



SPECIAL OPERATIONS FORCES INDUSTRY CONFERENCE

Col Eric Forsyth
Program Executive Officer

FIXED WING (FW)

FIXED WING

Program Executive Office Fixed Wing

ISR - FIND



MQ-1C Gray Eagle



MQ-9 Reaper



RQ-20A Puma



MEUAS 1.5 Scan Eagle



Aerosonde



JAVAMAN



MC-12W



U-28A/PC-12

MOBILITY - INFILTRATE



CV-22 Osprey

EC-130J
Commando Solo



C-146A
Wolfhound

C-145A
Skytruck



MC-130J
Commando II

MC-130H Talon II



STRIKE - FINISH



MQ-9 Reaper

MQ-1C Gray Eagle



AC-130U
Spooky

AC-130W
Stinger II



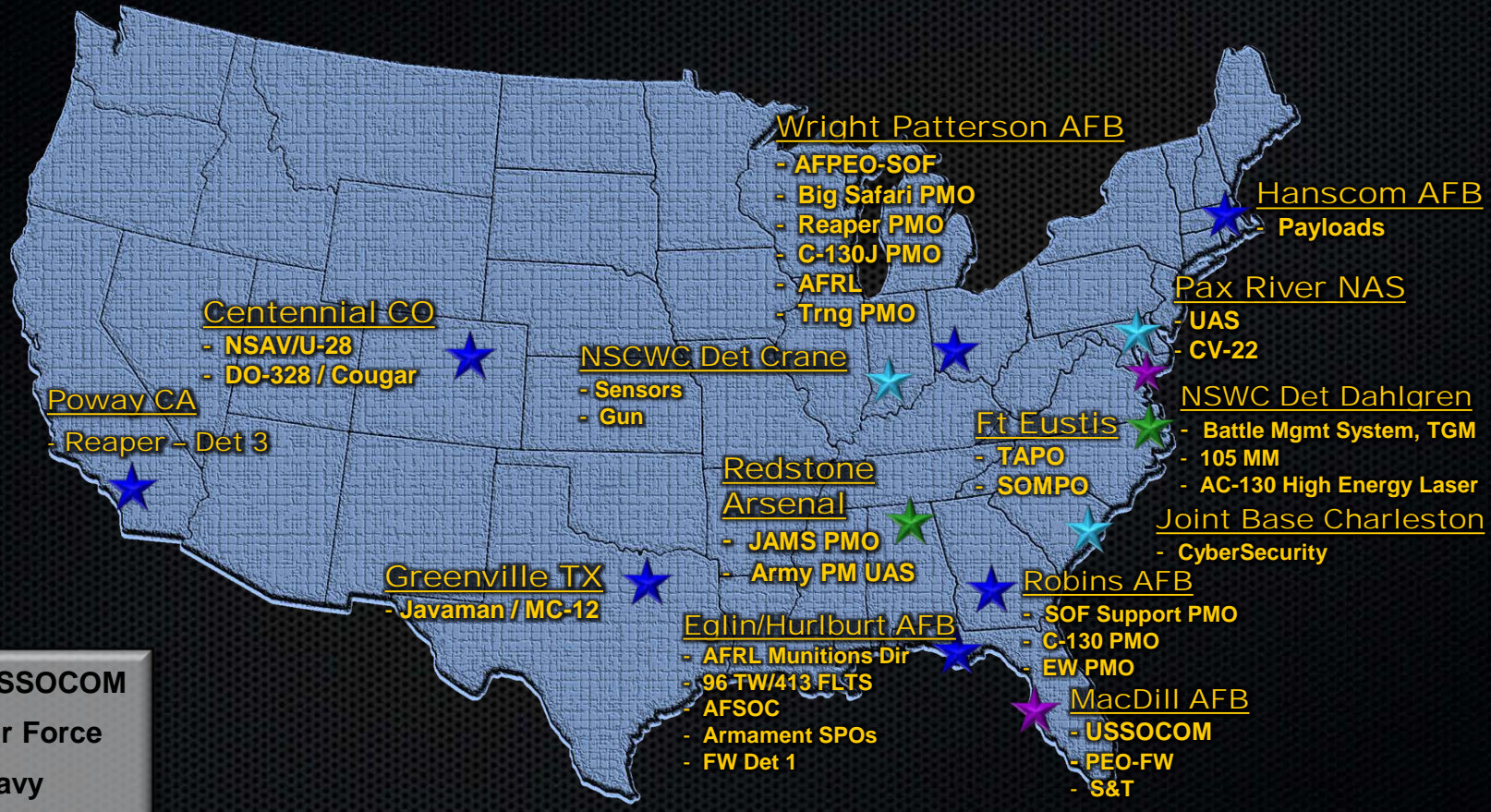
AC-130J
Ghostrider



SOPGM

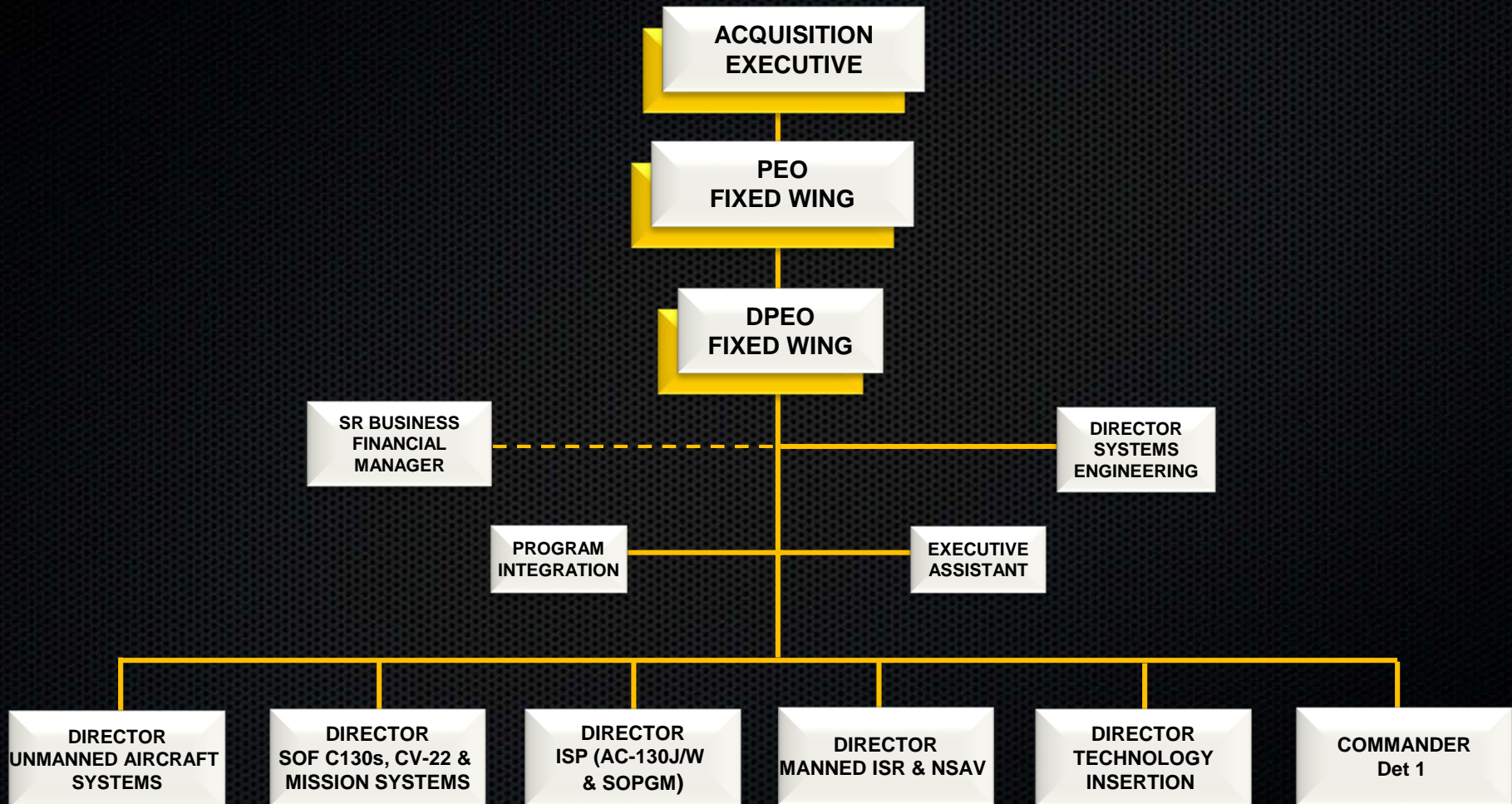
TECHNOLOGY INSERTION

PEO-FW Acquisition Support Enterprise



- USSOCOM
- Air Force
- Navy
- Army

PEO-FW Organization



FY15 Execution

31 FW Aircraft

- Two AC-130Js
- Four MC-12s
- One JAVAMAN
- Nine MC-130Js
- Three CV22s
- 12 MQ-9s

791 FW Munitions

- 90 Bomb Units, BLU-133, 129, 126
- 50 GBU-49 Guided Bomb Units
- 99 GBU-39B/B Laser Small Diameter Bombs
- 552 AGM-176A Griffin Missiles

Manned ISR, NSAv, AvFID, & Next Gen ISR



Manned Intel, Surveillance and Reconnaissance



- Capability Description: Provide Tactical Airborne Intelligence, Surveillance, and Reconnaissance (ISR) to SOF
- On-Going Efforts: Missile Warning System Upgrades, SD to HD Upgrades; IMINT and SIGINT Upgrades
- Future: Low Cost Mods Focused on Communication System Upgrades

ACQUISITION STRATEGY

- Operational System in Sustainment with Evolutionary Mission System Technology Insertions

PERIODS OF PERFORMANCE

- 12 Months per Mission Design Series
 - U-28: 1 Nov - 31 Oct
 - MC-12: 15 Dec – 14 Dec

MILESTONES

- None – In Sustainment

POINT OF CONTACT

- 813.826.9482 (TILO)

FUNDING

- | U-28 | MC-12 |
|----------------|---------------|
| • FY16: \$231M | • FY16: \$16M |
| • FY17: \$217M | • FY17: \$23M |

CURRENT CONTRACT/OEM

- Sierra Nevada Corp (U-28)
- L3 Communications (MC-12)

Non-Standard Aviation/Aviation Foreign Internal Defense



- Capability Description: Non-Standard Aviation (NSAv) C-146 Supports Intra-Theater Transport and Casualty Evacuation. Aviation Foreign Internal Defense (AvFID) C-145 Provides Proficiency Training at Duke Field, FL
- On-Going Efforts: Acquisition of C-146 #19/#20; C-146 Simulator; Divestment of 11 of 16 C-145's
- Future: Low Cost Modifications and Sustainment

ACQUISITION STRATEGY

- NSAv – Utilizes 645 Aeronautical Systems Group to Procure Aircraft, Necessary Training systems, equipment, and Aircraft Upgrades/Modifications. Single Contractor
- AvFID – C-145 Sustainment

PERIOD OF PERFORMANCE

- 12 Months
- NSAv: 1 DEC 2015 - 30 NOV 2016
- AvFID: 1 JAN 2016 - 31 Dec 2016

MILESTONES

- NSAv – Completed Upgrade of 18 Aircraft from Block 10 to Block 20 Configuration (FAA Certified NVG Cockpit, Soft Smoke Barrier, Cottonmouth)
- AvFID – Sierra Nevada Contractor Logistics Support

POINT OF CONTACT

- 813.826.9482 (TILO)

FUNDING

- | NSAV | AvFID |
|----------------|--------------|
| • FY16: \$143M | • FY16: \$5M |
| • FY17: \$115M | • FY17: \$8M |

CURRENT CONTRACT/OEM

- Sierra Nevada Corp (NSAv and AvFID)

Next Generation ISR



- Capability Description: Provides Next Generation of Tactical Airborne ISR In Support of Special Operations Forces (SOF)
- Ongoing: Next Generation Manned ISR Study to Identifying Capability Gaps
- Future: Analysis of Alternatives (AoA) to Identify Potential Platforms and Systems

ACQUISITION STRATEGY

- AoA Jul 16 – Jan 17
- Program Objective: Missionize / Sustain TBD Aircraft
- Design Approach: Modularized / Rapidly Reconfigurable Design

PERIOD OF PERFORMANCE

- AoA Jul 16- Jan 17

MILESTONES

- Complete Next Gen ISR Study
- Award Analysis of Alternatives Contract July 16

POINT OF CONTACT

- 813.826.9482 (TILO)

FUNDING

- FY16: \$500K RDT&E
- FY17: \$1M RDT&E

CURRENT CONTRACT/OEM

- Johns Hopkins University - Applied Physics Lab (JHU-APL) for NexGen ISR Study and AoA

Unmanned Intelligence, Surveillance, & Reconnaissance (ISR) Systems

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

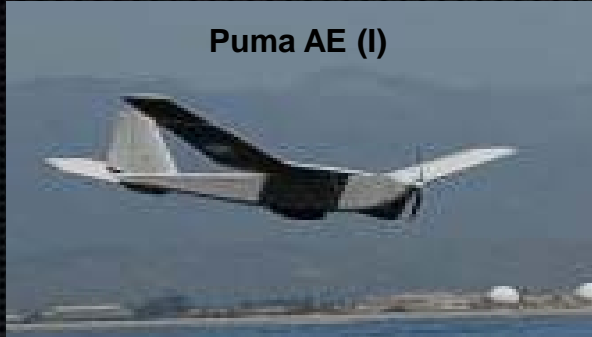
GROUP IV UAV

- Max Payload: ~850 LBS
- Max Radius: ~1400nm

GROUP V UAV

- Max Payload: ~1000 LBS
- Max Radius: ~10000nm

Puma AE (I)



Scan Eagle (II)



Aerosonde (II)



MQ-9 Reaper (V)



MQ-1C Gray Eagle (IV)



Medium Altitude Long Endurance Tactical (MALET) (MQ-1C, MQ-9)



- Capability Description: SOCOM MQ-1C/9 Aircraft are an Armed, Multi-Mission, Long-Endurance Remotely Piloted Aircraft That Provides a Unique Capability to Perform Strike, Coordination, and Reconnaissance Against High-Value, Fleeting, and Time-Sensitive Targets
- On-Going Efforts: 30 Currently Active Modification Projects
- Future: Reduced Size, Weight and Power; Increased Sensor Detection/Resolution; Modular Payload Architecture

ACQUISITION STRATEGY

- Evolutionary Acquisition Program that Provides Improvements to MQ1C/9 UAVs, Ground Control Stations, and Training Systems, Mission Payloads, Aircraft Weapons Integration and Modification

PERIOD OF PERFORMANCE

- Various

MILESTONES

- Post Milestone C, Tech Insertion and Sustainment

POINT OF CONTACT

- 813.826.9482 (TILO)

FUNDING

	MQ-1C	MQ-9
FY16	\$ 2M	\$ 66M
FY17	\$ 4M	\$ 56M*

*Pending Congressional Add and OCO Requests

CURRENT CONTRACT/OEM

- General Atomics (MQ-1C, MQ-9)
- Raytheon (FMV Sensor)

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



- Capability Description: Runway independent launch/recovery and modular/interchangeable payloads.
- On-going Efforts: Electro Optical/Infrared, SIGINT/EW, and Communications Relay Payloads Interoperable with Joint and SOF Architectures
- Future: Reduced Size, Weight and Power; Small Footprint Launch/Recovery; Suite B Encryption

ACQUISITION STRATEGY

- Evolutionary Acquisition Programs that Deliver, Integrate, and Qualify SOF-Unique Mission Kits, Mission Payloads, Air Vehicle Enhancements, and Ground Station Upgrades
- Contractor Owned and Operated (MEUAS)
- Government Owned and Operated (SUAS/MTUAS)

PERIOD OF PERFORMANCE

- Various

MILESTONES

- Post Milestone C (SUAS/MTUAS/MEUAS)

POINT OF CONTACT

- 813.826.9482 (TILO)

FUNDING

	SUAS	MTUAS	MEUAS
FY16	\$11M	\$ 9M	\$80M
FY17	\$12M	\$27M	\$80M

CURRENT CONTRACT/OEM

- AeroVironment (Puma AE)
- Insitu (Scan Eagle)
- AAI (Aerosonde)

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

AC-130U



CV-22



Flight Simulator



**C-130J
Instrument
Panel**



Crash Worthy Seat



MC-130J



SOMPE



EC-130J

Legacy C-130s



- **Capability Description:** Sustainment mods to improve reliability and maintainability, correct deficiencies, address obsolescence, incorporate mission enhancements, and critical safety changes
- **On-going Efforts:** Radar upgrades, avionics upgrades, gun system improvements, structural improvements, Military Information Support Operations capability replacement, and installation of the SOF-unique portions of the C-130J block cycle software and hardware upgrades
- **Future:** Install Emergency Equipment Bins, Light Weight Armor for Paratroop Doors, Hostile Fire Sensor

ACQUISITION STRATEGY

- Operational System in Sustainment with Evolutionary Technology Insertions

PERIOD OF PERFORMANCE

- Various

MILESTONES

- Post Milestone C: Legacy Aircraft:
- MC-130H, EC-130J, and AC-130U/W

POINT OF CONTACT

- 813.826.9482 (TILO)

FUNDING

- FY16: \$26M
- FY17: \$33M

CURRENT CONTRACT/OEM

- Various

MC-130J Modifications

ACQUISITION



- Capability Description: Modified C-130Js to Perform Low-level Infil/Exfil, Airdrop, Resupply and In-Flight Refueling
- On-going Efforts: Add Terrain Following Radar and Survivability Systems
- Future: Incrementally Automate SOF Mission Systems to Reduce Aircrew Workload

ACQUISITION STRATEGY

- Post-production Modifications to New Aircraft Recapitalizing Legacy Fleet

PERIOD OF PERFORMANCE

- Various

MILESTONES

- Milestone B: MC-130J Inc 3 / MCTF
- Pre-Milestone B: RF Countermeasures

POINT OF CONTACT

- 813.826.9482 (TILO)

FUNDING

- FY16: \$116M
- FY17: \$176M

CURRENT CONTRACT/OEM

- Lockheed Martin (C-130J, Inc3)
- Lockheed Martin/Raytheon (MCTF)
- BAE (RFCM)
- Northrup Grumman (RFCM)

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: Beyond Line of Sight Antenna, Landing/Search Light and Color Heads Up Display
- Future: Multi-Mode Radar Replacement with Silent Knight Radar

ACQUISITION STRATEGY

- Operational Systems in Sustainment With Evolutionary Technology Insertions

PERIOD OF PERFORMANCE

- Various

MILESTONES

- Post Milestone C: Production and Sustainment Through a Joint Performance Based Logistics Contract

POINT OF CONTACT

- 813.826.9482 (TILO)

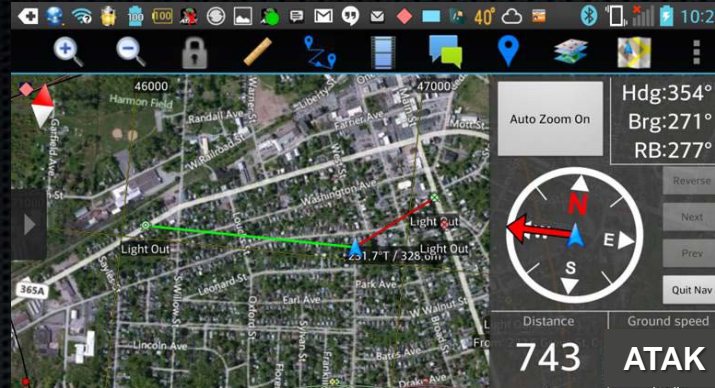
FUNDING

- FY16: \$34M
- FY17: \$35M

CURRENT CONTRACT/OEM

- Bell-Boeing Prime (OEM)
- Multiple Contracts (Low Cost Mods)
- Final Aircraft Delivery in 2018

Missions Systems



- Capability Description: Enables Mission Planning and Execution for SOF across all Components
- On-going Efforts: Electronic Takeoff and Landing Data, Android Tactical Assault Kit, Mobile Device Integration, Capital Equip Replacement
- Future: Continued Special Operations Mission Planning Equipment Software Development/Sustainment

ACQUISITION STRATEGY

- Limited/Full and Open Competition Contracts for Major Acquisitions

PERIOD OF PERFORMANCE

- Various

MILESTONES

- Post MS-C: Acq Project: SOMPE

POINT OF CONTACT

- 813.826.9482 (TILO)

FUNDING

- FY16: \$35M
- FY17: \$41M

CURRENT CONTRACT/OEM

- Various

Integrated Strike Programs



AC-130W Stinger II



- Capability Description: Close Air Support and Air Interdiction in Support of Ground Forces
- On-Going Efforts: 105mm Gun, Expanded Crew Positions, and Improved Crew Communications
- Future: HUD/HMD, Enhanced Defensive Countermeasures

ACQUISITION STRATEGY

- Modified 12 AC-130 Aircraft with Precision Strike Package

PERIOD OF PERFORMANCE

- Various

MILESTONES

- Post MS B, Engineering and Manufacturing Development
- Complete Operational Utility Evaluation
- Preparing for Deployment – Fall 2016

POINT OF CONTACT

- 813.826.9482 (TILO)

FUNDING

- FY16: \$26M
- FY17: \$16M

CURRENT CONTRACT/OEM

- SNC (MOPs / SOPGM Door)
- L3 TCS (A-Kits)
- L3 WesCam (Sensors)
- L3 ForceX (Software)
- RCVS Elbit (HMD)
- ATK (30mm Gun)

AC-130J GHOSTRIDER



- Capability Description: Close Air Support and Air Interdiction in Support of Ground Forces
- On-Going Efforts: 105mm gun, Expanded Crew Positions, and Improved Crew Communications
- Future: Larger Sensors, Side HUD, Enhanced Defensive Countermeasures, Improved Communications

ACQUISITION STRATEGY

- Modify 37 Donor MC-130 Aircraft with Precision Strike Package
- Utilize AC-130W as Risk Reduction

PERIOD OF PERFORMANCE

- Various

MILESTONES

- Post MS B, EMD
- Completed Operational Utility Evaluation
- Preparing for MS C and 105mm DT – Summer 2016
- Preparing for IOT&E – Spring 2017

POINT OF CONTACT

- 813.826.9482 (TILO)

FUNDING

- FY16: \$212M
- FY17: \$223M

CURRENT CONTRACT/OEM

- Lockheed Martin (Integration)
- SNC (MOPs)
- L3 WesCam (Sensors)
- L3 ForceX (Software)

Stand Off Precision Guided Munitions



- Capability Description: Procure and Develop Precision Guided Munitions (PGM)
- On-Going Efforts: Integrating Small Glide Munition, Small Diameter Bomb II and Enhanced Paveway II on SOF platforms
- Future: Investigate SMART 105 and Multi-Mode Seeker Technology

ACQUISITION STRATEGY

- Leverage Service Common PGMs for SOF Use
- Fund Limited Development of PGMs for SOF Unique Operational Requirements

PERIOD OF PERFORMANCE

- Various

MILESTONES

- Fielded Hellfire R9H
- Fielded GBU-49 with BLU-126/129

POINT OF CONTACT

- 813.826.9482 (TILO)

FUNDING

- FY16: \$98M
- FY17: \$95M

CURRENT CONTRACT/OEM

- Lockheed Martin (Hellfire Missile)
- Raytheon Corp (Griffin Missile /GBU-49)
- Boeing Corp (SDB/LSDB)
- Dynetics Corp (Small Glide Munition)

FW Technology Insertion

ACQUISITION



PEO-FW SENSORS / PLATFORM INTEGRATION UNCLASSIFIED

	FY17	FY18	FY19	FY20	FY21	FY22
Sensor Development & Testing	Sensor Technology for Group I-III UAS (SAFC) (Capability Improvements, Reduced SWaP, & Multi-INT Fusion)					
	Modular Payloads for Group IV/V UAS & Manned					
	>HD4K Resolution EO/IR	Improve Concealed, Weather-Degraded, Complex Environments Operations				
	3D, Multi-Color, Long Slant Range	Real-Time FOPEN/LDAR				
	Foliage Penetration (FOPEN)/LDAR	Track Hostiles & Friendlies At Night In Urban, Triple Canopy During Thunderstorm				
	Multiple Moving Target Tracking	Tag Tracking				
Medium/Wide Area Motion Imagery (MAMI/WAMI)						
Platform Integration	Platform Integration (SUAS, MTUAS, MQ-1C, MQ-9, AC-130) (Payload Integration, Multi-Platform UAS Control Station, Reduced Footprint, Improved Comms)					
	Next Gen Manned ISR AoA		Platform Integration (Manned ISR)			
	Tactical Off Board Sensor ATD		TOBS Transition For AC-130J			



FW Emerging Technology

Lab Capabilities



User Requirements



PEO-FW Emerging Tech

Identify Innovative Solutions

- Capability Briefings
- Eng Analysis
- Test
- TILO
- BAA
- CRADA
- Demo
- SBIR
- RIF

Influence Future Requirements

Tech Insertion Roadmaps

POM & Budget

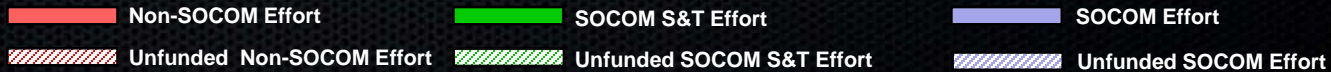
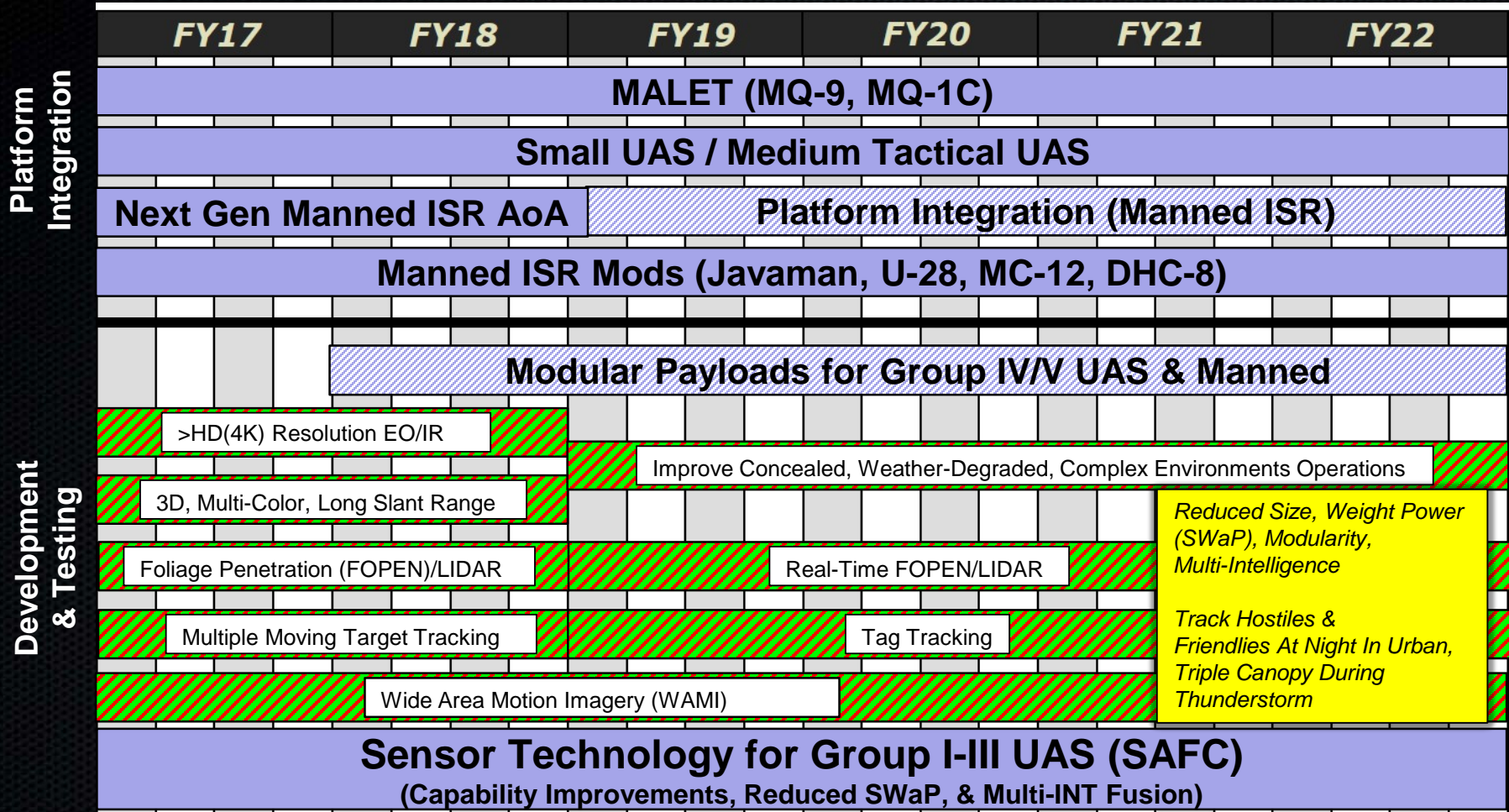
Fiscal Year Priorities

- Funding
- PM Tracking
- Contract Vehicle
- Schedule
- Technology maturation

Transition to User / Platform

Industry Engagement

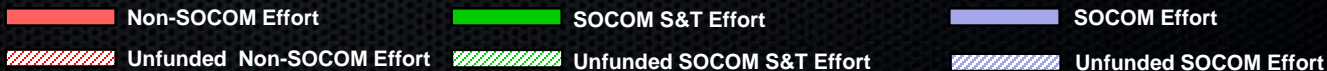
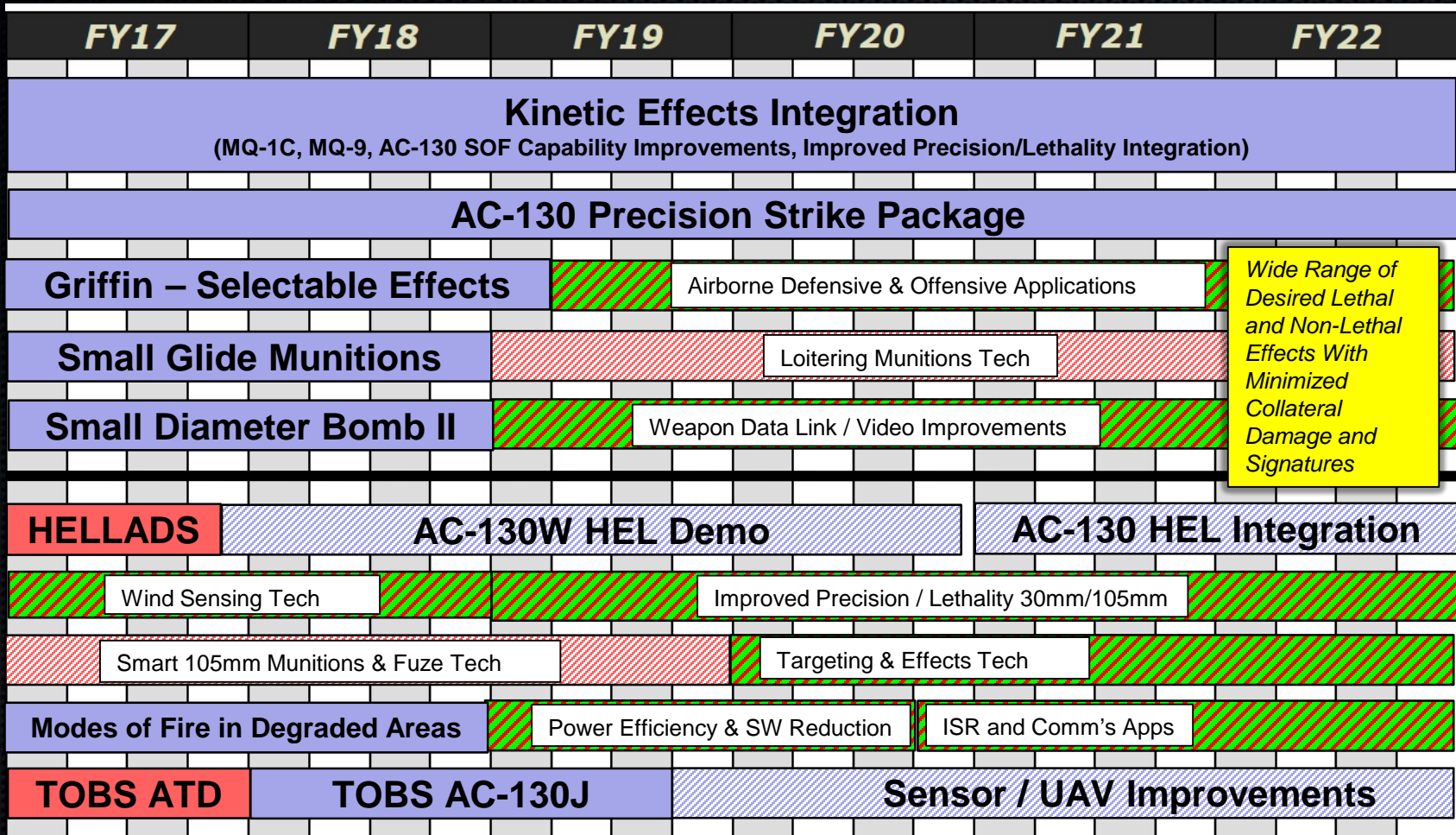
ISR / Sensors



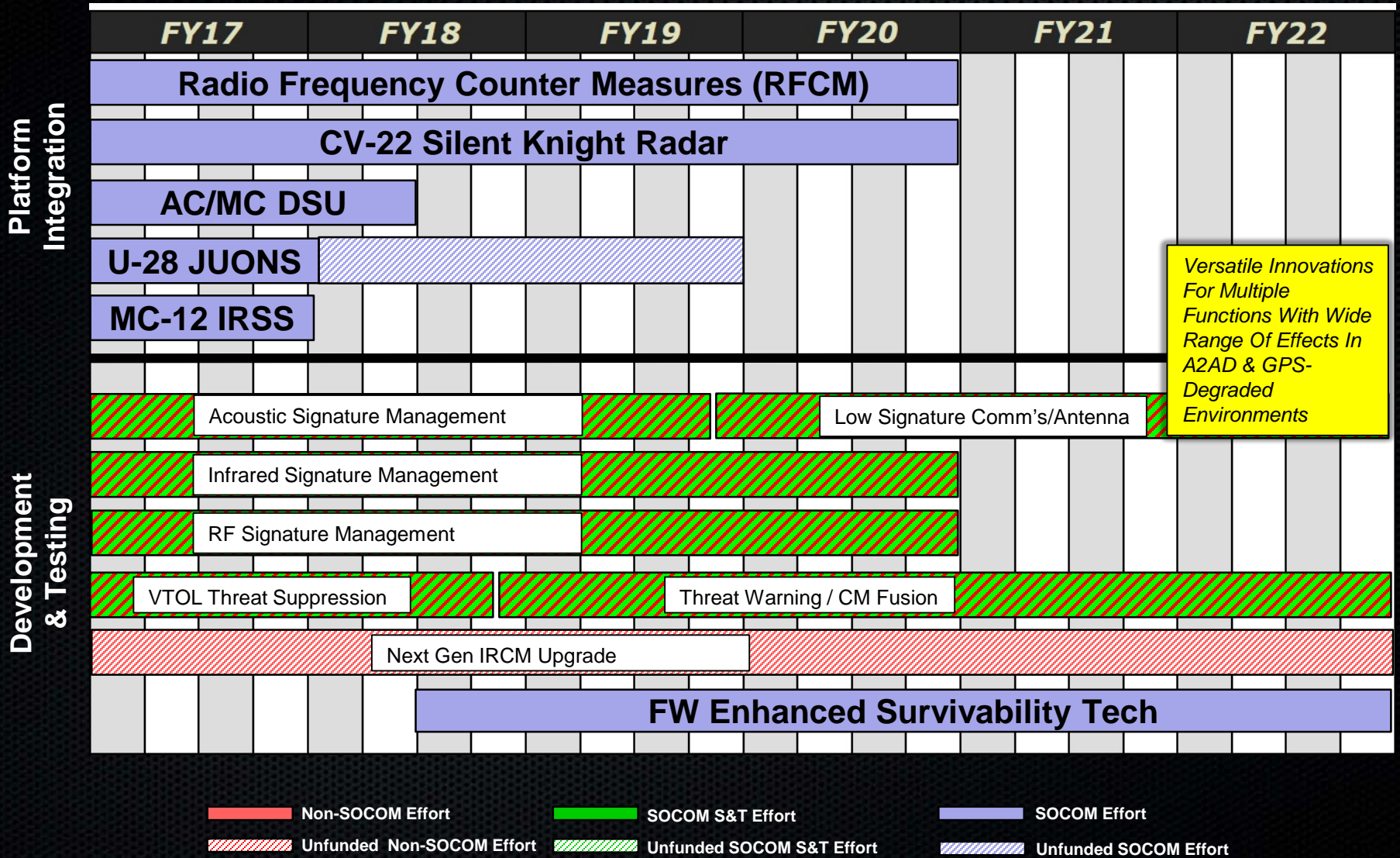
Strike / Munitions / Directed Energy

Platform Integration

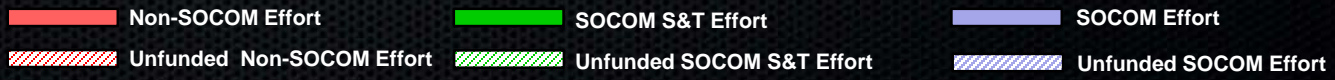
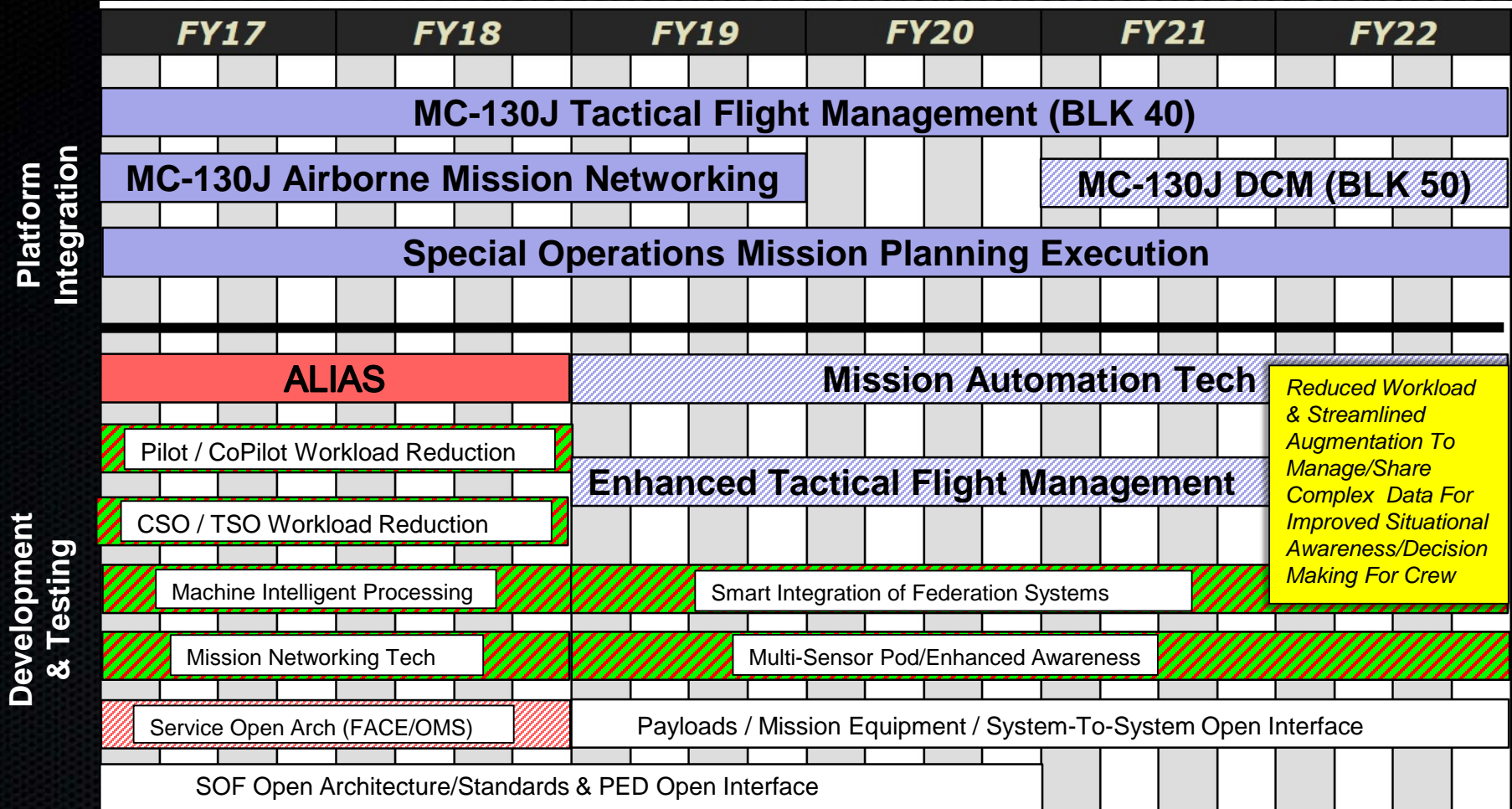
Development & Testing



Survivability



Mission Automation



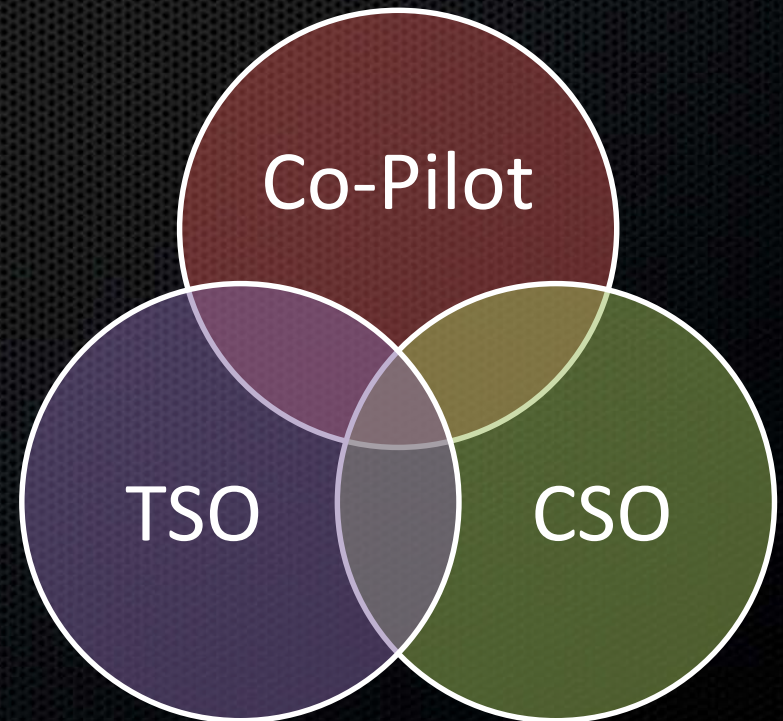
SOF AT&L Collaboration Event: Mission Automation

Problem Statement: Increased mission requirements and more complex operating environments require increased automation to reduce crew workload and positions. Investigate innovative & revolutionary approaches to improve mission effectiveness.

Event: 19-20 July 16 (T)
FBO & SOFWERX Website

- Tech Community
- Academia
- Gov't SMEs

Event Goals: Identify paths for future R&D, experimentation, demonstrations, etc.



Special Applications For Contingencies (SAFC)

Insitu Scan Eagle



Peebles Payload

RQ-20 Puma



Silent Echo Payload

- SAFC Develops and Integrates Payloads in Unmanned Aerial Systems Payloads
- Evolutionary and Spiral-Based for Technology Insertion and Low Volume Procurement
- 15 On-Going Projects: Payload Development, Testing, Evaluation and Demonstration
- Future Needs: Standardized Modular Payloads, Sensor SWaP, Survivability Improvements

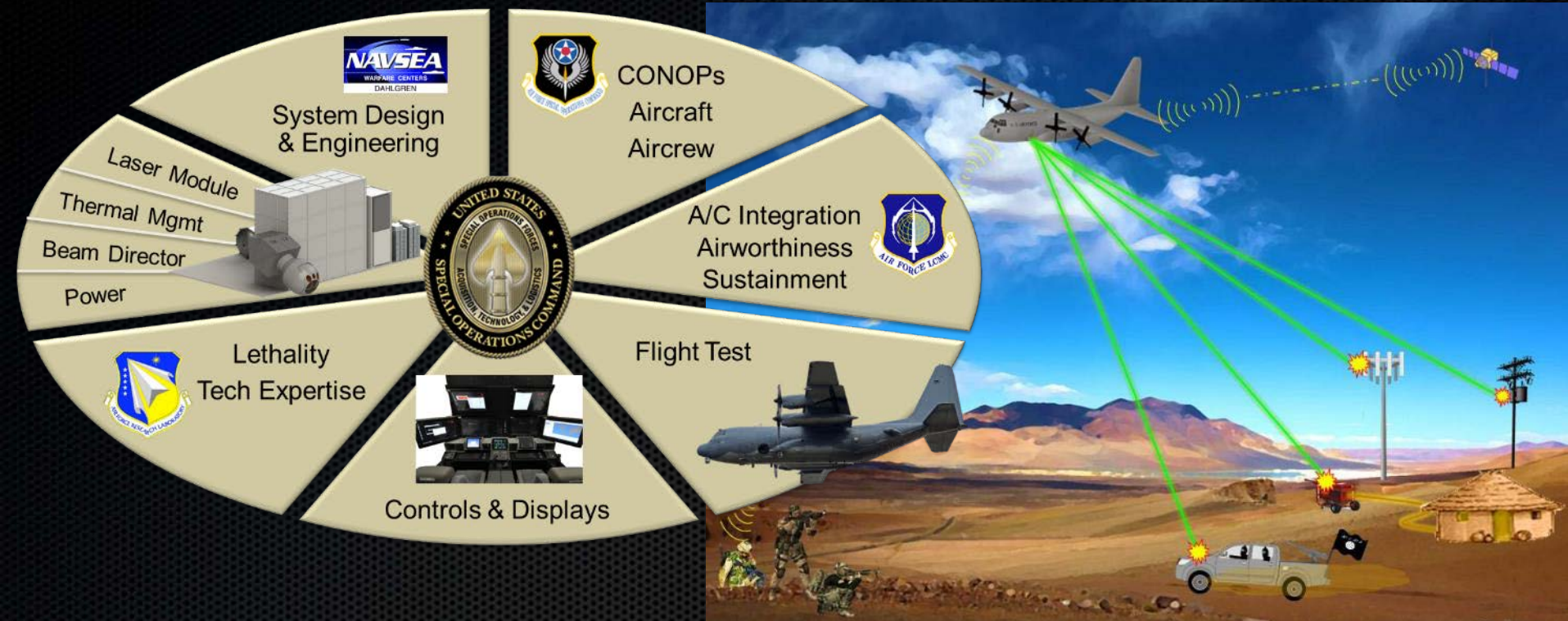
DO-328 “Cougar”



- Flexible Demonstration Platform for ISR Payloads, Weapons, Survivability, and Communications
- Multi-Sortie Missions Past Year:
 - 5 Transition to Ops, 5 TTPs, 3 New Tech Capabilities, 1 Upgrade Decision, 1 HW Fly-Off
- Future Efforts:
 - 10+ Demonstrations Per Year Across Capability Gaps Driven by User Priorities & Funding

AC-130 High Energy Laser

ACQUISITION



- Operationally Relevant Offensive 60-150 kW HEL Utilizing the 30mm Gun Port
- USSOCOM, as Gov't Prime, will Develop and Execute a 3-year Acquisition Program to Integrate an Offensive High Energy Laser onto the AC-130W
- Dahlgren Phase II Trade Study Out-Brief to Leadership in July 2016
- TBD FY17 New Start to Achieve a 2020 Combat Evaluation

FW Technology Insertion

ACQUISITION



- Bridge “Valley of Death” between Science and Technology (S&T) and Programs of Record
- Evaluate Emerging Technologies to address SOF Capability Gaps
- Rapid Demonstration Using *Borrow-Try-Decide* Model
- Focus on Game-Changing Capabilities (e.g. Third Offset)

ACQUISITION STRATEGY

- Utilize Variety of Contract Vehicles
- Technology Transition into Existing Programs and Platforms

PERIOD OF PERFORMANCE

- Various

MILESTONES

- Pre-Milestone Activities

POINT OF CONTACT

- 813.826.9482 (TILO)

FUNDING

- FY16: \$ 32M
- FY17: \$ 29M

CURRENT CONTRACT/OEM

- Various (S&T, SAFC)
- Sierra Nevada Corp (Cougar O&M)
- Multiple TBD (AC-130 HEL)