PEO Aviation Roadmap

Ms. Leslie Hyatt
APEO G-5, Futures
PEO Aviation Strategic Alignment

**National Defense Strategy**
- Build a More Lethal Force
- Strengthen Alliances & Attract New Partners
- Reform for Greater Performance & Affordability

**PEO AVN Strategic Goals**
- Support Army Aviation’s Needs With an Aligned, Integrated, and Operationalized PEO
- Foster Ingenuity Across the Aviation Industry and Enable the Army to Remain Ahead of Evolving
- Achieve CAB Interoperability Through Open Systems Architecture
- Provide Indispensable Value to the Warfighter, DOD, Congress, and Our Allies

**CSA Army Priorities**
- People
- Readiness
- Modernization
- Reform

**PEO Aviation Mission**
Serve Soldiers and our nation by designing, developing, delivering, and supporting advanced aviation capabilities for operational commanders and our allies.
Holistic Systems Approach

**Past**
Platform Focused Approach

*Individual PM Roadmaps*

Deliver Define Deliver Define Deliver Define
Develop Design Develop Design Develop Design

**Future**
Holistic System Approach

*Coordinated Capability-based AVN Roadmap*

Deliver Define Develop Design

Rapid Fielding of CAB Level Capability
Aviation Development Battle Rhythm

Opportunity for Agility Occurs in the Software and Component Realm

New S/W 18 Mos - 3 Years

New LRUs 5-10 Years

Improved Data Modem

H-60M MFDs

CH-47 Blade

T700

New Dynamics Inside Airframes 20-30 Years

UH-60A AH-64A

New Platforms/Airframes 35-40 Years

Industry Alignment is Critical to the Mission

CH-47F Blk II ACRB Blade

Multi-core Processor

ITEP

FARA FLRAA

UNCLASSIFIED
Actions Across Domains

Enterprise Synchronization Yields Integrated Holistic Capability
PEO Aviation MDO Capability Roadmap

<table>
<thead>
<tr>
<th>Current</th>
<th>Enduring</th>
<th>MDO Capable 2028</th>
<th>MDO Ready 2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>From 11 Modular AC CABs</td>
<td>Delivering Capabilities to</td>
<td>12 Tailored AC CABs (5 CABs/1 TAB in Force Pkg. 1)</td>
<td>Future Fleets</td>
</tr>
</tbody>
</table>

**Attack/Reconnaissance**
- **Apache:** 528
  - AH-64D
  - AH-64E
- **Shadow:** 132
  - RQ-7B v2
- **Gray Eagle:** 132
  - MQ-1C

**Tactical Assault/MEDEVAC**
- **Utility:** 583
  - H-60L
  - H-60M
- **Gray Eagle Extended Range**
  - ITIE Integration
- **Cargo:** 132
  - CH-47F Block I

**Heavy Lift**
- **Cargo CH-47F Block I**
- **CH-47 Block II**

**Common Enablers**
- **Operational Power**
  - Improved Turbine Engine
  - Electrical Generators, APUs, Batteries
- **Assured PNT**
  - Electrical and Antenna Solutions

**Assuring PNT**

**Integrating Enduring and Future Systems**
- **Future Vertical Lift**
  - FARA
  - FLRAA

**Increasing Reach, Protection, and Lethality**

**Future Systems**
- **Apache AH-64 v6 + ITE**
- **Shadow BLK III**
- **Gray Eagle ER**
- **Utility H-60M + ITE**
- **Cargo CH-47F**

**Future Fleets**

**Integrating Enduring and Future Systems**

**Current**
- Apache: 528
- Shadow: 132
- Gray Eagle: 132
- Utility: 583

**Enduring**
- Apache AH-64E v6
- Shadow Block III Upgrade
- Gray Eagle Extended Range
- Utility 60V

**MDO Capable 2028**
- Apache AH-64 v6 + ITE
- Shadow BLK III
- Gray Eagle ER
- Utility H-60M + ITE
- Cargo CH-47F

**MDO Ready 2035**
- Future Fleets
PEO Aviation MDO Capability Roadmap

**Common Enablers**
- **Open Systems Architectures**
  - New Digital Backbone Architecture to Enable Rapid Integration of Emerging Technology
- **Autonomous Enablers**
  - New Generation Controls and Sensors to Enable Autonomous Flight

**FVL Open Systems Architectures**

**FVL Priorities to Support Maneuvers**

**UAS Maneuvers**
- **Current**
  - Fixed Wing Transport
    - C26  C37
    - UC35  C12
  - ISR
    - Guardrail  ARL-M
    - EMARSS  Saturn
- **Enduring**
  - Future Tactical UAS
    - BCT Asset Replacing Shadow Capability with Point Takeoff and Landing
  - Short Range Recon (SRR) UAS
    - Low-cost, Expendable Surveillance/Recon Asset
  - Air Launched Effects
    - Scalable Effects to Detect, Decoy, Disrupt, or Deliver Lethal/Non-lethal Effects Against Evolving Threats

**MDO Capable 2028**
- FTUAS
- Initial SRR Capability
- Air Launched Effects

**MDO Ready 2035**
- FTUAS +
- Advanced AUAS
- SRR +
- ALE +
- FW Transport +
- FW SEMA +

**Aviation Mission Common Server (AMCS)**

**Moving Toward Autonomous Flight for Both Manned and Unmanned Air Vehicles**

**FW SEMA Assets in COMPO1/2/3**
Roadmap Path Ahead

- Integrated & Aligned Operational Capabilities to CAB Commanders

- Needs Assessment
- Draft Roadmap
- Integrated Priorities List
- Synchronized Capability Development
- Synchronized Capability Fielding
- Continuous Business Process

Integrated & Aligned Operational Capabilities to CAB Commanders
Combat Aviation Brigade Architecture Integration Lab (CABAIL)

Mr. Al Abejon
Director, CABAIL
CABAIL Configuration

Typical Voice and Data Network

- FM/SINCGARS and VHF/UHF Voice Radios
- Tactical Scalable MANET (TSM)
- Blue Force Tracking (BFT) 1/2
- SATCOM DAMA
- HQ1/2 (Migration to SATURN)
- Link-16
- High-frequency (HF)
- Abn Wide-band SATCOM
- Common Data Link (CDL)
- Mobile User Objective System (MUOS)
- APCO P-25 (Phase 1/Phase 2)
- Wi-Fi

Bldg. 5678 Redstone Arsenal, AL
CABAIL Objectives

- Develop CAB as Lethal Maneuver Force for Joint All-domain Operations (JADO)
- Facilitate Rapid Insertion of Maturing Industry Technologies into CAB
- Leverage Products & Capabilities of Other PEOs/PMs With Aviation Equities
- Involve Aviation Warfighter to Ensure Relevance of Capabilities
- Expedite Usable Capabilities to Aviation Warfighter
- Influence Future Vertical Lift (FVL) Requirements, Designs, & Employment
Government – Industry Collaboration

- Establishment of No-Cost Bailment Agreements/CRADAs
- Rapid Insertion of Mature Capabilities & Technologies (TRL 8/9)
- Direct User Feedback; Foster Government-Industry Synergy
- Reduce Risk/Accelerate Advanced Capabilities Development
- Expedite Usable Capabilities to Aviation Warfighter
- Inform Future Vertical Lift (FVL) Designs and Capabilities

Instructions on How to Express Interest in Participation Published Soon on beta.sam.gov
Introduction to Panels & Next Steps

Mr. Jeremy Bolton
APEO, Strategic Initiatives Group

Ms. Christina Brantley
PM, AMTC
Afternoon Discussion Panels

• After Our Lunch Break, We Will Have Two Consecutive Panel Discussions
  • Multi-Domain Operations Suitability and Holistic Survivability
  • Interoperability and Increased Air Crew Effectiveness
• We Will Hear from Aviation PMs, Representatives From FVL CFT and Aviation Capabilities Development & Integration Directorate (CDID)
• We Will Respond to Questions Submitted by Attendees During the Morning Sessions
Based On the Information Provided at This Event, AMTC Members Will Have the Opportunity to Submit Enhanced White Papers to AMTC and the PEO for Consideration

**Activity Timeline**

- **7 Feb**  Draft Release of the Objectives Requirement Document (ORD) AMTC-20-01 was Released to AMTC Members
- **19 Feb**  Anticipate Formal Release of the Request for Enhanced White Papers (RWP) to AMTC Members
- **11 Mar**  Enhanced White Paper Submittal via BIDS
RWP Responses for AMTC Members

Details on Formal RWP Release:
https://www.amtcenterprise.org/opportunities

Submissions Will Require White Paper and Quad Chart
Follow on AMTC Process

**Enhanced Whitepaper Process**

- Request for Enhanced Whitepapers (ACC-RSA/CAO)
- Enhanced Whitepapers and Draft SOWs Submitted (AMTC Members)
- Compliance Screening (CAO)
- Competitive Evaluation (Gov’t TPOCs)
- Selection Memo – Pull From Basket (Gov’t TPOCs/ALO)
- Excellent or Acceptable (Basket)
- Unacceptable (Reject)

**Phase 1 Target Completion Date**

Prior to End of FY20

This Process Worked With Acquiring PM

**Items of interest, but not selected for immediate contract actions remain “valid” for three years from submission**
MDO Suitability and Holistic Survivability Panel

Moderator

Mr. Lars Ericsson
APEO G-10, System Engineering
MDO Suitability and Holistic Survivability

Moderator
Lars Ericsson
APEO G-10, Engineering

Panel Members
COL Scott Anderson
PM, Unmanned Aerial Systems

COL Roger Kuykendall
PM, Aviation Turbine Engines

COL Tal Sheppard
PM, Attack Helicopter

COL James DeBoer
PM, Fixed Wing

COL David Phillips
PM, Future Long Range Assault Aircraft (FLRAA)

LTC Matthew Kukla
Future Vertical Lift CFT

MAJ Chris Lamar
Aircrew Systems Division Chief, AVN Enablers RDD
Interoperability and Increased Air Crew Effectiveness Panel

Moderator

Ms. Leslie Hyatt
APEO G-5, Futures
Interoperability and Increased Air Crew Effectiveness

**Moderator**
Leslie Hyatt
APEO G-5, Futures

**Panel Members**

COL Marcus Gengler
Dir AVN Enablers RDD, Ft. Rucker

COL Greg Fortier
PM, Future Attack Reconnaissance Aircraft (FARA)

COL Johnathan Frasier
PM, Aviation Mission Systems & Architecture

COL Calvin Lane
PM, Utility Helicopter

COL Al Niles
PM, Cargo Helicopter

LTC Matthew Kukla
Future Vertical Lift CFT
One-on-One Sessions