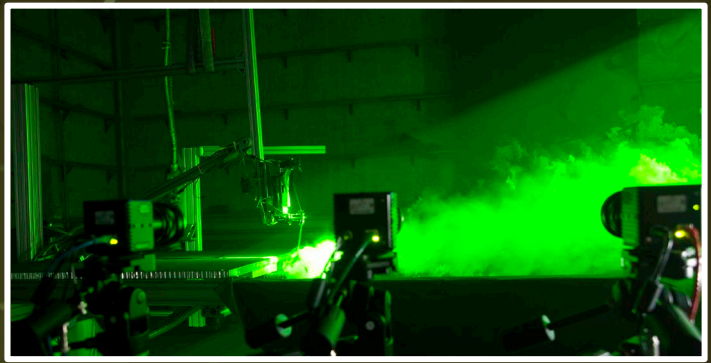
U.S. ARMY COMBAT CAPABILITIES DEVELOPMENT COMMAND AVIATION & MISSILE CENTER

Overview Brief

Ms. Christi Dolbeer

Director, Technology Development, DEVCOM Aviation & Missile Center

OUR MISSION



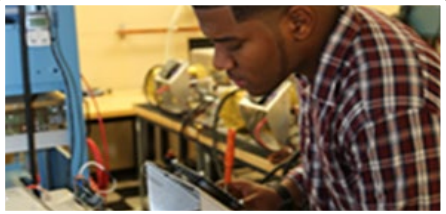
Develop, **integrate**, **demonstrate**, and **sustain** aviation and missile systems capabilities to support modernization priorities and improve readiness.

AvMC TECHNOLOGY

EXPERTISE • ENGINEERING • TALENT

1.

Develop and integrate next generation technologies to ensure aviation and missile dominance.



2.

Provide world class functional engineering expertise to our PEOs, MDA, RCCTO, and other critical partners.

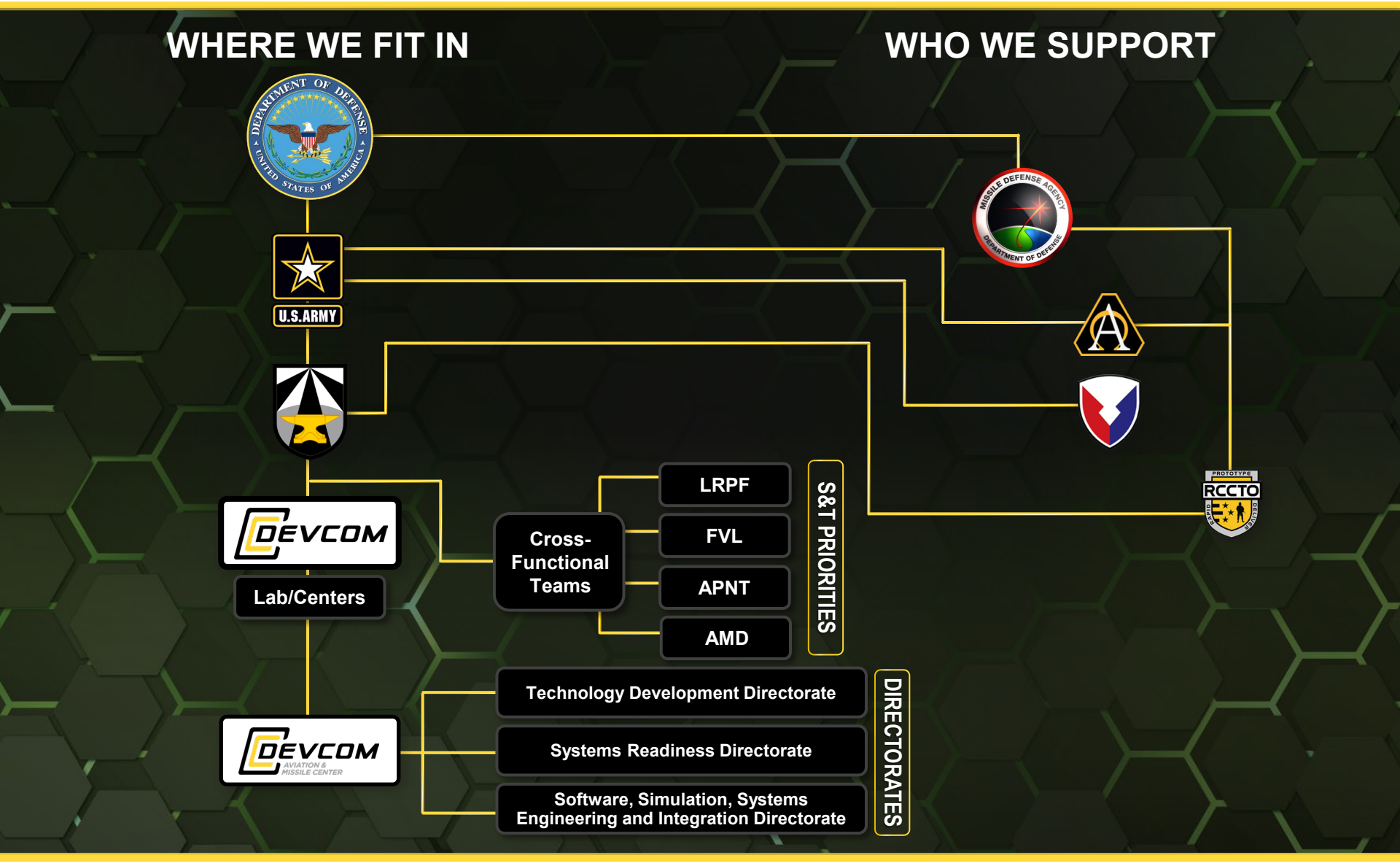
3.

Provide world class sustainment engineering expertise to our AMCOM partners.

4.

Recruit and develop the engineering talent to achieve areas 1-3.

WHERE WE FIT IN



OUR LEADERSHIP TEAM

Director
Mr. Jeffrey Langhout
(SES)

Chief of Staff
Mr. Steve Fisher

MILDEP
COL Steve Ansley

Systems Readiness Directorate
Mr. Keith Darrow
(SES)

Software, Simulation, Systems Engineering and Integration Directorate
Dr. James Kirsch
(SES)

Technology Development Directorate
Ms. Christi Dolbeer
(SES)

Scientific & Technical Positions (STs)

Radio Frequency Sensors
Dr. Brian Smith

Protective Technologies
Dr. Donna Joyce

Airvehicle Aerodynamics & Preliminary Design
Dr. Mahendra Bhagwat

Rotorcraft Flight Dynamics and Control
Dr. Jeffery Lusardi

BY THE NUMBERS

12,354
FY22 Strength

3,033
Civilian

19
Military

~9,302
Contractor

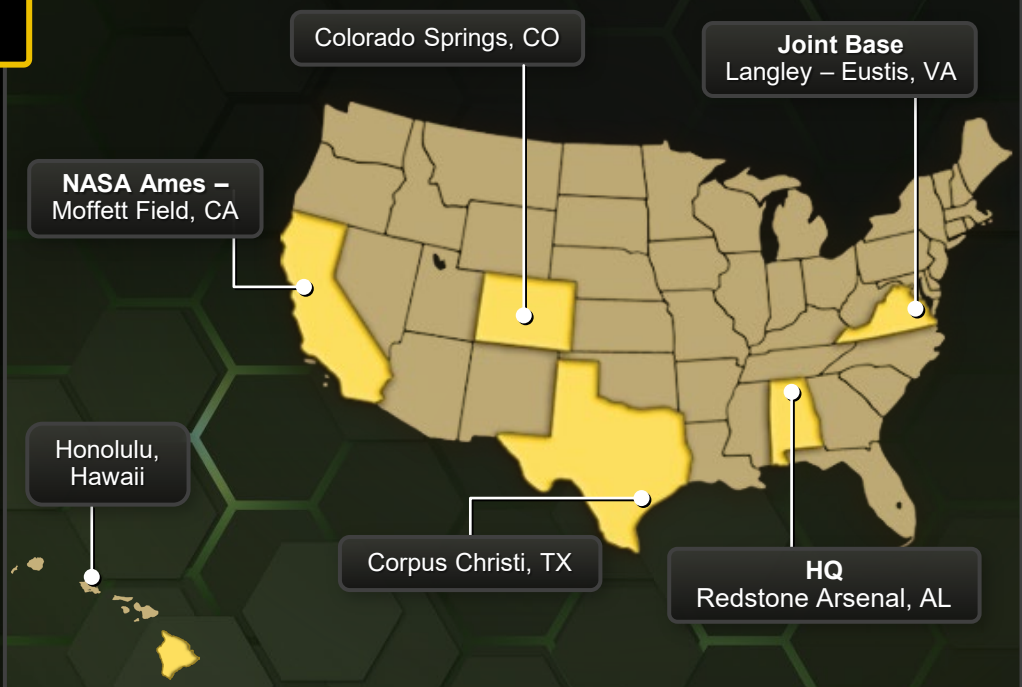
FY22 Funding
$4.5B

6%
Aviation S&T

4%
Missile S&T

66%
Army

24%
Other



CORE COMPETENCIES

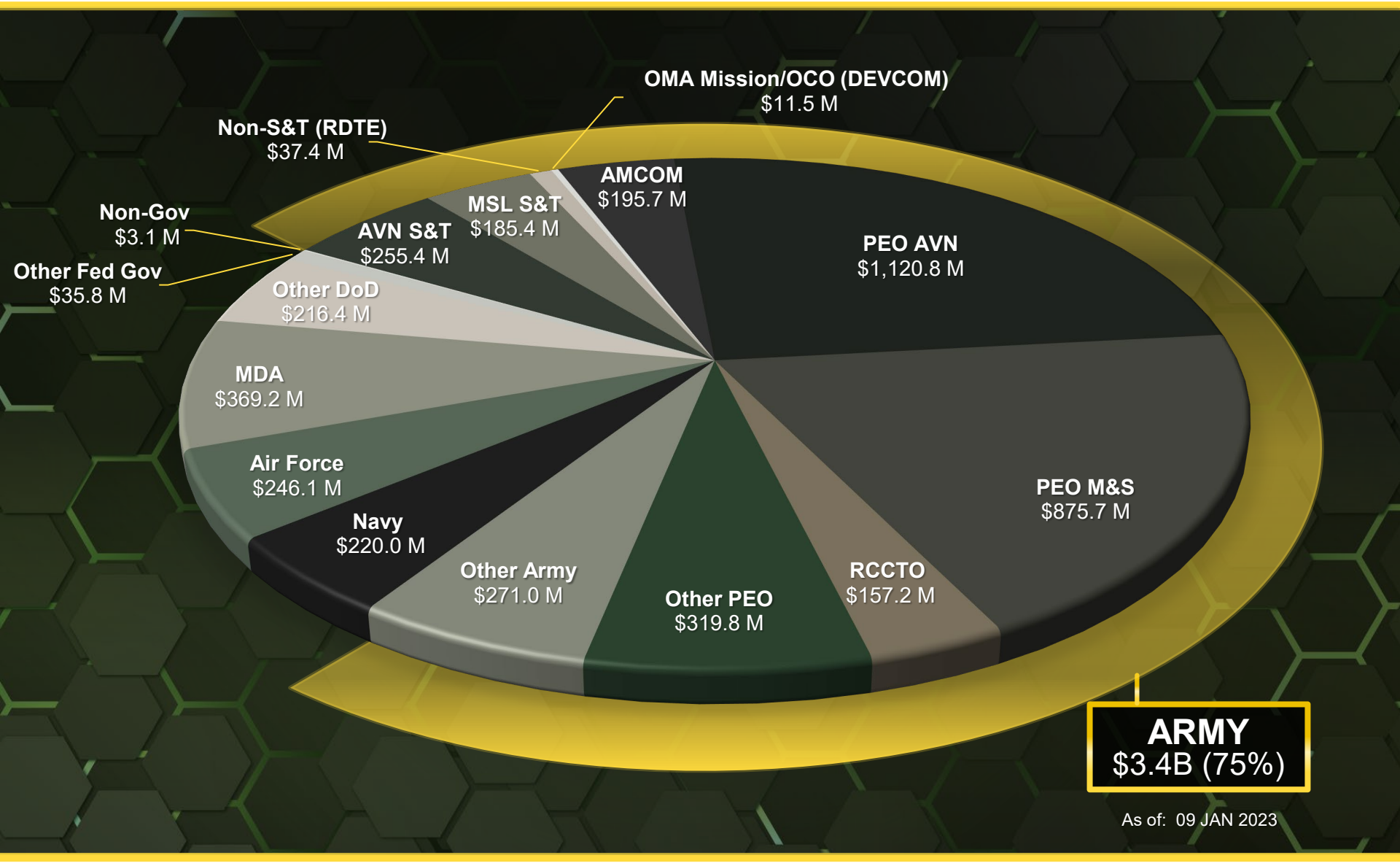
SCIENCE AND TECHNOLOGY:

- Missile Seekers, Guidance, Navigation and Control
- Missile Materials and Structures
- Missile Propulsion, Warhead Integration, and Fuzing
- Aviation Platforms and Air Mobility
- Aviation Autonomy, Teaming, Avionics and Survivability
- Air Defense Radar and Fire Control

LIFE CYCLE ENGINEERING:

- Airworthiness
- Product Performance
- Modeling and Simulation
- Multidiscipline Acquisition and Project Engineering
- Prototype Design and Development
- Software Engineering
- Systems Engineering, Integration, and Interoperability
- Weapons Assurance

FY22 TOTAL REVENUE ($4.5B)



As of: 09 JAN 2023

UNIQUE FACILITIES AT REDSTONE

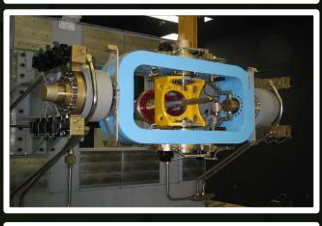
REGIONALLY MANAGED – GLOBALLY EXECUTED

OVER 1.6 MILLION SQUARE FEET IN LAB SPACE

McMorrow Labs
DEVCOM AvMC HQ

Software Engineering

Accredited Level 4 SEI, Software and Systems Development and Sustainment Organization



Guidance Integration Facility

Systems Functional Integration, Flight Hardware Component Verification

Prototype Integration Facility

Rapid Response for Warfighter Solutions

Weapon Sciences

Basic and Applied Research in Microfabrication and Nanotechnology

Russell Tower

300-foot Tall Facility for Sensor/ Seeker Development and Signature Measurements

Automatic Test Equipment

Engineering and Sustainment Support of Fielded Automated Test & Diagnostic Systems

Component Development

Sensors, Seekers, Guidance, Navigation, and Control Development, Measurement and Processing

Advanced Prototype Experimentation

Warfighter-in-the-Loop Simulation Facilities for Missile, Aviation and Unmanned Systems

Hardware-in-the-Loop

Missile Component Simulation in Real-world EM Environments – Infrared, Millimeter Wave and Multi-spectral

Propulsion & Structures

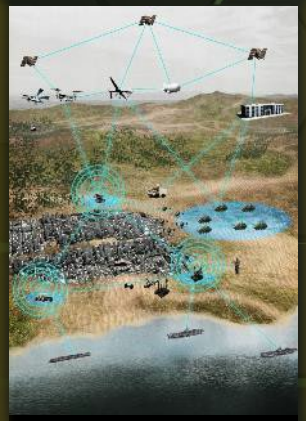
Energetics Development and Enhanced Lethality

S&T PRIORITIES ALIGNED WITH THE ARMY MODERNIZATION STRATEGY

LONG RANGE PRECISION FIRES

NEXT GENERATION COMBAT VEHICLE

FUTURE VERTICAL LIFT



ARMY NETWORK

AIR & MISSILE DEFENSE

SOLDIER LETHALITY

SUPPORTING ARMY AND JOINT READINESS NOW AND IN THE FUTURE MDO ENVIRONMENT

RESEARCH IN SUPPORT OF FUTURE FORCE

Driving the discoveries and innovations which will be critical to realizing new capabilities for the Army of 2030 and beyond.

ANALYSIS

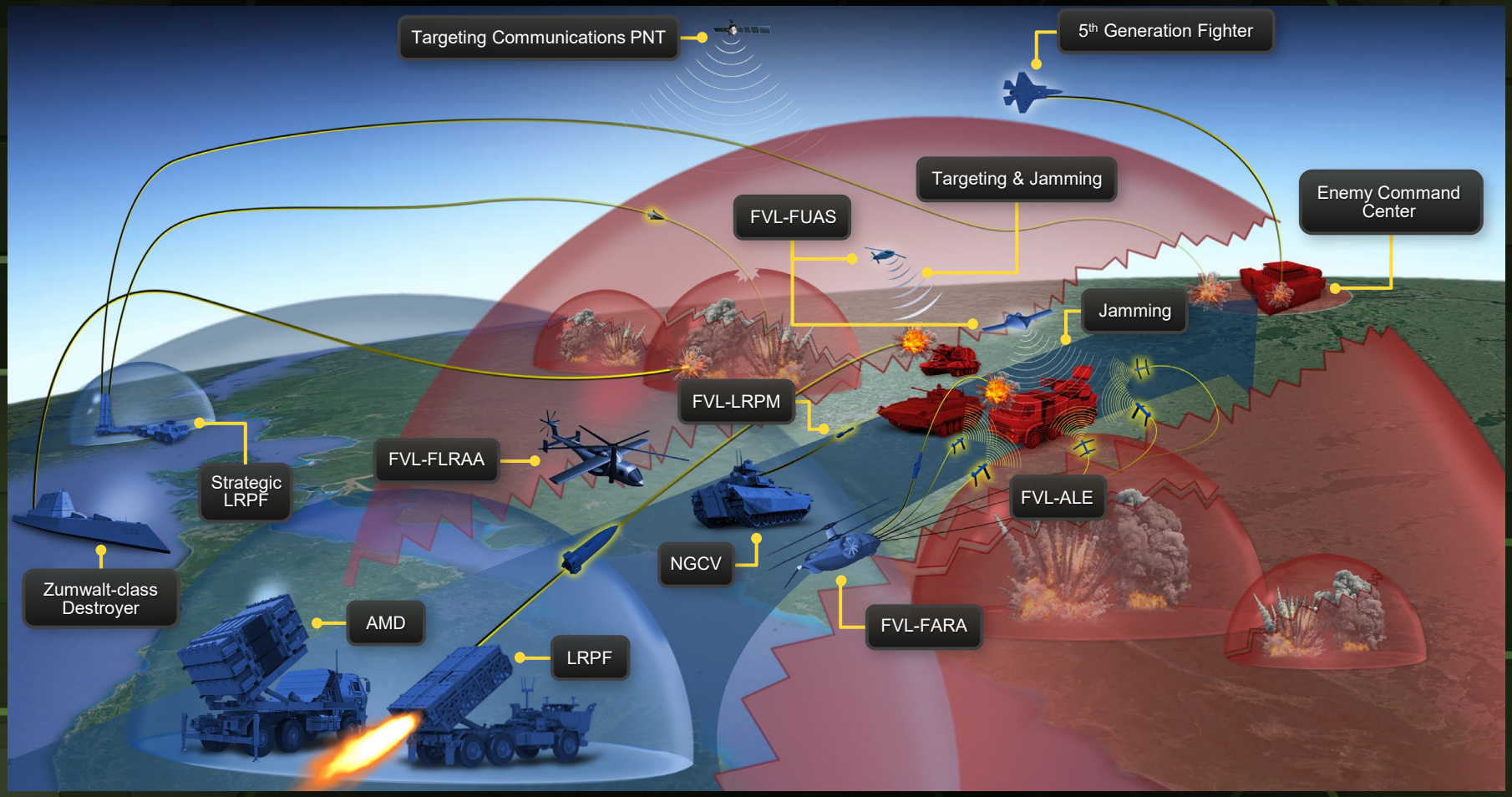
Conducting objective experimentation and systems analysis to support the equipping and sustaining of our Warfighters.

ENGINEERING

Providing life cycle engineering expertise to support fleet development and readiness across warfighting battlefield operating systems.

S&T STRATEGY

BREAK THE ENEMY'S BUBBLE | **PROTECT OUR FORCE** | **ON THE MOVE**



ELIMINATE A2/AD AT ALL ECHELONS | **REACH, RANGE, AND SPEED** | **AGILE MANEUVER TO CONTACT**

AVIATION S&T ALIGNMENT TO ARMY MODERNIZATION PRIORITIES

BREAK THE BUBBLE **PROTECT THE FORCE** **ON THE MOVE**

FUTURE VERTICAL LIFT (FVL) MODERNIZATION LINES OF EFFORT

FUTURE ATTACK RECONNAISSANCE AIRCRAFT (FARA)

PM FARA

- Holistic Team Survivability
- Adaptive & Resilient Tactical Autonomy Controls & Structures
- Advanced Rotorcraft Armament and Protection System (*ARAPS*) & FVL Radar

FUTURE LONG RANGE ASSAULT AIRCRAFT (FLRAA)

PM FLRAA

- Power & Thermal Management
- FVL Medical
- Alternative Concept Engine (*ACE*)
- Next Generation Rotorcraft Transmission

FUTURE UNMANNED AIRCRAFT SYSTEMS (FUAS)

PM UAS

- Air Launched Effects (*ALE*)
- Multi-Role Small Guided Missile (*MRSGM*)
- High Speed Maneuverable Missile (*HSMM*)
- Unmanned Aerial System Survivability

MODULAR OPEN SYSTEMS APPROACH (MOSA)

PM AMSA / PM ASE

- Advanced Teaming
- Integrated Mission Equipment (*IME*)
- Holistic Situational Awareness and Decision Making (*HAS-DM*)
- Full-Spectrum Targeting
- Convergence Battlefield Integration

Program Executive Office – Aviation

Aviation Center of Excellence

MISSILE S&T ALIGNMENT TO ARMY MODERNIZATION PRIORITIES

BREAK THE BUBBLE **PROTECT THE FORCE** **ON THE MOVE**

ARMY MODERNIZATION PRIORITIES

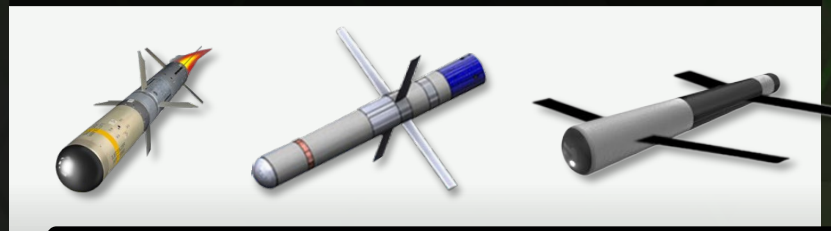
Fires Center of Excellence

FIRE SUPPORT CAPABILITY AREA
LONG RANGE PRECISION FIRES
- Strategic and Operational Rockets and Missiles (*STORM*)

AIR DEFENSE CAPABILITY AREA
AIR & MISSILE DEFENSE
- Short and Intermediate Effectors for Layered Defense (*SHIELD*)
- Search, Track, Acquire, Radiate, and Eliminate (*STARE*)
- Integrated Fires Mission Command (*IFMC*)

Maneuver Center of Excellence
Aviation Center of Excellence

CLOSE COMBAT CAPABILITY AREA
NEXT GENERATION COMBAT VEHICLE
- Tactical Aviation and Ground Munitions (*TAGM*)



CLOSE COMBAT CAPABILITY AREA
FUTURE VERTICAL LIFT
- Tactical Aviation and Ground Munitions (*TAGM*)

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