“WE DELIVER TO SOLDIERS.”

The Army Rapid Capabilities and Critical Technologies Office (RCCTO) delivers experimental prototypes with residual combat capabilities to units of action. The RCCTO focus areas evolve over time as the mission and threat conditions change and adapt. The RCCTO receives its priorities from the Board of Directors (BoD), led by Secretary of the Army, and including the Chief of Staff of the Army, Under Secretary of the Army, Vice Chief of Staff of the Army, Army Acquisition Executive, and Commanding General, Army Futures Command.

As part of the overall Army modernization strategy, the BoD directed the RCCTO to rapidly prototype hypersonics and directed energy capabilities and deliver them to operational units. As the RCCTO expedites hypersonics and directed energy, it also continues to execute previously assigned projects and to scout emerging technologies.

HYPersononics

- **Delivering hypersonics** quickly as possible is essential in order for the United States to endure and prevail in the great power competition.
- The RCCTO is prototyping a Long Range Hypersonic Weapon (LRHW) that will deliver residual combat capability to Soldiers by FY23.
- LRHW will introduce a new class of ultrafast, maneuverable, long-range missiles that can launch from ground platforms, travel in excess of Mach 5 and enable the Army to operate in the anti-access/area denial environment.
- In August, the Army issued two contracts to accelerate the rapid prototyping and fielding of the LRHW, marking an important step in moving the development of Army hypersonic capabilities out of government laboratories and into commercial production.
- The RCCTO is responsible for building the LRHW prototype for one Army battery and then transitioning the effort to an Army program of record.
- The Services are executing hypersonics through use of a common glide body, missile design similarities, and joint test opportunities. These similarities in design for land, air, and sea variants will provide economies of scale for future production as we build the U.S. hypersonics industrial base.

DIRECTed ENERGY

- As part of its modernization strategy, the Army requires a variety of Directed Energy (DE) weapons to address near-peer threats.
- The Army’s new DE strategy will rapidly field high energy laser and high power microwave prototypes to units of action.
- In July, the Army issued a contract to accelerate the rapid prototyping and fielding of its first combat-capable laser weapon system: a 50kW-class laser for a platoon of Strykers in FY22 to complement Maneuver Short Range Air Defense (M-SHORAD).
- The DE M-SHORAD capability is intended to protect Divisions and Brigade Combat Teams from unmanned aerial systems (UAS), rotary-wing aircraft, and rockets, artillery and mortar.
- The Army also plans to field an experimental/prototype High Power Microwave (HPM) weapon with residual combat capability that will expand the threat target set to groups and swarm UAS.
- The Services are leveraging commonalities in DE initiatives to increase combat effectiveness and maximize resources.
The Army RCCTO continues to execute in other high priority areas, including transitioning or concluding past RCCTO projects; applying innovative technology to address cyber capability gaps; and scouting emerging and disruptive technologies for quick prototyping and delivery to Soldiers.

## ACE PROJECT OFFICE
**ADVANCED CONCEPTS AND EXPERIMENTATION (ACE)**

- Quick reaction office for emerging technologies.
- Portal to nationwide experts in academia, industry, start-ups and other services.
- Holds Innovation Days to transition emerging technology to prototype and deliver to the Soldier.
- **Current focus:** Radar, Artificial Intelligence, Autonomy & Swarms, and Combat Vehicle Advanced Technologies.

## CESD PROJECT OFFICE
**COMPUTING AND ELECTRONICS SECURITY DOMINANCE (CESD)**

- Partners with Army cyber programs.
- Partners with innovative technology centers to plan, develop, and deliver disruptive technology.
- Initial project leveraged precision cyber techniques to counter Unmanned Aerial System for U.S. ground forces.
- **Current focus:** Applying innovative and disruptive technology to meet cyber needs.

## RAPO PROJECT OFFICE
**RAPID ACQUISITION PROJECT OFFICE (RAPO)**

- Conducts accelerated acquisition and technology assessments.
- Areas include multi-domain sensor-to-shooter, electronic warfare, and vehicle protection.
- RAPO transitions prototypes through RCCTO and into the hands of Soldiers.
- **Current focus:** Machine-to-machine Sensor to Shooter, and Electronic Warfare.

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**ON THE WEB** [HTTPS://RAPIDCAPABILITIESOFFICE.ARMY.MIL](https://rapidcapabilitiesoffice.army.mil)