



U.S. ARMY
RDECOM



The U.S. Army Research, Development and Engineering Command

Army International Engagement

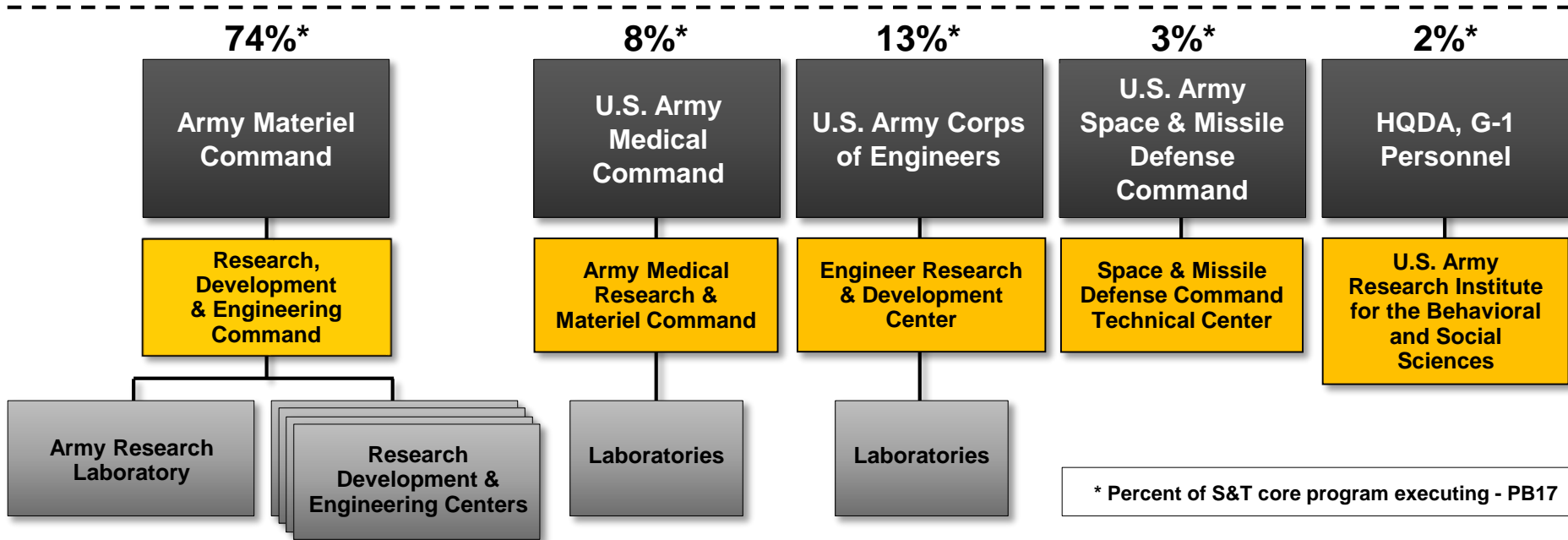
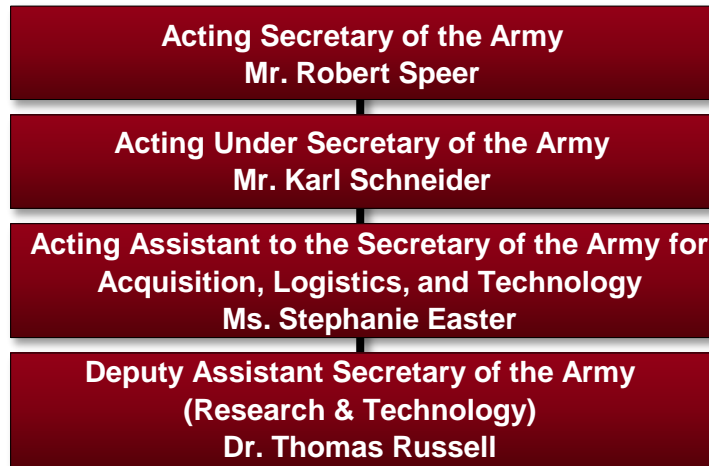
2017 POST

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Director, International Cooperation & Exchange



Army S&T Enterprise



TECHNOLOGY DRIVEN. WARFIGHTER FOCUSED.



Our Organization



RDECOM...

- Executes **74%** the Army S&T budget
- Employs over **13,800** civilians, direct contractors and military, **11,000+** of which are scientists and engineers
- Has over **515** active CRADA agreements with **industry** and **academia**
- Supports **life-cycle engineering**
- Provides an integrated life-cycle resource for the development of new systems and the life extension of legacy systems

Vision

Provide innovative research, development and engineering to produce capabilities for decisive overmatch to the Army against the complexities of the current and future operating environments in support of the Joint Warfighter and the Nation.

Mission

To be the Army's enabling command in the development and delivery of capabilities that empower, unburden, and protect the Warfighter.

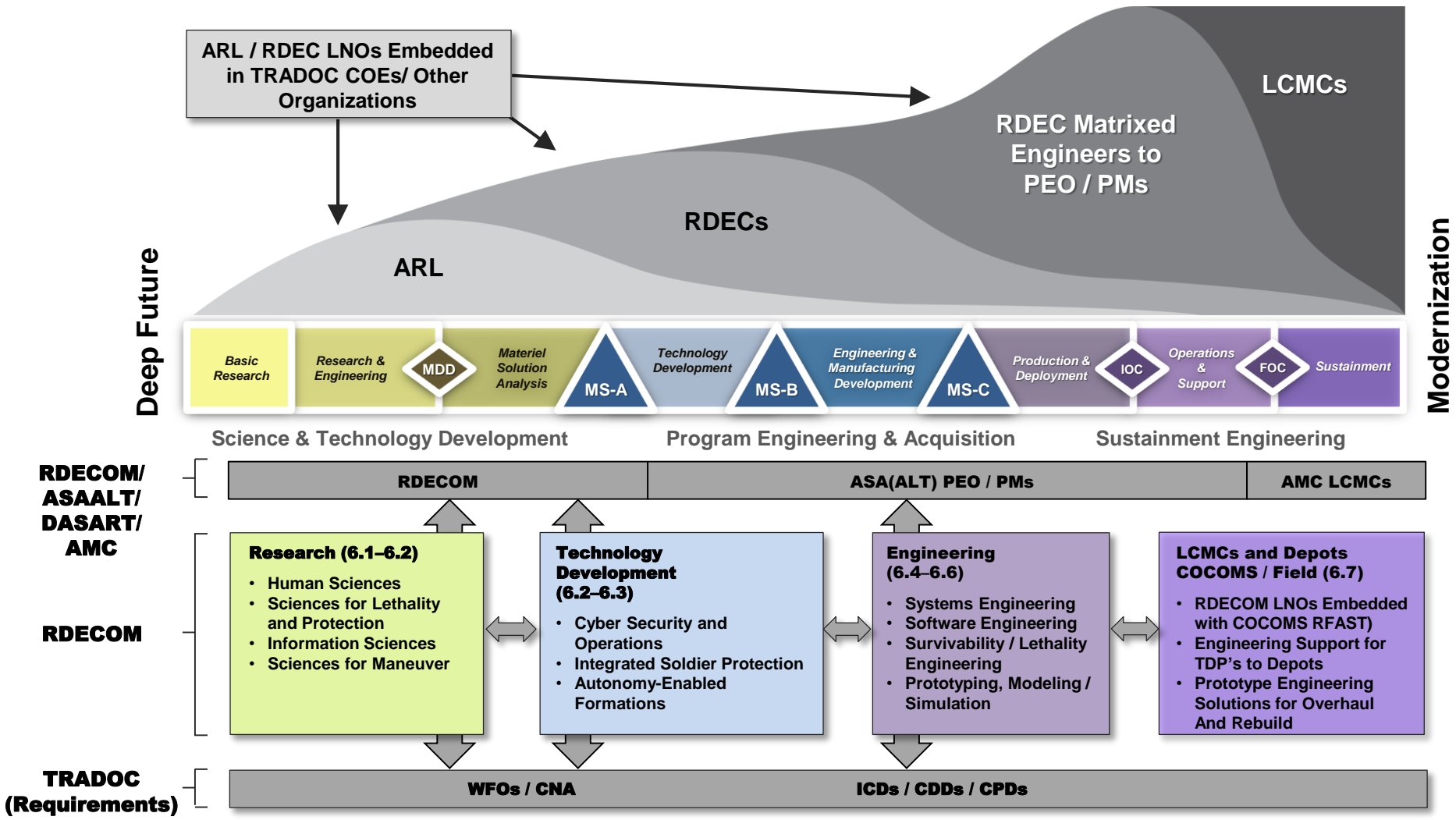


RDECOM integrates research, development and engineering for the Army

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The RDECOM Business Model



Engineering throughout the lifecycle is critical

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Army Priorities



Army Big 6+1 Capabilities

- A. Future Vertical Lift
- B. Combat Vehicles
- C. Cross Domain Fires
- D. Advance Protection
- E. Expeditionary Mission Command / Cyber Electromagnetic
- F. Robotics and Autonomous Systems (RAS)
- With a Cross Cutting Capability (+1) of:*
- G. Soldier / Team Performance and Overmatch



Army Modernization Challenges

- A. Force Protection
- B. Ease Overburden
- C. Timely Mission Command and Tactical Intelligence
- D. Reduce Logistics Burden
- E. Create Operational Overmatch
- F. Achieve Operational Maneuverability
- G. Operate in an CBNRE environment
- H. Early Detection of Traumatic Brain Injury
- I. Improve Operational Energy
- J. Improve Individual and Team training
- K. Reduce Lifecycle Cost



RDECOM Guidance From CSA

- A. Autonomy
- B. Megacities
- C. Subterranean
- D. Cyber
- E. Soldier Performance and Human Operations

Focusing on “Game Changing” technology to provide Decisive Overmatch on Future Battlefields

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Supporting the Army's Priorities



ARMAMENTS

Research, Development and Engineering Center (ARDEC)

- Fuse and Precision Armament Technology
- Cross Domain Fires

AVIATION AND MISSILE

Research, Development and Engineering Center (AMRDEC)

- Counter UAS
- Visualization
- Anti-Access / Area Denial
- Missile Defense

TANK AUTOMOTIVE

Research, Development and Engineering Center (TARDEC)

- Robotics / Autonomous Systems
- Combat Vehicles
- Advanced Protection System

ARMY RESEARCH LABORATORY (ARL)

- Advance Computing and Big Data
- Additive Manufacturing
- Nanotechnology

COMMUNICATIONS-ELECTRONICS

Research, Development and Engineering Center (CERDEC)

- Network
- Prioritize Position Navigation and Timing (PNT)

EDGEWOOD, CHEMICAL BIOLOGICAL CENTER (ECBC)

- Operation in CBRNE environment

NATICK SOLDIER

Research, Development and Engineering Center (NSRDEC)

- Soldier Performance Optimization
- Biological Technology
- Neuro-cognition

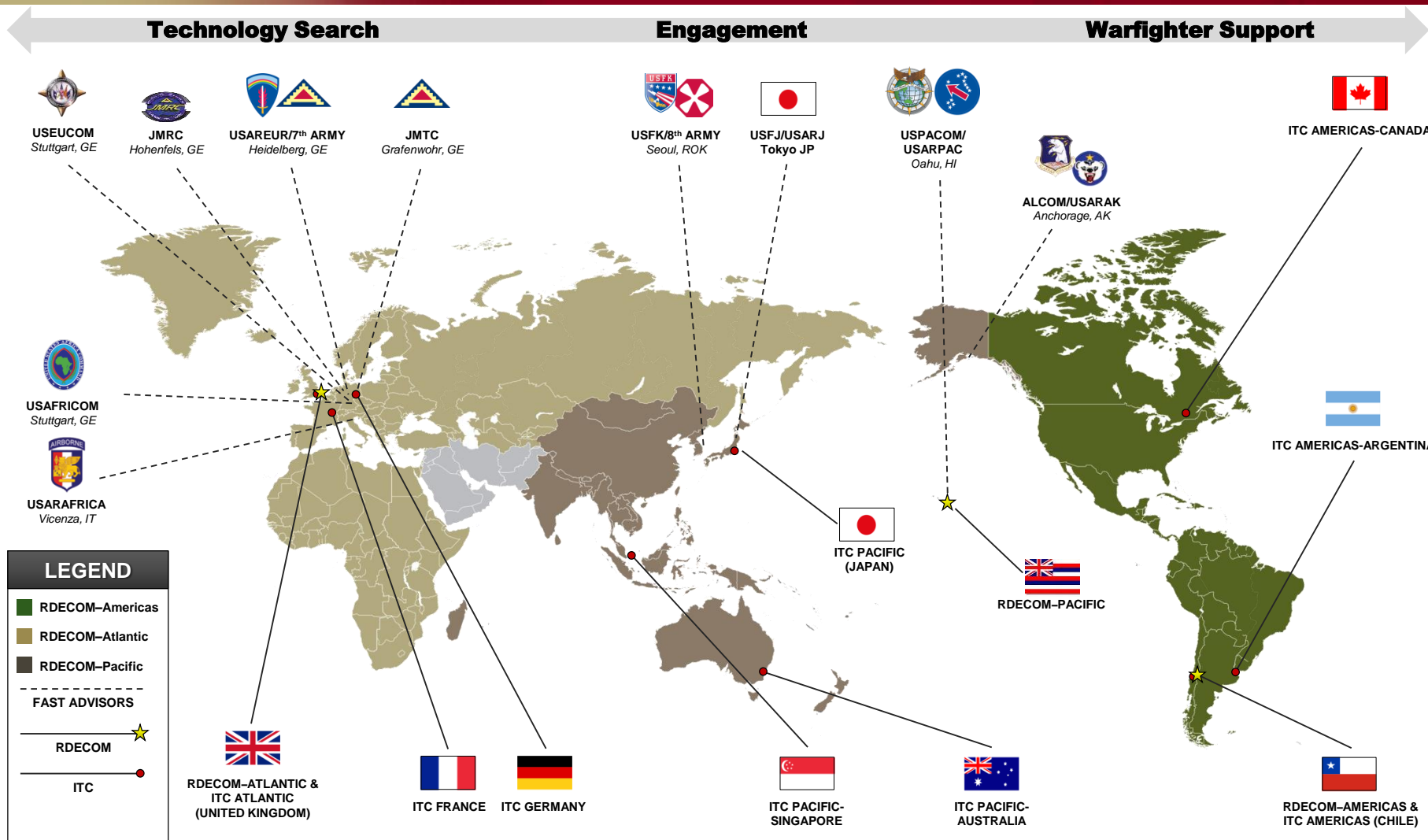


Delivering capabilities for the Army, joint warfighters, our Nation, and our Allies

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Where We Are – International



Driving innovation around the world with our allies and partners

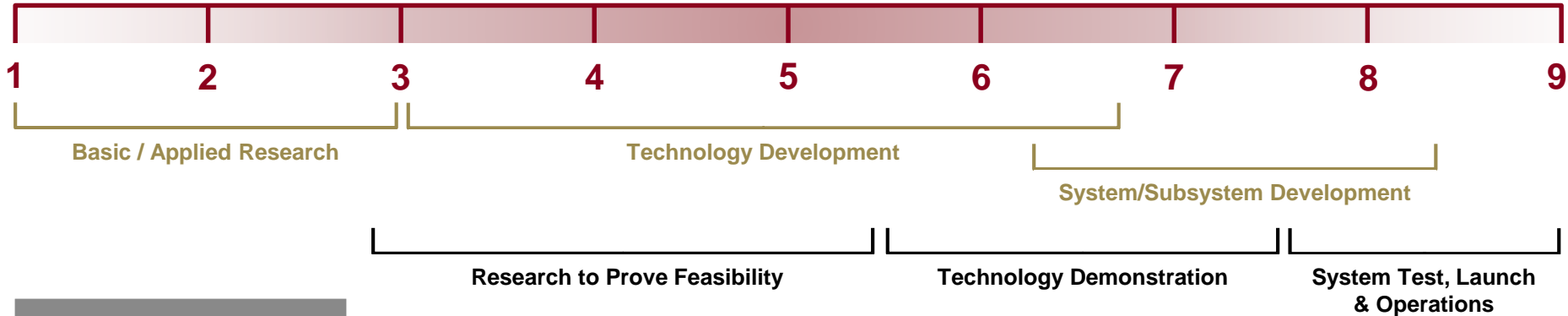
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International TRL Continuum



TECHNOLOGY READINESS LEVEL (TRL)



Academic Grants

Data / Information Exchange Annex

International Agreements

Engineer and Scientist Exchange Program

Foreign Technology Assessment Support

Coalition Warfare Program

Foreign Comparative Testing

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Engineer Scientist Exchange Program



ESEP is a professional development exchange program that provides career-broadening work assignments for U.S. government scientists and engineers in foreign defense establishments.

GOALS

- **Foster international collaboration and cooperation, build relationships, and leverage limited resources by avoiding duplication of research efforts between nations**

OBJECTIVES

- **Enhance bilateral RDT&E efforts**
- **Promotes future International and Bilateral collaborative efforts through harmonization, interoperability, and standardization**
- **Establish/continue valuable relationships/contacts in the R&D community**



Foreign Technology Assessment Support



The Foreign Technology Assessment Support Program enables the continued **identification, acquisition, and integration** of foreign technology solutions into U.S. Army programs.

The program provides funding to assess foreign products / technologies at TRL 1-6 which may offer a **unique and/or state-of-the-art** Science & Technology program opportunity.

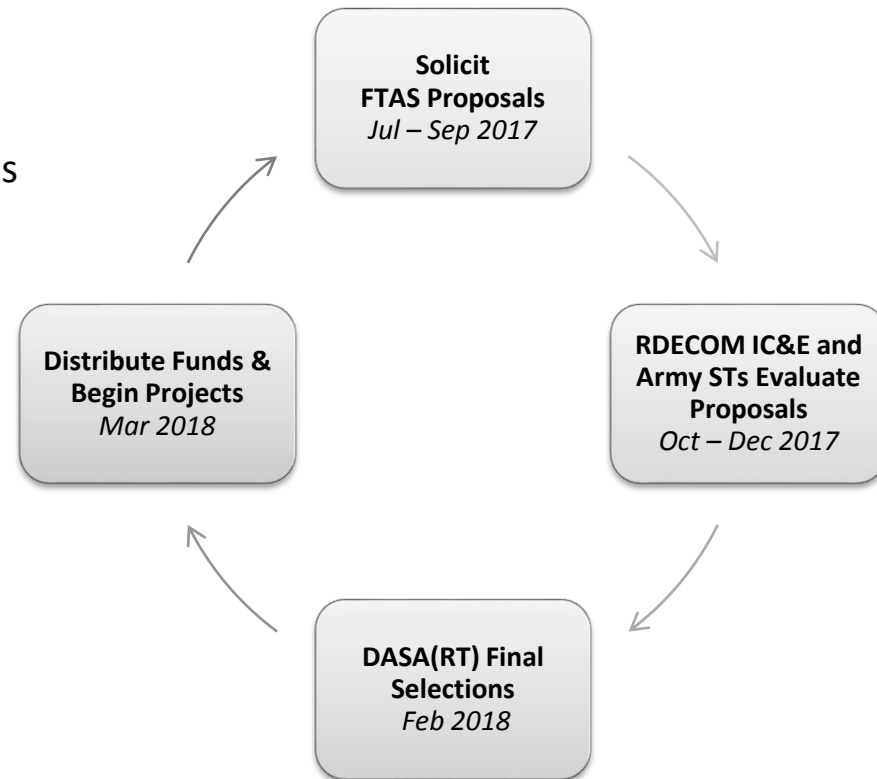
Products / technologies should provide the U.S. Army a **chance to accelerate** the development of a needed capability.

Successful FTAS projects have an opportunity to transition into CWP, FCT or ManTech Programs

Program Facts

- Open to Foreign Industry and Academia
- Open to all of U.S. Army
- One year projects; \$150K per project

FY18 Cycle





Foreign Comparative Testing



Typical Project Scope:

- OSD Funds 10 – 12 new projects / year
- \$600-800K/yr w/ an 18-24m duration
- TRL 7 is the average for all active OSD projects
- Army: 11 active programs with seven countries; Total OSD commitment \$14M

Selection Considerations:

OSD

- OSD Focus Areas / Priorities
- Joint Application
- Long Term Value
- Cost Avoidance

U.S. Army

- Procurement Strategy
- Program Office Support / Endorsement
- Risk (Cost/Schedule/Performance)
- Warfighting Challenges Alignment

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FY 2016 FCT Projects

Project	Description
Aerial Delivery Improvements for Underwater Mines	<ul style="list-style-type: none">• Demonstrate a Joint Direct Attack Munition (JDAM) compatible wing kit for aerial delivery of Naval underwater mines<ul style="list-style-type: none">• Provides a low-cost upgrade to enable accurate emplacement of legacy mines at significantly greater ranges
Airborne Lean Services Architecture	<ul style="list-style-type: none">• Evaluate software that uses a services oriented architecture based on published open standards to support Air Force Special Operations Command air-to-ground networks<ul style="list-style-type: none">• Enables affordable, flexible, and dynamic systems interoperability, automation, and security within and between tactical and operational nodes and platforms
Compact High Power Radio Frequency (HPRF) Technology for Vehicle/Vessel Stopping	<ul style="list-style-type: none">• Test commercial-off-the-shelf magnetron microwave tube, solid-state power modulator, and RF antenna technology with reduced size, weight, and power (SWaP) for military HPRF applications<ul style="list-style-type: none">• Reduces acquisition program timeline for delivering a new non-lethal, standoff, vehicle & vessel stopping capability
Evaluation of Towed Jumper Release System	<ul style="list-style-type: none">• Test an emergency parachute system for airborne static-line operations<ul style="list-style-type: none">• Mitigates 'towed jumper' scenarios, where an airborne soldier's parachute system malfunctions and is dragged behind an aircraft often resulting in serious injury or death

Win in a Complex World

Conceptualizing 2040 & Beyond: Materiel Solutions

