SPECIAL OPERATIONS FORCES INDUSTRY CONFERENCE

Win • Transform • People

Col Melissa Johnson *Program Executive Officer*

FIXED WING

Program Executive Office Fixed Wing (FW)

ISR - FIND


MQ-1C Gray Eagle


MQ-9 Reaper


RQ-20A Puma


MEUAS 1.5


MEUAS 2.0


JAVAMAN


MC-12W


U-28A/PC-12

MOBILITY - INFILTRATE


EC-130J Commando Solo


CV-22 Osprey


C-145A Skytruck


C-146A Wolfhound


MC-130H Talon II


MC-130J Commando II

STRIKE - FINISH


MQ-9 Reaper


MQ-1C Gray Eagle


AC-130U Spooky

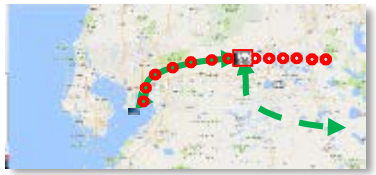

AC-130W Stinger II

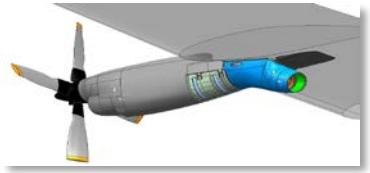

AC-130J Ghostrider


Stand Off Precision Guided Munitions

TECHNOLOGY INSERTION


Sensors


Mission Automation


Survivability


Kinetic Effects / DE

Acquisition Support Enterprise

PEO- FW CY18 Execution Priorities

- Accelerate velocity to the field to meet current and future fight
- Improve overall adaptability and affordability throughout system lifecycle
- Aggressively identify, leverage and implement new technology and new ways of using current technology

Airborne Intel, Surveillance, and Recon (AISR)

Manned ISR

- **Capability Description:** Provide Tactical Airborne Intelligence, Surveillance, and Reconnaissance (ISR)
- **On-Going Efforts:** GPS improvements, engine infrared suppression, and payload
- **Future:** Increased communication bandwidth and data transport
- **Challenges:**
  - Enhanced optics
  - Data automation
  - Enhanced data transport

Unmanned ISR

GROUP I UAV
- Max Payload: ~5 LBS
- Max Radius: ~10nm

GROUP II UAV
- Max Payload: ~10 LBS
- Max Radius: ~200nm

GROUP III UAV
- Max Payload: ~90 LBS
- Max Radius: ~1000nm

GROUP IV UAV
- Max Payload: ~1150 LBS
- Max Radius: ~1400nm

GROUP V UAV
- Max Payload: ~3750 LBS
- Max Radius: ~10000nm

Medium Altitude Long Endurance Tactical

- **Capability Description:**
  Provide tactical ISR
- **On-Going Efforts**: Ongoing modifications on MQ-1C and MQ-9
- **Future**: Airborne mission networking, signature reduction, automation, precision guided munitions integration, Human Machine Interface (HMI) improvements
- **Challenges:**
  - Signature reduction
  - Automation
  - International airspace access




Medium Endurance/Multi-Mission/Small Tactical UAS (MEUAS/MTUAS/STUAS)

- **Capability Description:** Provide Tactical Airborne Intelligence, Surveillance, and Reconnaissance
- **On-Going Efforts:** System resiliency, data link encryption
- **Future:** Beyond Line of Sight (BLOS) Ops/ Tactical Common Data Link, reduced footprint L/R
- **Challenges:**
  - Reduction in size, weight, and power constraints
  - Improve survivability
  - Increase endurance

Small UAS (SUAS) Expeditionary Organic Tactical Airborne ISR Capability (EOTACS)

- **Capability Description:** Tactical ISR
- **On-Going Efforts:** Payload modification
- **Future**: Common GCS, reduced launch/recovery footprint
- **Challenges:**
  - Increased reliability, supportability, and survivability
  - Vehicle endurance

Special Applications for Contingencies (SAFC)

- **Capability Description:** Develops and integrates Group 1-3 UAS technology and payloads
- **On-Going Efforts:** Multiple payload/platform improvements
- **Future**: Reduced size, weight, power and open system architecture
- **Challenges:**
  - Autonomous mission ops,
  - Teaming/Swarming

RQ-20A Survey / Geo-location

Solar RQ-20A Wings

Silent Echo Payload

Quadcopter

Integrated Strike Programs

AC-130W Stinger II

- **Capability Description:** Modified MC-130H with a Precision Strike Package (PSP) to deliver Close Air Support (CAS) and Air Interdiction (AI) missions
- **On-Going Efforts:** Upgraded Missile Warning System, improved visual threat scanning and integration of Small Glide Munition
- **Future:** Operations in contested environment and wireless communications system
- **Challenges:**
  - Improved survivability
  - Hostile Fire Indicator
  - RF Countermeasures

AC-130J Ghostrider

- **Capability Description:** Modified MC-130J with a Precision Strike Package (PSP) to deliver Close Air Support (CAS) and Air Interdiction (AI) missions
- **On-Going Efforts:** Upgraded EO/IR sensor, GPS hardening, munitions integration
- **Future:** IR suppression and all-weather operations
- **Challenges:**
  - Operations in contested/ degraded environments
  - Enhance survivability

Stand Off Precision Guided Munitions

- **Capability Description:** Procure and develop Stand-Off Precision Guided Munitions (SOPGM)
- **On-Going Efforts:** Miniature-Munitions demonstrations and data link integration
- **Future:** Guided Ammunition, selectable effects and enhanced sensors
- **Challenges:**
  - Operations in contested/ degraded Environments
  - Selectable warhead

Griffin Missile

Small Glide Munition (SGM)

Laser Small Diameter Bomb (LSDB)

Common Launch Tube (CLT)
- **Employs Griffin and SGM**

SOF C-130s, CV-22, and Mission Systems

MC-130 Recapitalization

- **Capability Description:** Modified C-130Js to Perform Low-level Infiltration/Exfiltration, Detect and Deny Radio Frequency (RF) Threats, Airdrop, Resupply and In-Flight Refueling
- **On-Going Efforts:** RF Countermeasures (RFCM), Terrain Following (TF) Radar and Airborne Mission Networking (AbMN)
- **Future:** SOF Mission systems enhancement
- **Challenges:**
  - Automated route replanning
  - Size, weight, and power reduction
  - EW enhancement

C-130 Modifications

- **Capability Description:** Sustainment Mods to improve reliability and maintainability
- **On-Going Efforts:** Avionics upgrades, structural improvements
- **Future:** Emergency equipment bins and light-weight armor
- **Challenges:**
  - Size, weight, and power reduction,
  - Obsolescence

CV-22B Osprey

- **Capability Description:** Provides Long Range, High Speed, All-Weather, Infil/Exfil, and Resupply of Teams in Hostile, Denied, and Politically Sensitive Areas in a Single Period of Darkness

- **On-Going Efforts:** Silent Knight Radar (SKR), Color Helmet Mounted Display, Suite of Integrated RF Countermeasures (SIRFC) upgrades, and Search/ Landing Light

- **Future:** Forward defense weapons system

- **Challenges:** Airborne Mission Networking

NSAv and AvFID

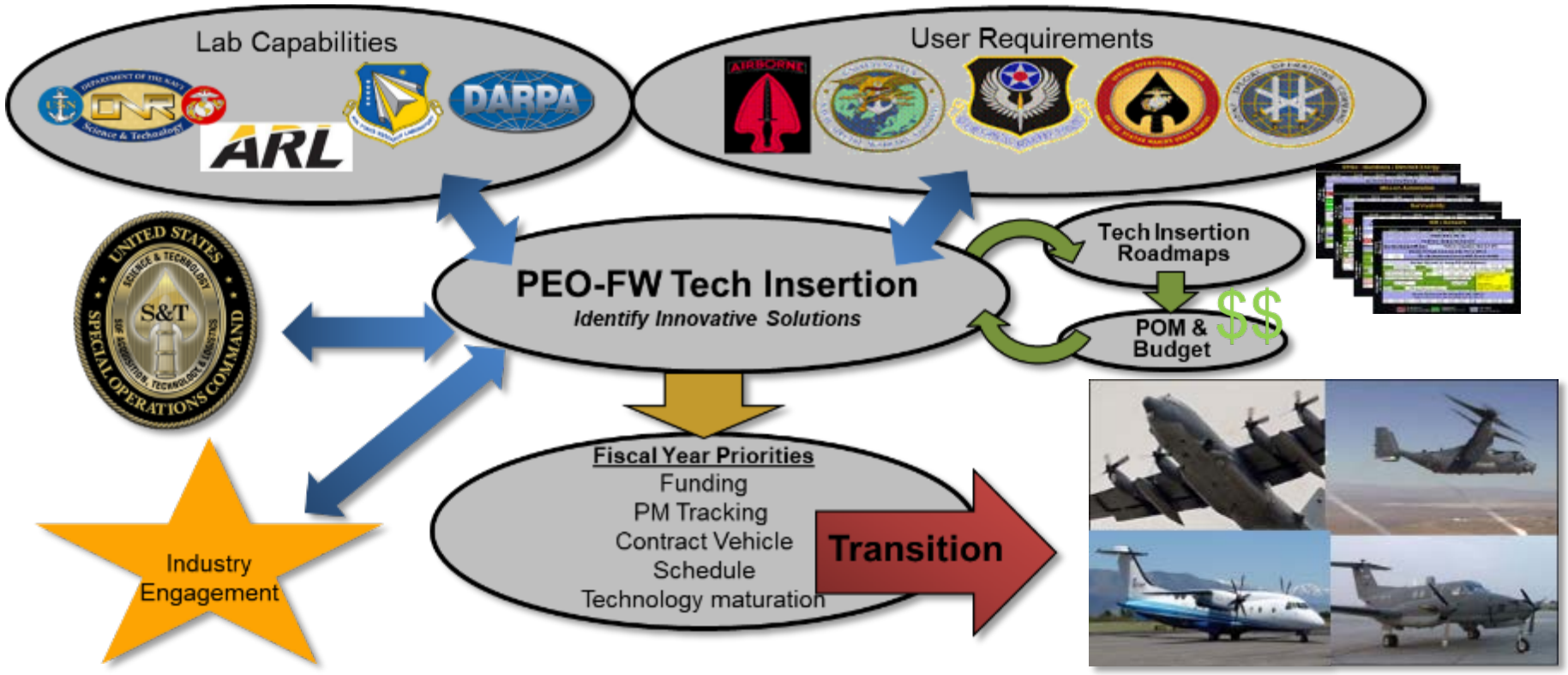
- **Capability Description:** Non-Standard Aviation (NSAv) supports worldwide Special Operations Force Tactical/Strategic missions. Aviation Foreign Internal Defense (AvFID) provides Combat Aviation Advisor proficiency in preparation for Partner Nation training in Special Operations Force Techniques, Tactics & Procedures

- **On-Going Efforts:** Cockpit, communication and cabin upgrades

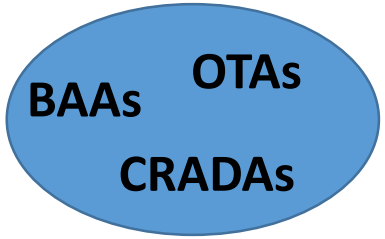
- **Future:** Continued avionic obsolescence avoidance and compliance

- **Challenges:** Maintaining civil aviation compliance in an obsolescence environment

FW Technology Insertion Process and Enablers

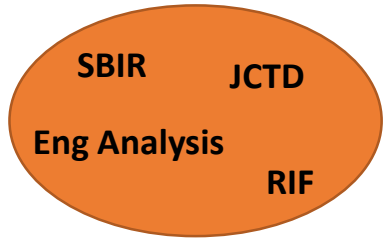


Capability Collaboration Events



Contracts / Agreements

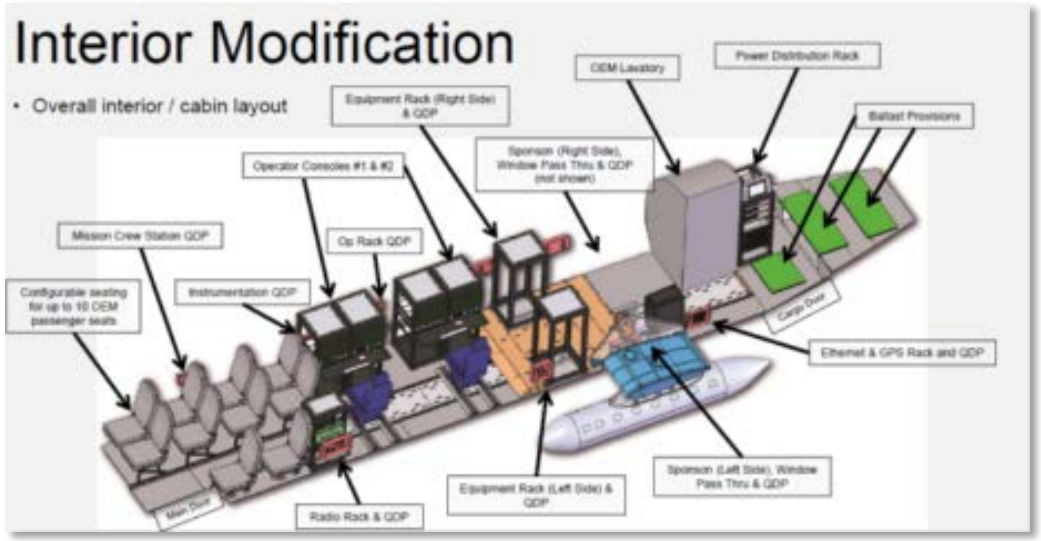
Cougar Demo Platform



Funding Resources

Enablers

- **Flying Testbed:**
  - **Rapid Configurable Demonstration Platform for:**
  - **Requirement Validation of Programs of Record**
  - **Technology Advancement, Transition, and Insertion**
  - **Risk Reduction**
  - **Technique Tactics & Procedure Development**

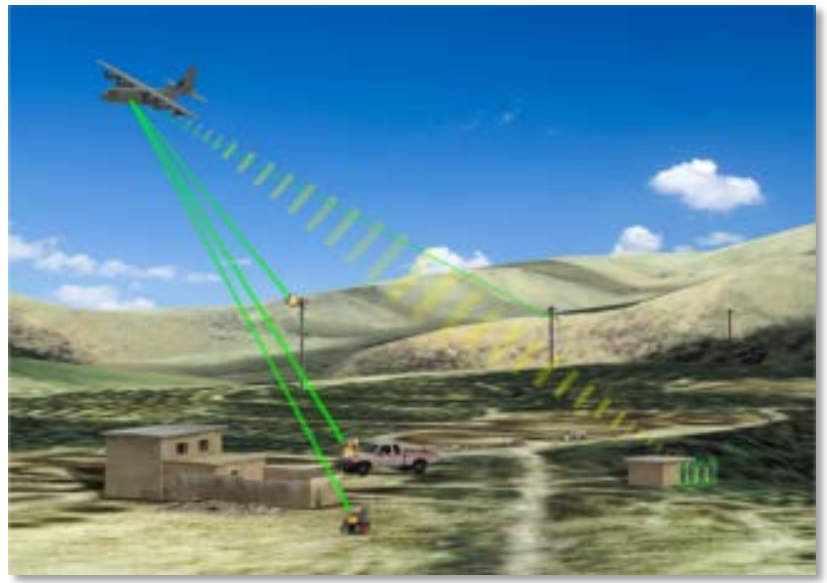


- **PEO-FW Engaging/Collaborating on Focused Problem Set with Industry, Government Labs, and Academia**

- **Technology Push with Direct User Participation/Feedback**
  - **Requirements/Capability Gap definition**
  - **White Boarding/Brainstorming/ Crosstalk**
  - **White Paper/Product Pitch**
  - **Example: “GPS out of the Box” event**

AC-130J High Energy Laser

- **Objective:** Demo a Precise Airborne Low Kinetic Weapon System Capable of Ground Based Scalable Effects
- **HEL Development Approach:**
  - Perform Risk Reduction at low power levels
  - Identify “best of breed” sub-systems
  - Inform DoD on Performance of Airborne Electric High Energy Lasers



Challenges

- Improve power storage efficiency
- Develop assured Position Navigation & Timing (PN&T) solutions for airborne platform applications
- SWaP reduction while increasing standoff distance

QUESTIONS?