



U.S. ARMY



2022 Army Aviation Mission Solutions Summit

Delivering Army Aviation For All-Domain Operations



BG Rob Barrie

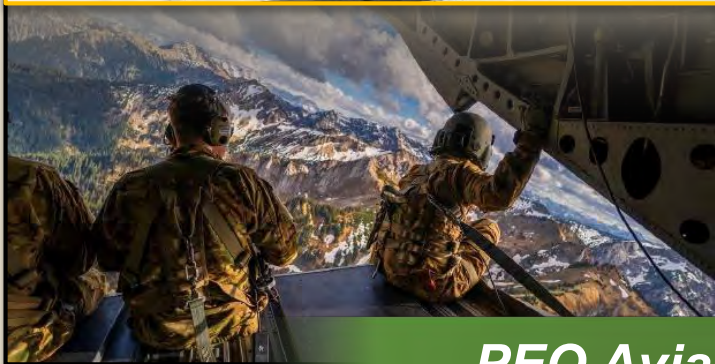
Program Executive Officer, Aviation

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Delivering Army Aviation for All-Domain Operations



PEO Aviation Imperatives

1. Design Future Capability to Maintain Dominance
2. Develop Solutions That Can Rapidly and Affordably Adapt
3. Deliver Capability to our Combatant Commanders
4. Support “Fight Tonight” with Our Enduring Fleet



PEO Aviation is Focused on These Imperatives Every Day

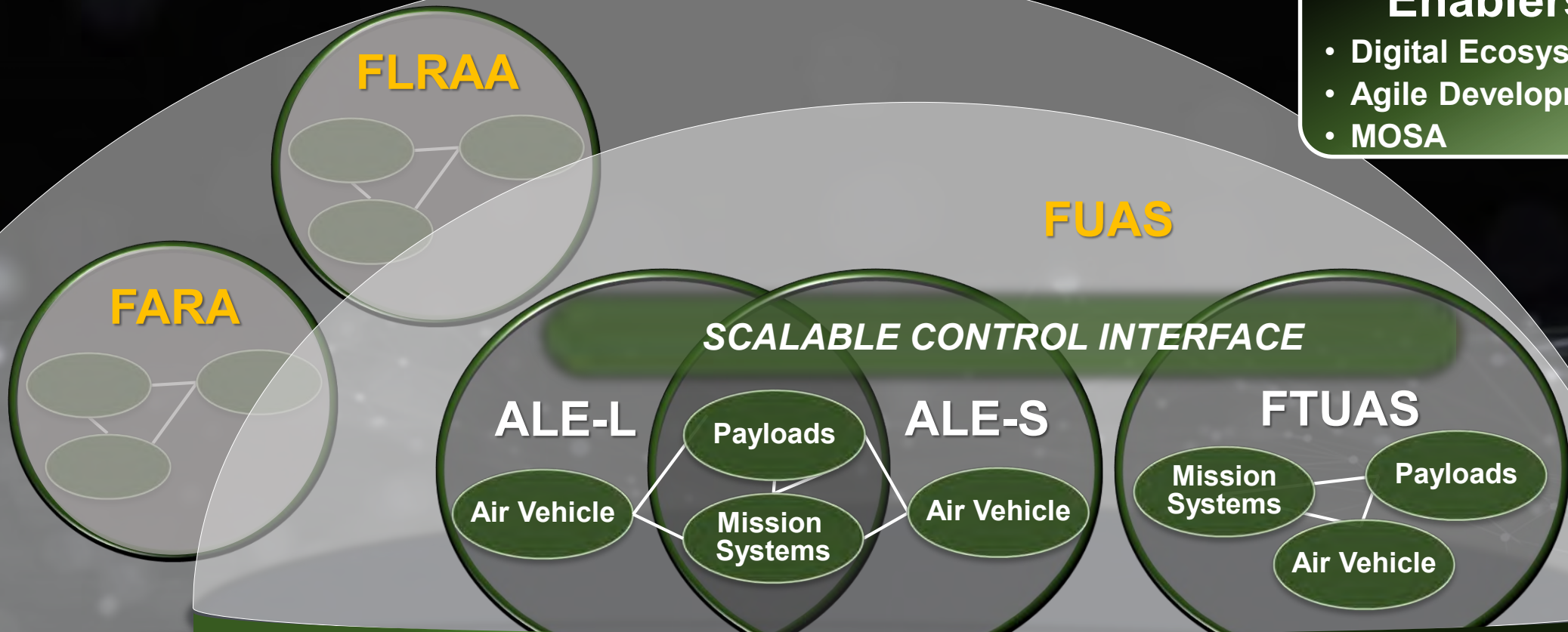


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Design Construct: System of Systems

- Enablers**
- Digital Ecosystem
 - Agile Development
 - MOSA



UAS Family of Systems

FVL System of Systems



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Modernizing The Design Tools & Methodologies

Digital Ecosystem

- MBSE(SysML)
- Digital Thread
- Infrastructure
- Product Life Cycle Management
- Modeling and Simulation

Key Enablers



MOSA

- Architecture & Standards
- Governance & Policy
- Business Practices
- Contracting Efficiencies
- Affordability & Savings

Agile Development

- DevSecOps
- Software Factory
- Continuous Integration/Continuous Delivery (CI/CD) Pipeline
- Infrastructure
- Partitioning
- Qualification Material Release



Modular Open Systems Approach

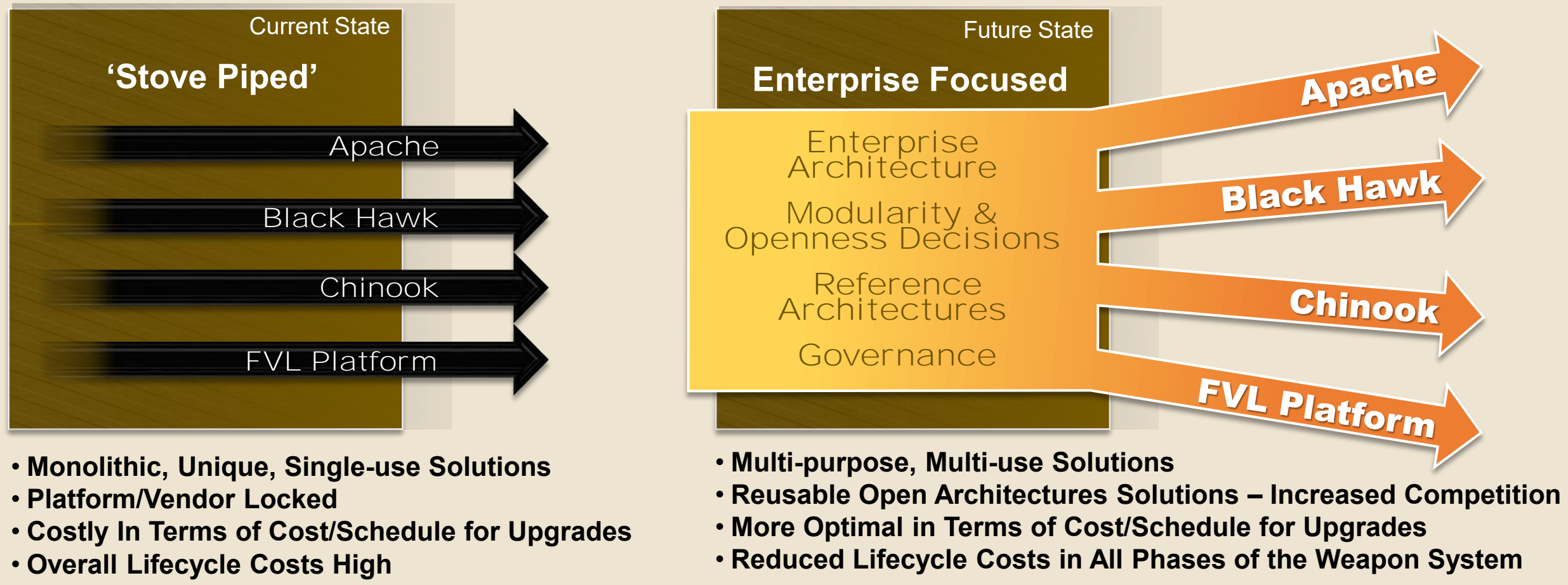
Cloud Based Environment



PEO Aviation MOSA Transformation is Synchronizing Modernization



The Problem Set That MOSA Can Resolve



Develop Once, Field Many ...
MOSA Enables Critical Modernization for Army Aviation Enduring & Future Fleets



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Development Example: Air Launched Effects (ALE)

An Attritable Family of Systems Consisting of an Air Vehicle, Effector Payload, Mission System Applications, and Associated Support Equipment Designed to Deliver Effects as a Single Agent or as a Member of a Team

Key Capabilities:

- Air-launched UAS
- Interchangeable Payload Effects
- Autonomous and Semi-autonomous Operation
- Degraded Environment Operation
- Extend FARA and FLRAA Reach
- IADs Defeat

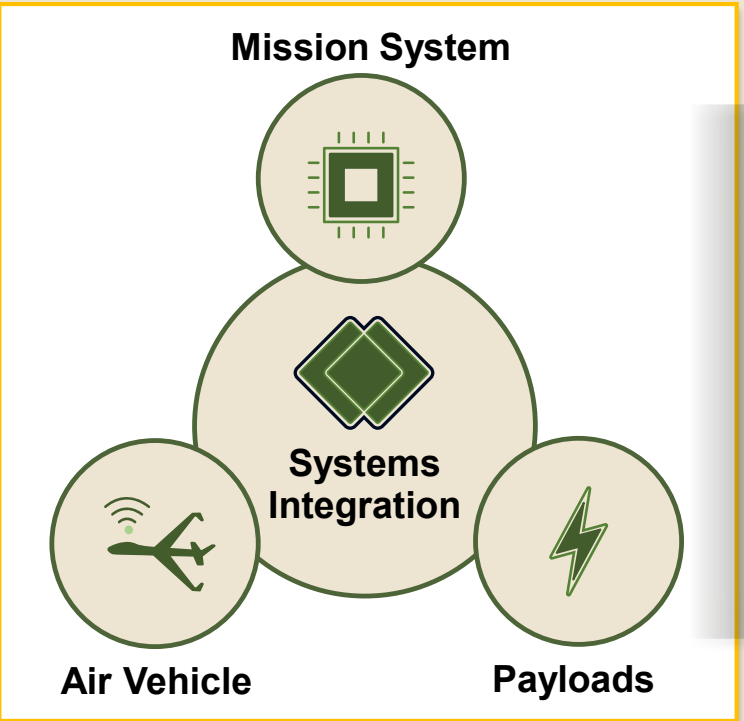


Photo courtesy of DVIDS.

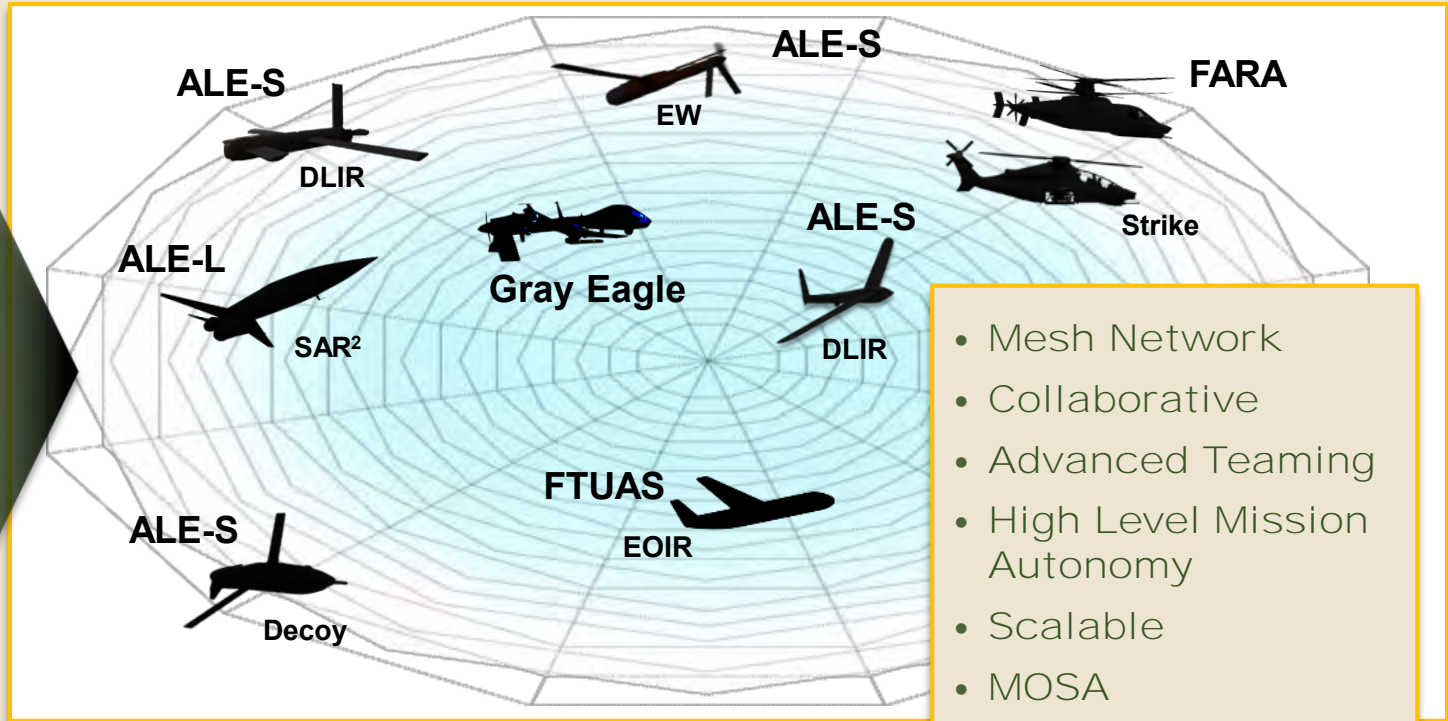


Modularity Applied in Development

ALE-WS



Future Vertical Lift System of Systems (SoS)



- Mesh Network
- Collaborative
- Advanced Teaming
- High Level Mission Autonomy
- Scalable
- MOSA
- Self-healing
- Swarming



Applying MOSA to ALE Solutions

Air Launched Effects (ALE)
Prototyping & Technical
Maturation Initiatives

ALE-Architect
*Defined ALE MOSA
Architecture Driving
Integration Across
Platforms and Sensors*

ALE-Weapon System
*Integrate MOSA Components
for a Fully-functional ALE*

ALE-Enablers
*Provide MOSA Compliant
Components to the
Weapon System*

*All Efforts
Converge to
Baseline
Capability*

*FY25 Initial
Operational
Capability
(IOC)
Milestone*

*ALE Production/
Fielding SMALL and
LARGE Solutions
(FY28)*

**Army
2030**

Scalable Control Interface

ALE-S Prototype

ALE-L Prototype

ALE Program Priorities

- ALE Designed to Align with FARA Requirements
- Initial Mission Set: DILR (Detect, Identify, Locate, Report) and Enable Freedom of Maneuver in A2/D2 Environment
- Maximum Transfer of ALE-related S&T Into the Program
- MOSA Designed, Produced, and Sustained



Supporting U.S. Army and Partner Nations with Enduring Fleet Capabilities



- Field/Train AH-64E V6
- Integrate Improved Turbine Engine
- Modernize Key Capabilities



- Complete Gray Eagle Extended Range Fielding



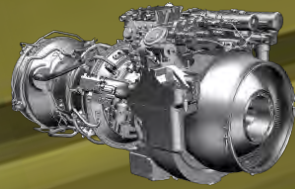
- Support Artemis ISR Enhancements

Army 2030 and Beyond

Partner Nations



- Deliver 60M/V
- Integrate Improved Turbine Engine
- Field Trainers



- Deliver Block I & II
- Upgrade Cockpit & Flight Control
- Deliver Reliability Centered Maintenance



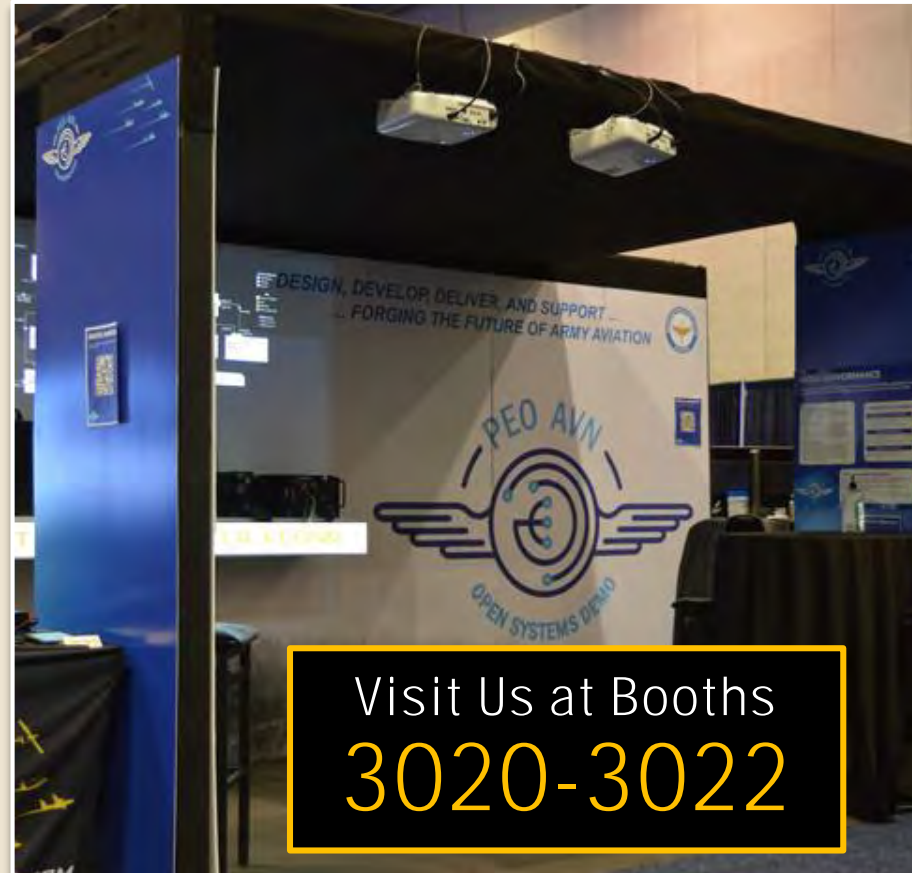
- Field Shadow Block III



AAAA Summit - PEO Aviation Demonstration

- **Who:**
 - Government-led (Breadth of PEO Aviation)
 - Using Products From More Than 20 Industry Partners
- **What Is Being Shown:**
 - Aviation Mission Computing Element (AMCE)
 - Comms/Datalinks/Controls
 - Integrated Air/Ground Comms
 - Integrated Mission Planning & Airspace Control Tools (IMPACT)
 - Common Operating Pictures
 - Aviation Platform Augmented Reality Integration (APARI)
 - UAS Controls
- **Why Is This Important:**
 - **Demonstrate** Change the Way We Field Capabilities
 - **Make the MOSA Vision More** Tangible

PEO Aviation Is Leading Out With Integrated Capabilities and a Strong Collaboration With Industrial Base



Visit Us at Booths
3020-3022





Closing Comments and Questions



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