

U.S. Army Small Unmanned Aircraft System (sUAS)

Technology Innovation Event

21 – 22 OCT 2020

U.S. Army Combat Capabilities Development Center-
Soldier Center (CCDC-SC) & Northeastern University
Kostas Research Institute (KRI)

Microsoft Teams (DoD Instance) Virtual Event

Army Technology Innovation Network Event

Topic : U.S. Army Small Unmanned Aircraft System (sUAS) Strategy

Concept: Foster collaboration across the innovation ecosystem to leverage expertise and information to generate novel system approaches, potential technology solutions to enable significant capability improvements for our Soldiers.

Objective: Enable the SUAS innovation community to contribute to developing technology solutions to increase the effectiveness and efficiency of the close combat platoon capabilities in the near and mid-term timeframes.

Intent:

- Share understanding of future concepts, operational challenges and desired capabilities
- Increase awareness of current capabilities, future potential SUAS enabling technologies and desired operational outcomes
- Focus on key SUAS technology areas and desired outcomes
 - Autonomy
 - Sensor Suites & Communication
 - Fuselage (materials, design, manufacturing)
 - Mission / Flight Endurance

Endstate: Improved understanding of collective challenges, on-going activities and opportunities available to enable focused and accelerated collaboration across partners for future development and experimentation to support the Close Combat Warfighter and units future combat capability development.

ACRONYMS

AFFOA – Advanced Functional Fabrics of America
ARM – Advanced Robotics for Manufacturing
CDID – Capability Development Integration Directorate
DIU – Defense Innovation Unit
MCDID – Maneuver Capabilities Development and Integration Directorate
MDO – Multi-Domain Operations

NNMI – National Network Manufacturing Initiatives
NSIN - National Security Innovation Network
OE – Operating Environment
PdM – Product Manager
PM – Program Manager
SoS – Systems of systems

Time	Topic	Speaker	Notes
0900 - 0930	Introduction	BG James Bienlien – CCDC COL Frank Moore – CCDC-SC Mil Dep Dr. David Luzzi – NU Mr. Robert Jensen– ARL-NE	Transition to Mr. Mat Correa
0930 – 1200	U.S. ARMY sUAS Concepts, Strategy, Capabilities, Technologies		
	Cross-Domain Maneuver “Army Approach” - SESU	Mr. Tom Desrosier – MCDID Concepts Dr. Paul Zablocky – DARPA PM STO	15 min 15 min
	U.S. Army sUAS Strategy sUAS POR Overview – - SRR, MRR, LRR - SBS - TeUAS Firefly EOD Platforms	COL Sam Edwards – MCDID RR Dir Mr. Stephen Hutson – Tech Chief SUAS Mr. Kevin Brown – APdM SBS MAJ Bradley Benjamin - MAJ Ben Olsen – Sustainment CDIC	15 min 10 min 10 min 10 min
	Technology Development Overview Maneuver Robotics Strategy (15 min Q&A) / 10 min break	Mr. Spencer Watza – CCDC-AVMC Mr. Ted Maciuba – MCDID RR Deputy	20 min 15 min
1200 – 1300	Joint Services SUAS		
	USMC SUAS Overview AF (SUAS / C-UAS) - SOF (SUAS) – (15 min Q&A)	Maj Eric "Chelsea" Eastman Maj Nicholas Wasinger MAJ Will Taylor	15 min briefs
1300 – 1500	Innovation Partners		
	MIT-LL NSIN - NNMI – DRAPER - BAE Systems – FAST Labs MITRE DIU – (15 min Q&A)	Dr. Scott Van Broekhoven Mr. Matt Merighi Mr. Steve Luckowski Mr. John Cash Mr. Damon Mcgurgan Mr. Greg Kern Mr. Matt Borowski	15 min briefs
1500 – 1600	Academic Partners		
	Northeastern University UMassLowell Worcester Polytechnic Institute Carnegie Mellon Massachusetts Institute of Technology	Dr. Haumant Singh Dr. Holly Yanco Dr. Raghvendra Cowlagi Dr. Katia Sycara Dr. Nicholas Roy	10 min briefs
1600 – 1645	Experimentation and Demonstration Venues		
	Ft. Devens Camp Edwards Kostas Research Institute (15 min Q&A)	Mr. Ryan Brown CW3 Smith, CPT Rouse Mr. Matt Kling	10 min briefs
1645 – 1730	Challenge Area Discussions		
	ID Collective Issues Across SUAS Community for Senior Leader intervention Technology Discussion Overview	Mr. JP Kruszewski Mat Correa	30 min

Time	Topic	Panels
0900 - 1000	Army Innovation Overview - Topics, opportunities, events	Mr. Mat Correa - CCDC Ms. Claudia Quigley – ARL-NE Mr. Matt Merighi - NSIN COL Corsetti – 75 th IC
1000 – 1130	Autonomy <u>Discussion Outline:</u> Operational Objectives System Approaches / Capabilities Technology Area Development Emerging Technologies Challenges Q&A	Lead Coordinator: Mr. “JP” Kruszewski – CCDC-SC Mr. Ted Maciuba – MCDID Robotics Requirements Deputy Dr. James Dotterweich – ARL Dr. Joseph Conroy – ARL Dr. Tim Chung – DARPA Dr. Gian Luca Mariottini – DRAPER
1145 – 1315	Sensor Suites and Communication <u>Discussion Outline:</u> Operational Objectives System Approaches / Capabilities Technology Area Development Emerging Technologies Challenges Q&A	Lead Coordinator: Michael Donnelly – C5ISR Mr. Ted Maciuba – MCDID Robotics Requirements Deputy Mr. Sean Maguire, Brian Bocskor – C5ISR Mr. Jimmy DiGioia, Dr. Richard Osgood, Mr. Michael Manser - SC Dr. Jian Yu - ARL Dr. Randy Tompkins - ARL Dr. Hanumant Singh – Northeastern University
1330 - 1400	DARPA OFFSET Program	Dr. Tim Chung
1415 - 1545	Fuselage (Materials, Design Manufacturing) <u>Discussion Outline:</u> Operational Objectives System Approaches / Capabilities Technology Area Development Emerging Technologies Challenges Q&A	Lead Coordinator: Michael Gesellschaft – PM SUAS Mr. Ted Maciuba – MCDID Robotics Requirements Deputy Mr. Karl Bernetich – ARL Dr. Brandon McWilliams – ARL Dr. Rajneesh Singh – ARL
1600 – 1730	Mission / Flight Endurance <u>Discussion Outline:</u> Operational Objectives System Approaches / Capabilities Technology Area Development Emerging Technologies Challenges Q&A	Lead Coordinator: MAJ Vikram Mittal – 75th IC Mr. Ted Maciuba – MCDID Robotics Requirements Deputy Dr. Richard Scenna – C5ISR MAJ Ben Olsen – TeUAS Dr. Deryn Chu – ARL Dr. Dat Tran – ARL Dr. Dino Mitsingas – ARL Dr. Kyle Grew – ARL Dr. Mike Waits – ARL
1730 – 1745	Close out & Way-Ahead	Mr. Mat Correa



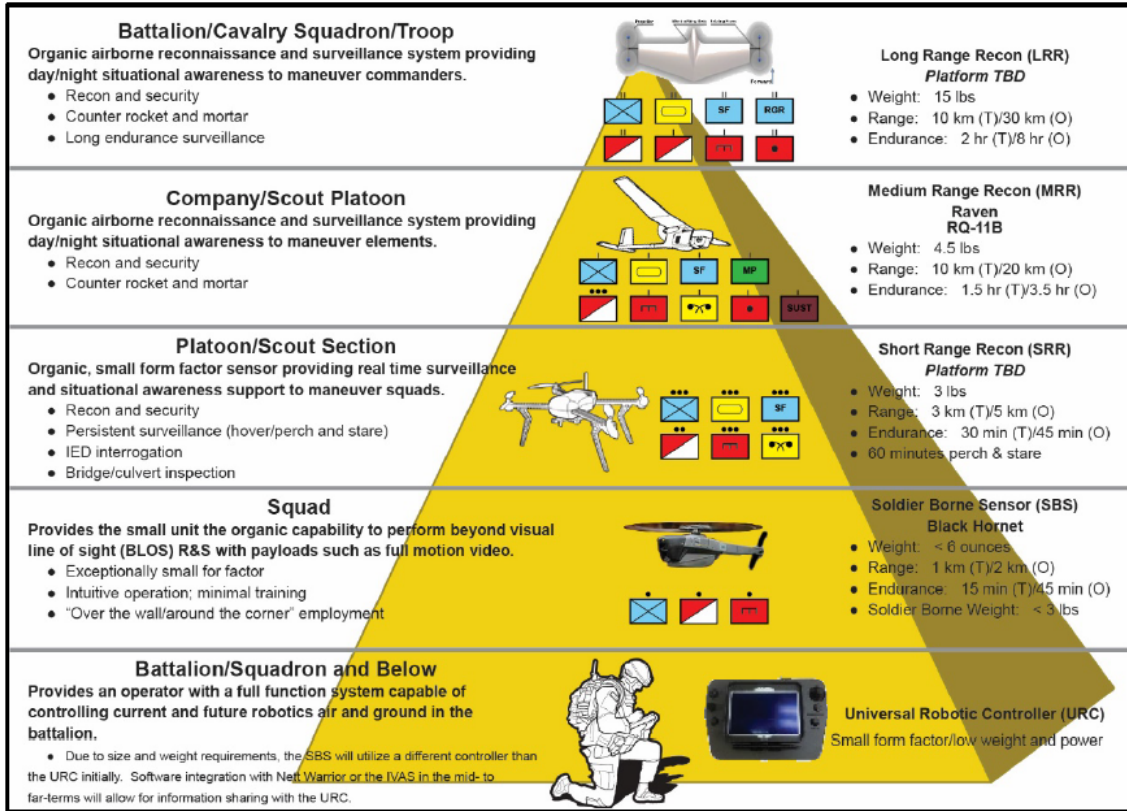
U.S. ARMY

SMALL UNMANNED AIRCRAFT SYSTEM STRATEGY



5.1.1: Current Program Description

The graphic below provides an overview of the current SUAS efforts according to the approved requirements. The graphic details the capabilities and primary uses by echelon for both maneuver elements and their enablers.



U.S. Army Small Unmanned Aircraft System Strategy

