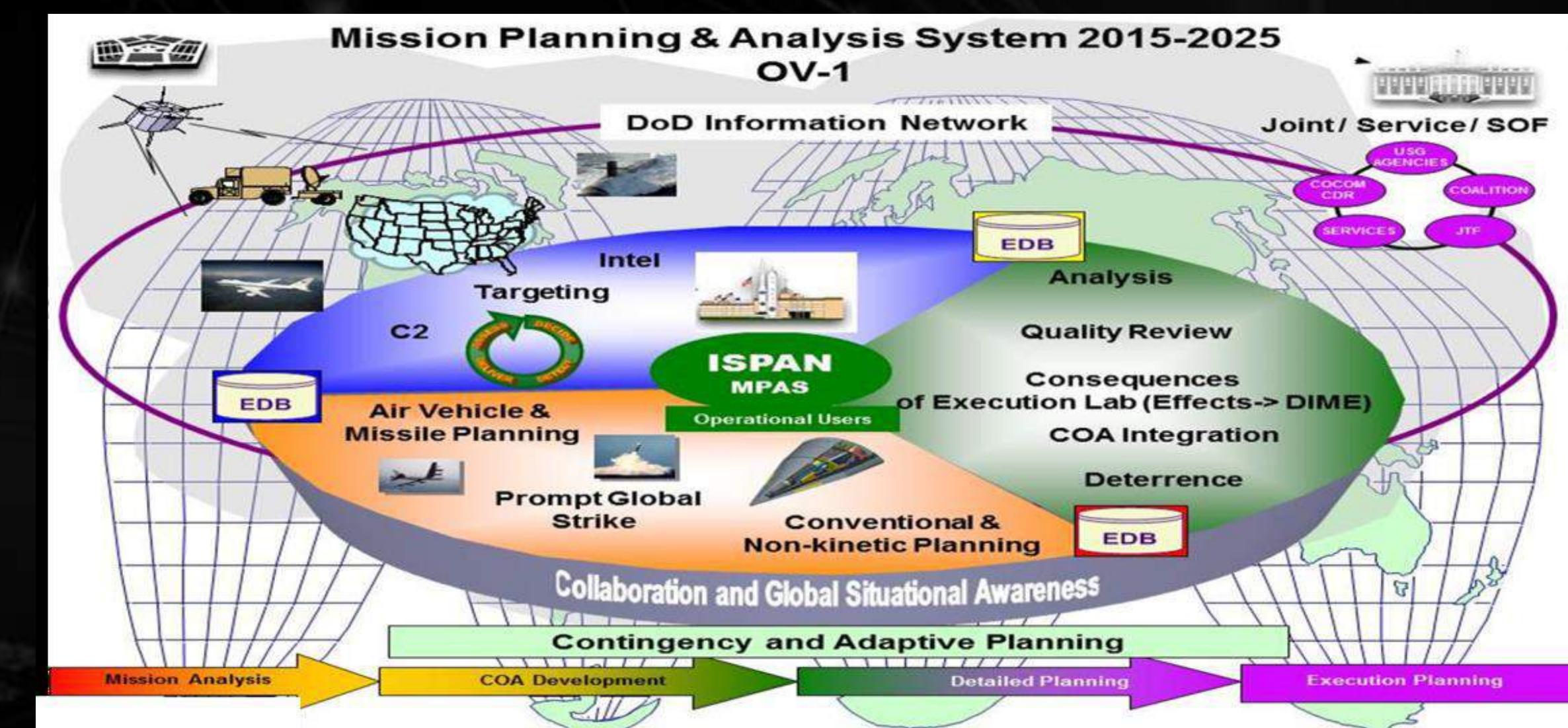
FOPR – Mar 2025

Contract Award – Jan 2026



Strategic Mission Planning and Execution System (SMPES) Air Vehicle Planning System 7

- Commercial Agile Software Development Services
- Software sustainment and modernization for Nuclear Aircraft Planning software applications
- Focus on Agile usage and DevSecOps
- Scope includes potential future software development



Funding and Contract Information

Dollar Value ~\$100M (Pre-Decisional)

Contract Type – Time & Materials, Firm Fixed Price (Pre-Decisional)

Contract Vehicle – To Be Determined

Schedule & Upcoming Dates

Sources Sought – Apr 2025

Industry Day – May 2025

FOPR – Jun 2025

Contract Award – Jun 2026



Strategic Mission Planning and Execution System (SMPES) NLCC Decision Support Service 2

- Commercial Agile Software Development Services
- Software sustainment and modernization for Senior Leader visualization software
- Focus on Agile and DevSecOps
- Scope includes potential future software development



Funding and Contract Information

Dollar Value ~\$45M (Pre-Decisional)

Contract Type – Time & Materials, Firm Fixed Price

(Pre-Decisional)

Contract Vehicle – To Be Determined

Schedule & Upcoming Dates

Sources Sought – Jul 2025

Industry Day – Aug 2025

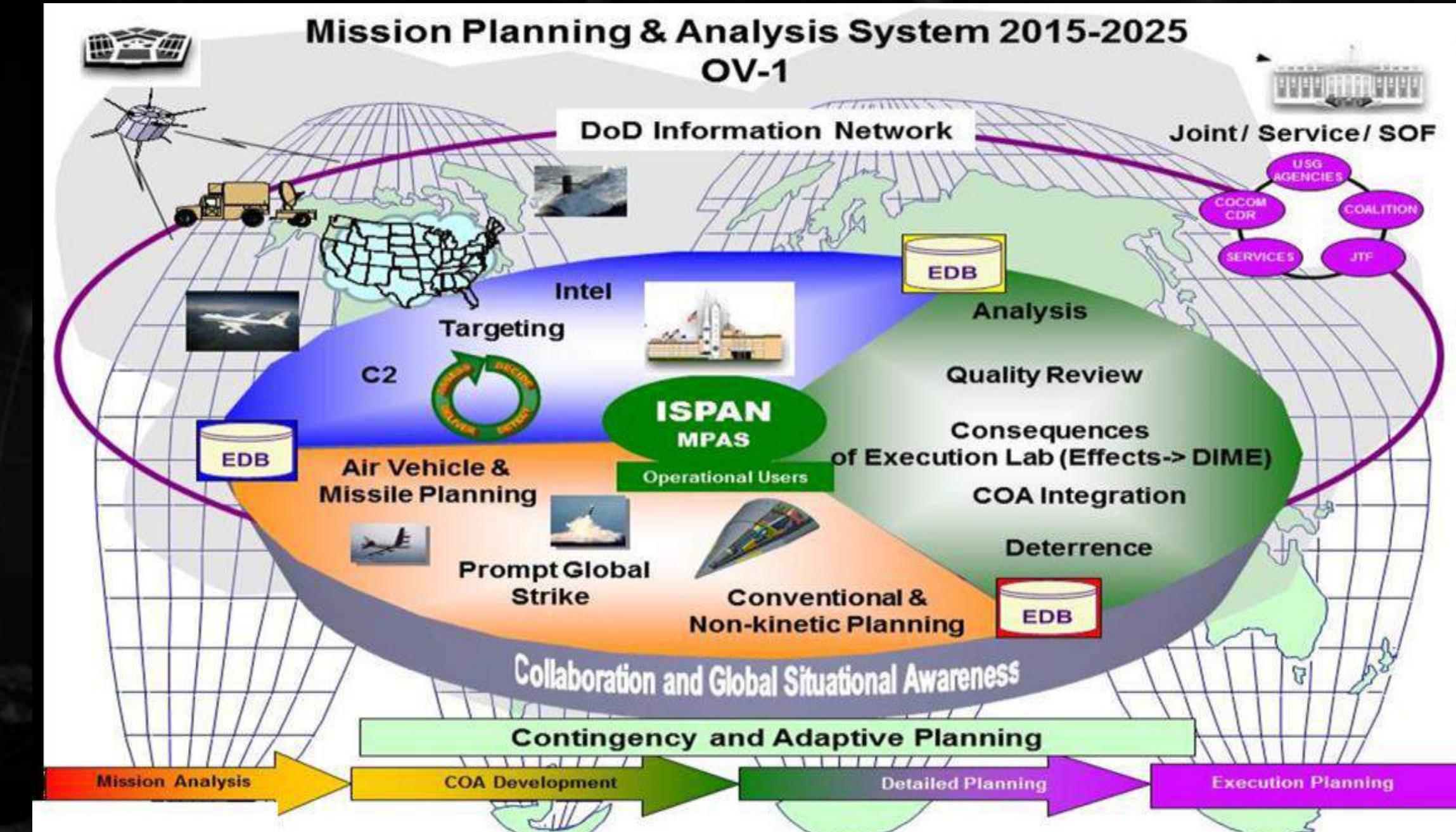
FOPR – Oct 2025

Contract Award – Sep 2026



Strategic Mission Planning and Execution System (SMPES) Global Strike Product Support 3

- Commercial Agile Software Development Services
- Software sustainment and modernization for Nuclear/Conventional Planning Support software applications
- On-site support for software applications
- Focus on Agile and DevSecOps
- Scope includes potential future software development



Funding and Contract Information

Dollar Value ~\$72M (Pre-Decisional)

Contract Type – Time & Materials, Firm Fixed Price (Pre-Decisional)

Contract Vehicle – To Be Determined

Schedule & Upcoming Dates

Sources Sought – Aug 2025

Industry Day – Sep 2025

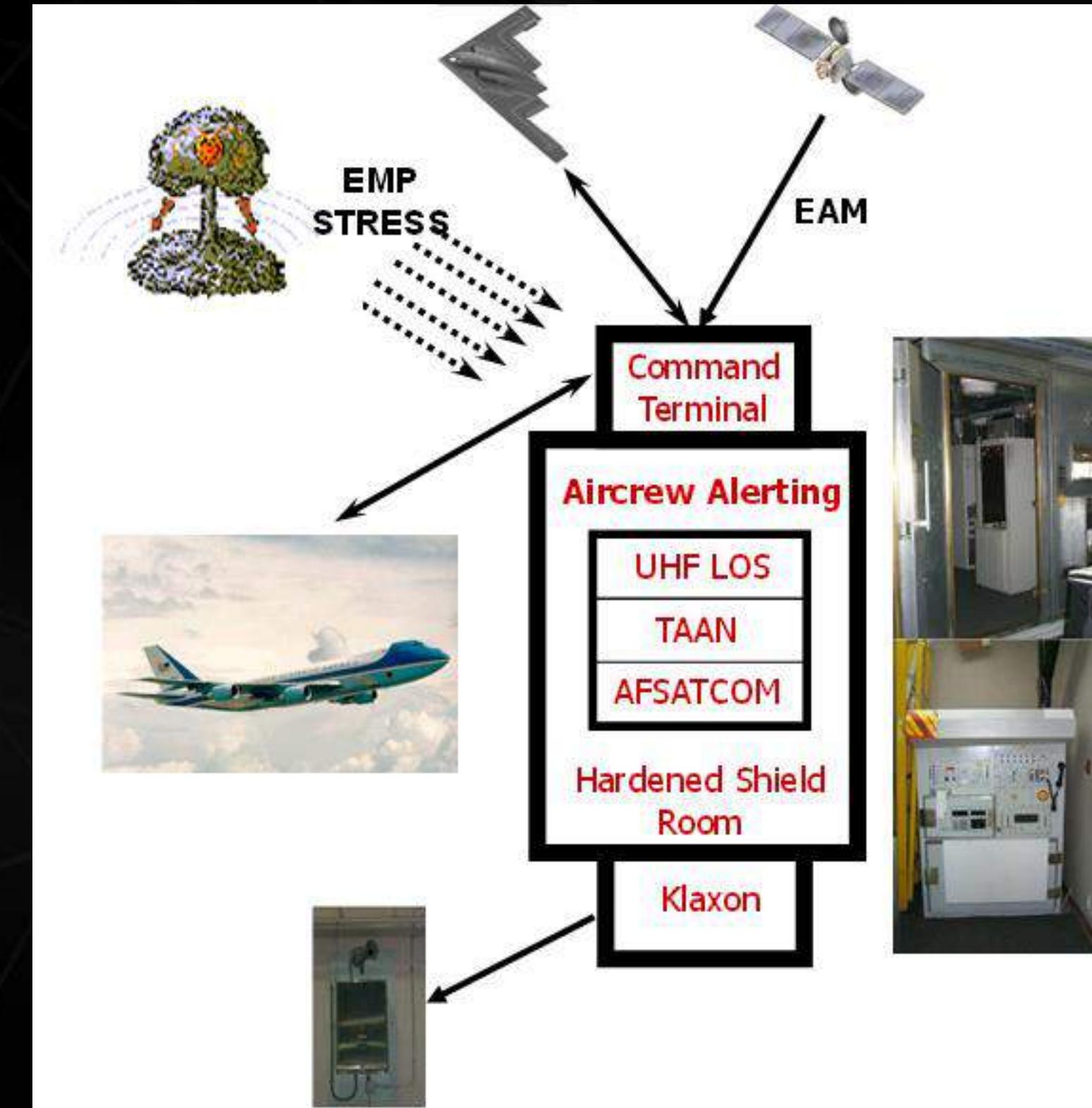
FOPR – Nov 2025

Contract Award – Sep 2026



AACE Engineering Support II/AACE

- The AACE system is an NC3 system designed by Peraton
- System includes console, Shield Room, Shield Room enclosure, and remote component subsystems
- Includes MILSTAR Ultra High Frequency (UHF) Dual Modem Unit (DMU)-II for receiving Emergency Action Messages (EAMs) from NC2 nodes, Tactical Aircrew Alerting Network (TAAN) radio/pager system, & klaxon to alert personnel



Funding and Contract Information

Projected Contract Value: ~\$7M

Contract Type: Cost Plus Fixed Fee and Cost Reimbursable

Schedule & Upcoming Dates

Sources Sought Dates – 27 Jun 2024

RFP Dates – Apr 2025

Industry Day – N/A

Contract Award Date – Jul 2025



Additional Opportunities

Securing Next Gen NC3

Additional contract efforts to be awarded across FY2025 & FY2026

- Varying classification levels
- Information to be released on SAM.gov

Annual NC Integration Directorate Industry Day

- Summer 2025
- Overview of all current requirements and path to Next Gen NC3
- To be held at the appropriate classification level, cleared personnel only
- Details and instructions for attendance to be released on SAM.gov

"As global tensions rise, the United States confronts a complex and evolving geostrategic landscape, demanding it modernize its strategic nuclear forces...particularly the Nuclear Command Control and Communications system, [which] secures U.S. strategic dominance and global stability."

- Gen Anthony J. Cotton, Commander, U.S. Strategic Command



Summary

1

NC is in the fight tonight:

- Sustaining multiple fielded systems
- 24/7 support through MILSATCOM Systems Support Team
- Projecting end-of-life components & systems – driving modernization priorities

2

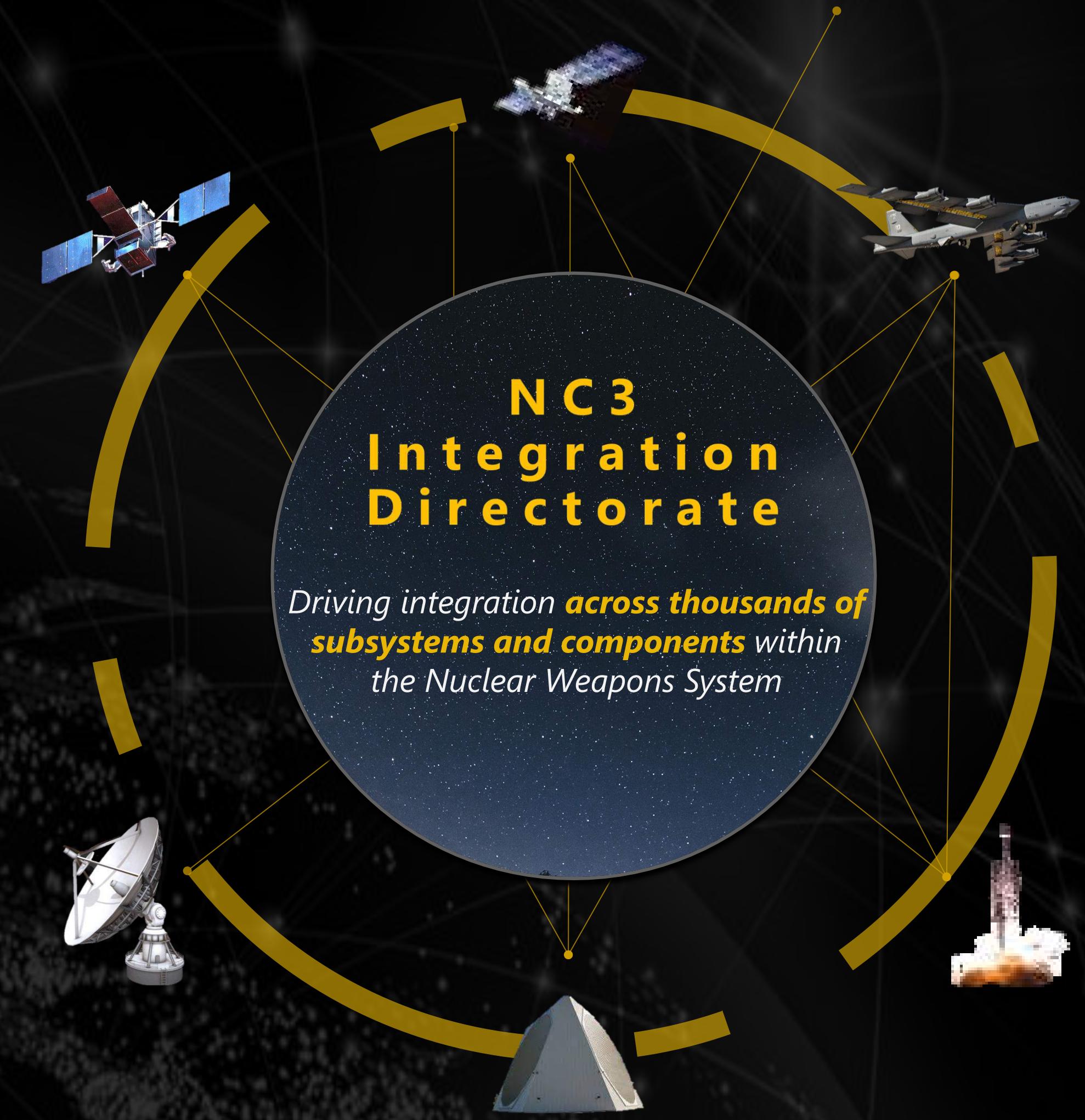
NC is developing, producing & fielding the systems of today and tomorrow:

- Executing 29 programs providing enhanced capability critical to improved NC3 network performance

3

Enabling the Next Gen of NC3 capability for the Warfighter:

- Smart Modernization for Next Gen NC3
- Advanced Concepts Research & Development
- Digital Engineering



Integrating across programs, organizations & domains to maximize Warfighter capabilities



Contact AFNWC NC3 Integration Directorate

AFNWC.NC.WORKFLOW@us.af.mil

Include 'NEW HORIZONS' in the subject line

