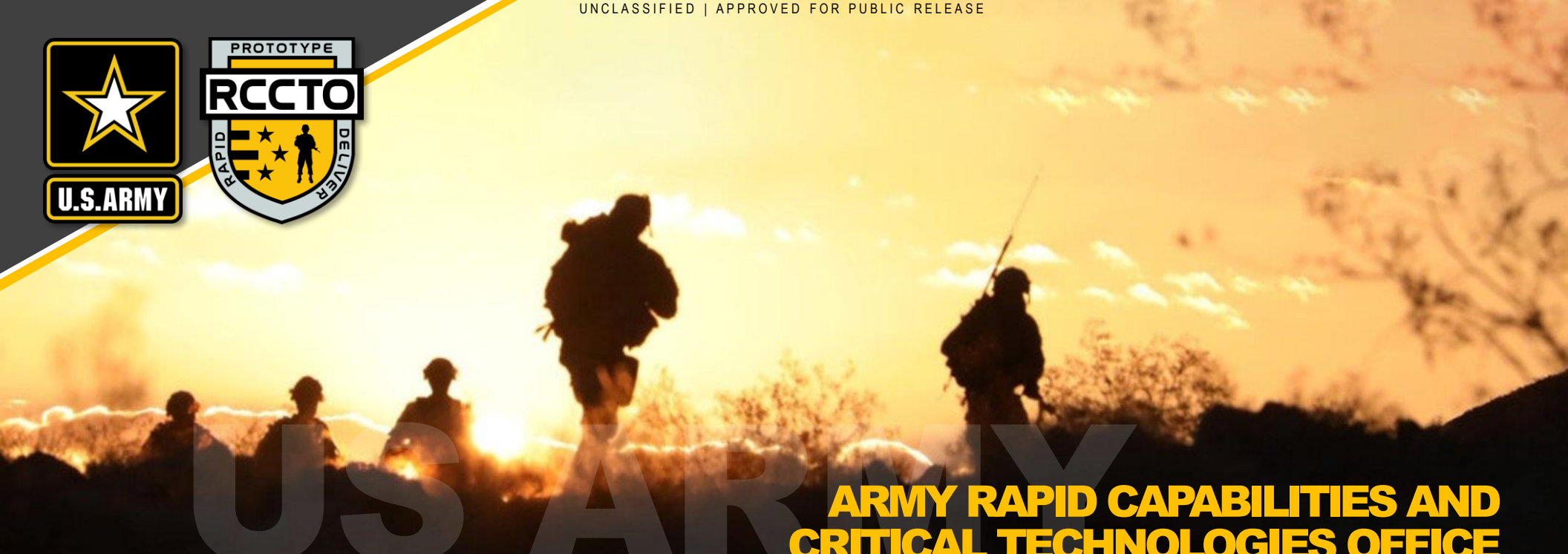


ARMY RAPID CAPABILITIES AND CRITICAL TECHNOLOGIES OFFICE

RCCTO Overview

Redstone Update – Von Braun Center

"DISTRIBUTION STATEMENT A. Approved for public release. Distribution is unlimited."

Army Rapid Capabilities and Critical Technologies Office Mission

MISSION: The Army Rapid Capabilities and Critical Technologies Office (RCCTO) will rapidly and efficiently **research, develop, prototype, test, evaluate, procure, transition, and/or field** critical enabling technologies and capabilities that address **near-term and mid-term** threats. The RCCTO will execute this mission **consistent with the Army's modernization priorities** that maximize Soldiers' capabilities to deploy, fight, and win on future battlefields.

Reference: 29 July 2020 Charter

Signature Outcomes			Critical Outcomes				Joint Outcomes
Hypersonics	Mid-Range Capability	Directed Energy	Rapid Acquisition	CEID*	ACE**	CTO***	C-sUAS****

* Cyber, Electronic Warfare & Information Dominance (CEID)

** Advanced Concepts & Experimentation (ACE)

***Critical Technologies Office

****Counter-Small Unmanned Aircraft Systems (C-sUAS)

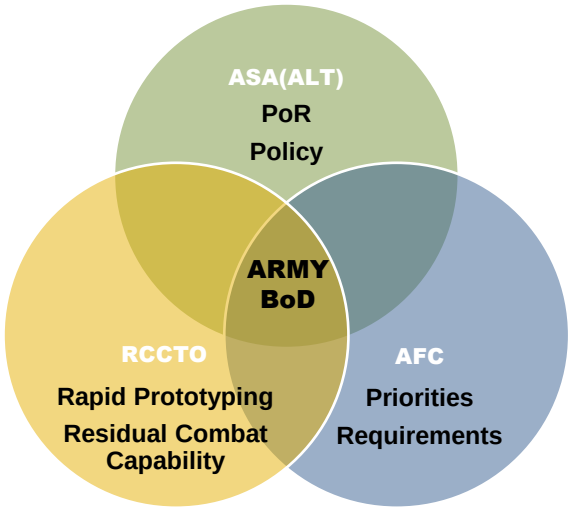
RCCTO Governance & Relationships

IN JULY 2020 THE SECRETARY OF THE ARMY SIGNED AN UPDATED CHARTER that affirmed the Army Rapid Capabilities and Critical Technologies Office (RCCTO) as a unique program office and modernization asset.

Army Board of Directors	
HON Christine Wormuth *Secretary of the Army*	GEN James C. McConville *Chief of Staff of the Army*
HON Gabriel O. Camarillo *Under Secretary of the Army*	GEN Randy George *Vice Chief of Staff of the Army*
HON Douglas R. Bush *Assistant Secretary of the Army for Acquisition, Logistics and Technology (ASA (ALT))*	GEN James E. Rainey *Commanding General, Army Futures Command*

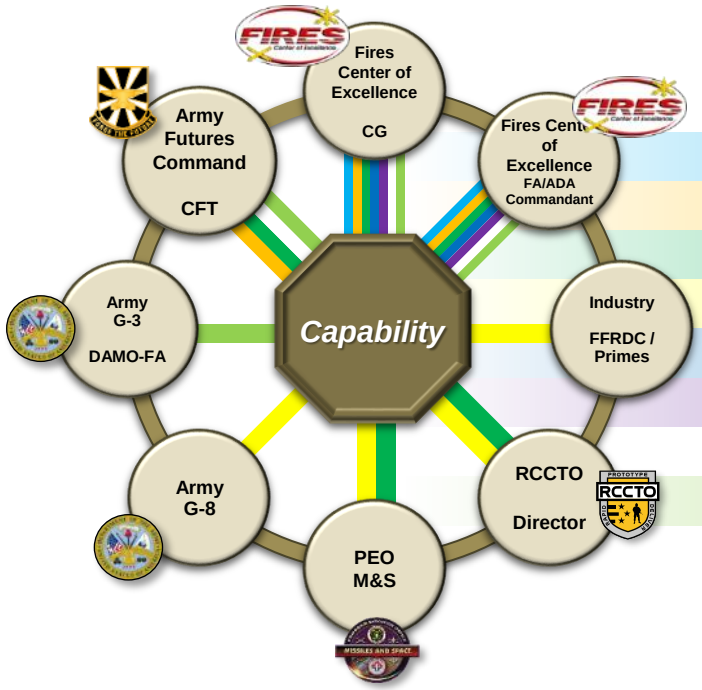
LTG Robert A. Rasch, Jr
Director

ARMY PARTNERS



Partnership Transition Teams

THE "OCTAGON"



- DOCTRINE
- ORGANIZATION
- TRAINING
- MATERIEL
- LEADERSHIP
- PERSONNEL
- FACILITIES
- POLICY

* *Army Staff and Other Key Stakeholders*

Modernization Continuum

Do we want to invest S&T Resources?

Do we want to Prototype for a Unit of Action?

Do we want a Program of Record?

CHARACTERISTICS OF PLATFORM

Develop an Idea and Concept

1 Decision Point

Conduct Demonstrations

RDT&E 6.1-6.4

2 Decision Point

Write A-CDD

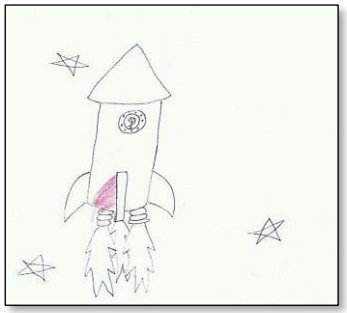
Build a Prototype at the Unit of Action level

RDT&E 6.3 & Above

3 Decision Point

Operational Utility

Build a Prototype at the Unit of Action level



OBJECTIVES

Develop a Requirement Based on Desired ***Objectives***

RDT&E 6.5 & Above

Write CDD

THRESHOLDS

Develop a Requirement Based on Known Achievable ***Thresholds***, with known fixes

IDEA → *Invention/Demonstration* → *Rapid Prototyping* → *Program of Record*

Post Milestone B

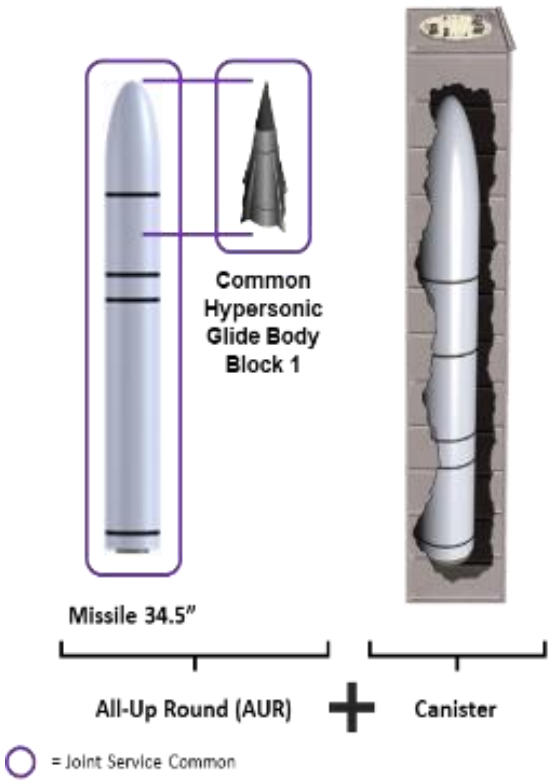
Milestone C

BRIDGING THE VALLEY OF DEATH

Army Hypersonics Project Office

Long Range Hypersonic Weapon (LRHW)

Mission: Deliver an experimental prototype LRHW with residual combat capability NLT FY23 at the Battery Level as part of the Long Range Fires Battalion in support of Multi-Domain Operations



Unit Equipment C17 Configuration| Load-out Jun 2021

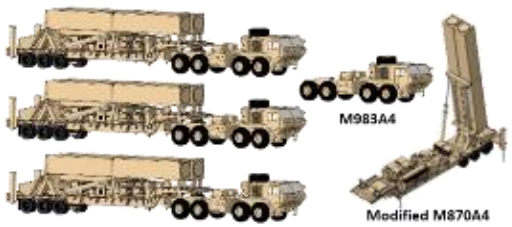
Unit Rollout – 7 Oct 21

Battery Operations Center (BOC) System

BLK 1 Integration: AFATDS

Battery Operations Center

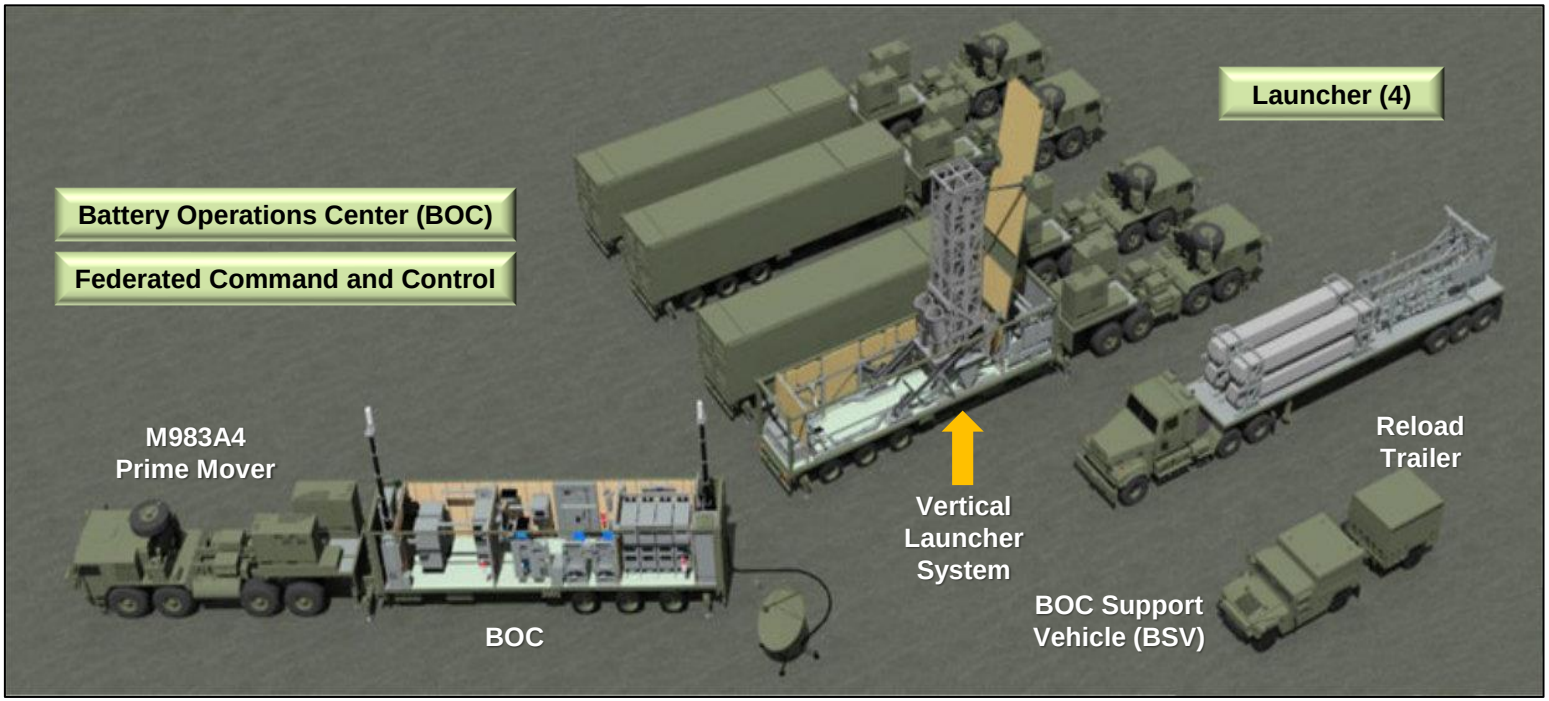
Transporter Erector Launchers (TEL)



Mid-Range Capabilities Project Office

Mid-Range Capability (MRC)

Mission: Deliver an initial prototype MRC NLT 4QFY23 at the Battery Level as part of the Long Range Fires Battalion in support of Multi-Domain Operations



SM-6

Tomahawk

Directed Energy Efforts

Maneuver Air Defense	Fixed and Semi-fixed Base Defense	Supports JCO

DE M-SHORAD
(Guardian)

Notional Depiction

50kW-class Laser weapon integrated on a Stryker platform, including on-board target tracking and FAAD C2 interoperability, with residual combat capability

MISSION

RCCTO will deliver the first prototypes at the platoon level in 4QFY22. RCCTO will continue to deliver prototypes in until transition to PEO MS in FY25.

IFPC-HEL
(Valkyrie)

Notional Depiction

300kW-class Laser system designed to fit on an Army truck , including on-board target tracking and FAAD C2 integration, with residual combat capability

MISSION

RCCTO will deliver the first prototypes at the platoon level in 4QFY24 and transition to PEO MS in FY25.

IFPC-HPM

Notional Depiction

Air Force developed High Power Microwave platform, including FAAD C2 interoperability, with residual combat capability

MISSION

RCCTO will deliver the first prototypes at the platoon level in 4QFY24 and transition to PEO MS in FY25.

DE C-sUAS
P-HEL

Notional Depiction

Palletized 20kW-class Laser weapon system, including on-board target tracking and FAAD C2 interoperability, with residual combat capability

MISSION

RCCTO, in coordination with the JCO, will demonstrate two low-cost C-sUAS prototype laser weapon systems in FY22 with the ability to detect, track, identify, and enable hard kill defeat of Group 1 and 2 UAS threats.

Executing Innovation

Bring Your Most Innovative Ideas – The Army is Listening

- **Army Strategic Rapid Acquisition (AStRA): Concept, Prototype, and Deliver**
  - RCCTO hosts recurring “pitch day” events in various locations, to find new technology ideas and accelerate them into prototypes that could quickly reduce near- and mid-term operational risks.
  - AStRA is open to companies and academic institutions who want to share their best ideas for emerging military technology.
  - Resembles commercial investor “pitch days” with follow-on awards
  - Most Recent Event: AStRA 4 at Fort Bragg, NC in March 2022

C-sUAS Semi-Annual Demonstration

- **#1: April 2022**
  - Topic: High Power Microwave (HPM) Ground-Based Aerial Denial systems and C-sUAS as a Service (CaaS)
  - 31 white papers submitted; 9 venders selected
- **#2: September 2022**
  - Topic: Electronic Warfare Denial Systems
  - 31 white papers submitted; 9 vendors selected
- **#3: Jan 2023**
  - **Topic: OSD-requested assessment of Group 3 Defeat Capabilities**
  - **13 white papers received; ongoing selection process**
- **#4: 2QFY23**
  - **Topic: Group 3 C-sUAS capabilities**
  - **29 white papers received; ongoing selection process**

Comments/Questions?












Thank you for your support