The Value of AMRDEC

TECHNOLOGY DRIVEN. WARFIGHTER FOCUSED.

2 Oct 2018
Deliver collaborative and innovative aviation and missile capabilities for responsive and cost-effective research, development and life cycle engineering solutions.
Who is AMRDEC?

~9,211
FY17 Strength

2,945
Civilian

16
Military

6,250
Contractor

907 / 5343
SETA  Non-SETA

Core Competencies

- Life Cycle Engineering
- Research, Technology Development and Demonstration
- Design and Modification
- Software Engineering
- Systems Integration
- Test and Evaluation
- Qualification
- Aerodynamics/Aeromechanics
- Structures
- Propulsion
- Guidance/Navigation
- Autonomy and Teaming
- Radio Frequency (RF) Technology
- Fire Control Radar Technology
- Image Processing
- Models and Simulation
- Cyber Security

FY17
$2,904M

6%
Aviation S&T

7%
Missile S&T

63%
Army

24%
Other
#1: Readiness
Provide aviation and missile systems solutions to ensure victory on the battlefield today.

#2: Future Force
Develop and mature Science and Technology to provide technical capability to our Army’s (and nation’s) aviation and missile systems.

#3: Soldiers and People
Develop the engineering talent to support both Science and Technology and the aviation and missile materiel enterprise.
Patriot Missions
- Provides verification that software meets all performance and reliability requirements by performing system, software and operation testing
- Maintains an interoperability test bed that is used to perform all PATRIOT Joint Tactical Data Link Certification testing

Corrosion Mitigation
- Developing new procedures and techniques to combat corrosion on aircraft and missile platforms, ground support equipment and parts and components in storage facilities

Aviation and Missile Composites
- On-site fabrication capabilities ensure aviation and missile structures are built and tested to the requirements demanded by the Army's combat environments

UH-60V
- Features a digital cockpit that updates legacy analog gauges
- Similar to UH-60M Pilot Vehicle Interface
- Meets Global Air Traffic Management requirements
Airworthiness

- Safely attain, sustain, and complete flight in accordance with approved usage limits

- Deliver responsive airworthiness solutions throughout the system life cycle

Modular Missile Technologies (MMT)

- Based on a Modular Open Systems Architecture for guided missiles

- Consists of two different airframe types: a canard-controlled forward firing missile and a tail-controlled drop/glide munition

Simulations, Trainers, & Integration Labs

- New methods include creating a PVI that closely replicates the actual aircraft

- Optimal mix of tactical and simulated hardware to keep trainers concurrent with aircraft

Lethal Miniature Aerial Missile System (LMAMS)

- Soldier-carried, Soldier-launched precision weapon system

- Allows precision engagement of enemy combatants without exposing the Warfighter to direct enemy fire
Extension of Range and Endurance
- Fly faster and farther
- Support all FVL initiative capabilities
- Carry more payload
- Demonstrate transformational vertical lift capabilities

Operations in Degraded Visual Environments (DVE)
- Operate in complex environments
  - Pilotage in all DVE’s
  - 360° situational awareness (SA)
  - Multi-functionality
  - Multi-spectral

Sustainability, Maintainability, Reduced Logistics Footprint
- Ultra-reliable designs
- Zero maintenance concept
- Reduced Maintenance burden

Future Tactical UAS Demo
- Mature autonomous capabilities
- Refine the interface between pilot and aircraft
- Advanced UAS engine concepts

Advance Engine & Drive Technologies
- Multi-speed transmission
- Move beyond traditional turbo-shaft engine architecture
### AMRDEC Top Missile S&T Initiatives

#### CAPABILITY AREA

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“You can only deter your opponent if your opponent believes that you have the will and the capability…readiness has a deterrent value, as well as a war-fighting value.”

Gen. Mark A. Milley, Chief of Staff of the Army
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