Unmanned Aircraft Systems Overview
Huntsville Aerospace Marketing Association

COL Scott Anderson

Project Manager, Unmanned Aircraft Systems

12 August 2022

Organization

PEO Aviation

PEO	DPEO (A)	SGM	CCWO	MILDEP	CoS (A)
					
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COL Kevin Chaney


PM FLRAA
COL David Phillips


PM CH
COL Al Niles


PM AH
COL Jay Maher

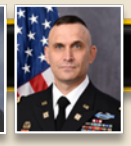

PM FW
Kelvin Nunn
(Acting)


PM UH
COL Calvin Lane

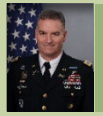

PM MASPO
COL Tim McDonald


PM UAS
COL Joseph Anderson


PM ATE
Regina Bublitz


PM AMSA
COL Burr Miller


PM UAS



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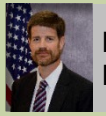

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Deputy Project Manager

HQ Staff

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Business Management Division

Mr. Wilson Ho
Chief
Logistics Management Division

Mr. Sean Townsend
Chief
Technical Management Division

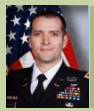
Ms. Jennifer Gillum
Director,
Rapid Integration & Acceptance Center (RIAC)

Mr. Eric Garrison
Director,
International Programs Office

Charity Evans
Director
Acquisition Operations (AcqOps)

Product Offices

Ms. Carson Wakefield
Product Lead
SUAS



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Product Manager
TUAS

LTC Chris Getter
Product Manager
EUAS

LTC Amanda Watkins
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Mr. Stephen Hutson
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Team UAS

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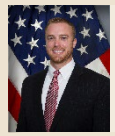

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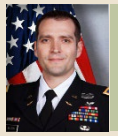

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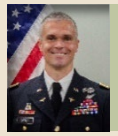

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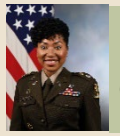

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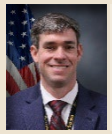

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Synchronizing Innovation – Doing Things Differently

Digital Ecosystem

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

Key Enablers

MOSA

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

Agile Development

- DevSecOps
- Integrated Development Env
- Continuous Integration/Continuous Delivery (CI/CD) Pipeline
- Training
- Contracting Strategy
- Qualification Materiel Release

MOSA
Modular Open Systems Approach

Cloud-Based Environment

Digital "Thread" → AFSIM/ATCOM/OneSaf → CAMEO EA w/Plug-ins → Matlab/Simulink/Helios/etc. → Windchill

Using A Data Centric Approach and Process Flows for Optimal Tool Optimization

PEO Aviation Digital Transformation is Synchronizing Modernization

Future UAS Desired Capabilities

IMPROVED REACH

IMPROVED SURVIVABILITY

IMPROVED LETHALITY

- *OPEN ARCHITECTURE*
- *SWARMING*
- *OPERATE in DENIED or DEGRADED ENVIRONMENT*
- *NETWORKED PAYLOADS*
- *STAND-OFF SURVIVABILITY STAND-IN EFFECTS*
- *ARTIFICIAL INTELLIGENCE and MACHINE LEARNING*

Future UAS Modernization

UAS Platform Upgrades

New Platforms / Products

Air Vehicle Size Comparison

Breadth of the PM UAS Portfolio

Worldwide Responsibility: Greater than 10,000 Air Vehicles Supporting All Echelons, USASOC, and INSCOM

Unmanned Aircraft Systems

SUPPORTING:
- All Echelons
- ISR and SOCOM

Soldier UAS

APO: systems

CURRENT
- RQ-11B Raven: 2,485 (3 per)
- RQ-28A Short Range Recon: 6,963 (2 per)

FUTURE

APO: systems
- LRR: 1,403 (1 per)
- MRR: 3,683 (1 per)
- SRR: 6,963 (2 per)

Tactical UAS

APO: systems

CURRENT
- RQ-7B Shadow: 110 (4 per)

FUTURE

APO: systems
- FTUAS: 76 (4 per)
- RQ-7b V2 Blk III: 46 (4 per)

Endurance UAS

APO: air vehicles

CURRENT
- MQ-1C Gray Eagle 204
  - GE-15 108
  - GE ER -25 96

FUTURE

APO: air vehicles
- GE-15: 108
- GE ER-25M: 96

Command, Control & Effects

APO: systems

CURRENT
- One System Video Remote Terminal (OSRVT) 3,424

FUTURE

APO: air vehicles
- Air Launched Effects: TBD
- Scalable Control Interface: SW
- Robotic and Autonomous Command and Control: SW

Supporting Our Forces and **Our Allies** With Worldwide Strength and Diversity

US Army UAS - Fielding Capability

Gray Eagle
Extended Range -25M

(Notional)

2029: ALE Small / Large Fielding

ARMY 2040

2026: SRR UAS Tranche 3 Fielding

2024: Air Launched Effects (ALE) Rapid Fielding Decision

2024: SRR UAS Tranche 2 Fielding

SCI CS29

ARMY 2030

FLRAA
FARA
Fielding

SCI CS27

Scalable Control Interface (SCI) MVCR

2025

2022: Gray Eagle Extended Range Fielding Complete

2028: Long Range Reconnaissance UAS Fielding

(Notional)

2025: FTUAS INCREMENT 2 Fielding

2024: Shadow Block III Fielding Complete

2023: Future Tactical UAS (FTUAS) INCREMENT 1 Fielding

(Notional)

2022: Short Range Reconnaissance (SRR) UAS Tranche 1 Fielding

2020

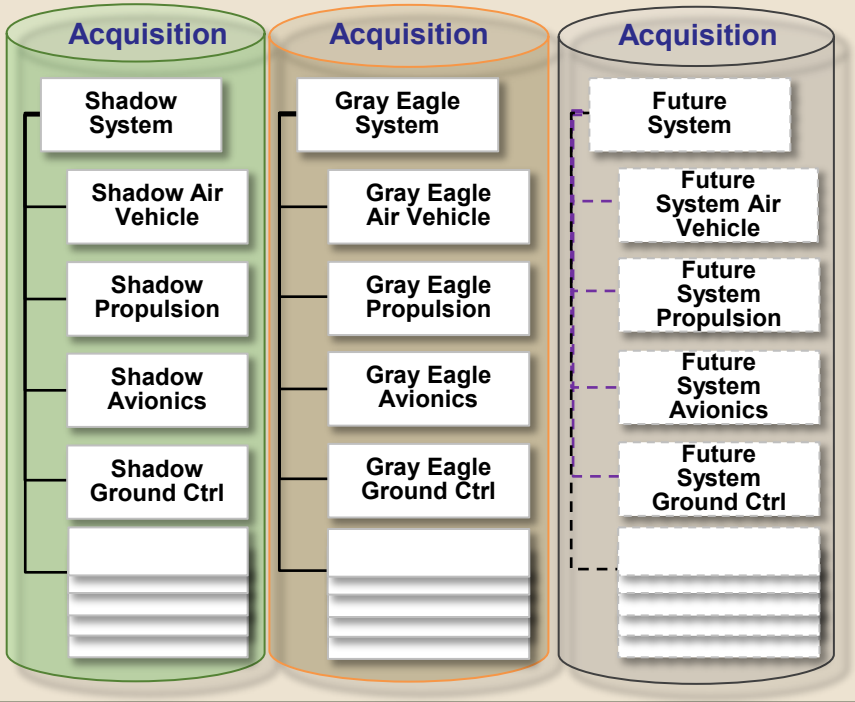
ACCELERATING TOWARD THE FUTURE

UAS Capability Roadmap

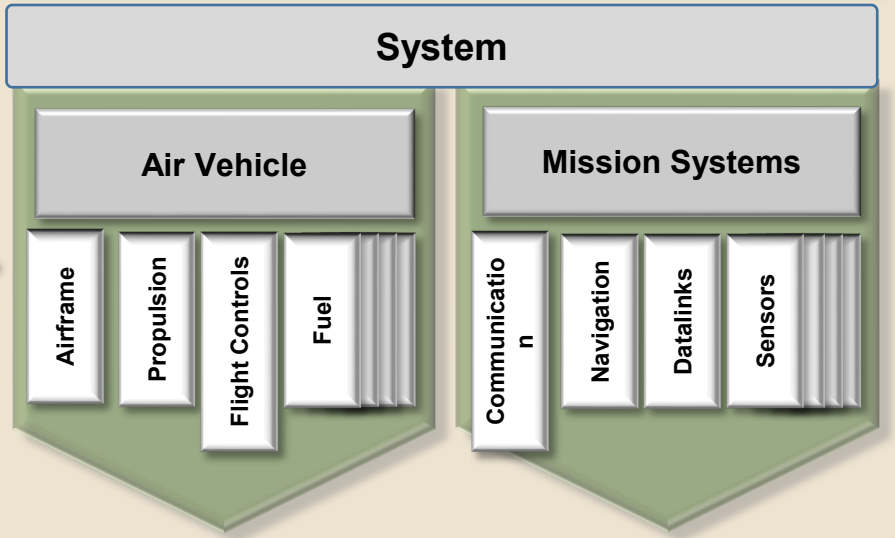
		Near Term FY22-FY29	Mid Term FY30-FY34	Far Term FY35-FY39
EAB/CAB	Group 4	**Gray Eagle Extended Range (GE ER)** *MQ-1C*	GE ER -25M Upgrade; GE ER -25 INC II	APNT, MOSA / Avionics Re-Architecture, Data Link Modernization, Reliability Improvements, Alternate Munitions / Payloads, ALE, SCI
BCT CAB	Group 3	**Future Tactical UAS (FTUAS)** *(Notional)*	INC 0; INC 1; INC 2; *Expeditionary Capability*	Vertical Take Off / Landing, MOSA, EO/IR Sensor, Encryption, Modern Datalinks, APNT, Advanced Teaming / Autonomous Behaviors, SCI
		RQ-7B V2 **Shadow** *RQ-7B V2 Block III*	*Shadow V2 Sustainment / Divestment*; Shadow Block III Upgrade	Increased Processing, Multiple Payloads, HD Imagery, Geo-Location Precision, Extended Communications; *UAS Air Vehicle Technology Development*
Bn/Co/Plt	Group 1&2	*Family of Small UAS*; SRR; Raven *RQ-11B*; Puma *RQ-20A*	SRR Prototyping; Tranche1; Tranche2; Tranche3; *Sustainment / Divestment*; MRR RQ-11C; *Sustainment / Divestment*; LRR	Perch and Stare, Advanced Payloads, APNT; Advanced Payloads / Radios, APNT; Advanced Payloads / Radios, Air Vehicles, APNT
CAB	ALE	**Air Launched Effects** *(Notional)*	ALE Prototyping; NDI UAV / Payloads, MOSA, MQ-1C; ALE-S; ALE-S/L	MULTIPLE AVs: ALE SMALL and ALE LARGE; COMMON CAPABILITIES: Advanced Radios, Resilient Waveforms, Autonomous Behaviors, Alternate Payloads
All Echelons	SCI	**Scalable Control Interface (SCI)**	SCI CS25; SCI CS27; SCI CS29; *Decreased need for UGCS and Trained Operators*	Distributed UAS Operations, Permission Based Roles, FVL / Multiple Air / Ground Platform Integration, MOSA

Changing the UAS Acquisition Paradigm

Traditional Paradigm – Cylinders of Excellence



UAS Family of Systems Paradigm



UAS FoS Phase 1 Initiated the Paradigm Change, From the Top Down

UAS Family of Systems Paradigm Enables:

- Acquisition at Subsystem/Component Levels
- Expanded Competition
- Opportunities for Commonality and Reuse
- Gov't Owns Requirements at Acquisition Level
- Government Performs Some of the Integration Role (Versus the Prime Contractor)

Questions