



*Presented to:*  
**NDIA Fuze Conference**  
**2014**

## ***AMRDEC Fuzing Activities***

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***TECHNOLOGY DRIVEN. WARFIGHTER FOCUSED.***

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**MISSION:**

**Deliver collaborative and innovative technical capabilities for responsive and cost-effective research, product development, and life-cycle systems engineering solutions**

**Who We Are:**

- Government ~ 3,107
- Military - 21
- Contractors ~ 6,468
- PhDs - 131
- Masters - 1,024
- 17 University/College Professors
- 2 Senior Research Scientists

**What We Do:**

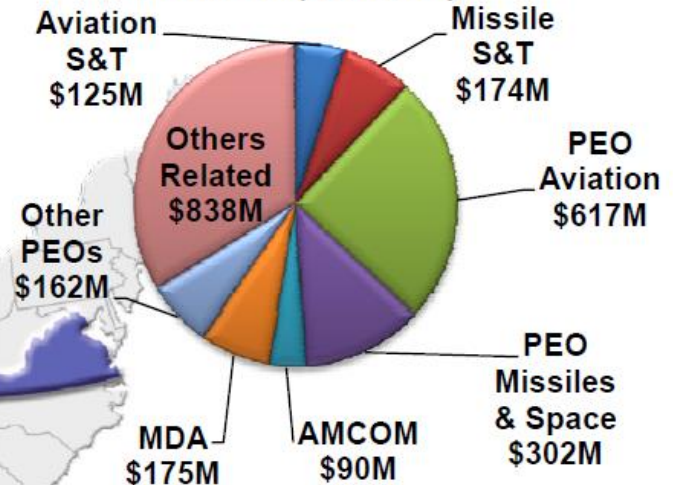
- Basic and Applied Research
- Technology Development
- Future Systems Development
- Fielded Systems Support
- Rapid Prototyping
- Obsolescence Management
- Technology Refresh



As of 15 JAN 14

**Who We Support:**

**FY13 Final (\$2,483M)**



**What We Manage:**

- FY14 Funding > \$2.4B
- Over 2.6M square feet in RDTE space
- 266 Facilities-Redstone and Offsite
- Additional unique test facilities and wind tunnels across US



**Expert engineering and laboratory capabilities to develop, transition, and sustain technology solutions for a wide variety of DoD customers**

### SCIENCE & TECHNOLOGY PROGRAMS

- Precision Navigation and Timing
- Missile Seekers
- Rocket and Turbine Propulsion
- Air Defense
- Vehicle Active Protection
- Fire Control Air Defense Radar Technology
- Target Acquisition Systems
- Aerodynamics and Structures
- Platform and Weapons Systems Integration
- Missile Condition Based Maintenance
- Manufacturing Technology
- AMCOM Corrosion Program

- ❖ TECHNOLOGIES
- ❖ SMART BUYERS
- ❖ SKILLED PERSONNEL
- ❖ LEVERAGED FACILITIES

- ❖ REAL WORLD NEEDS
- ❖ UNFORESEEABLE REQUIREMENTS
- ❖ TRANSITION OPPORTUNITIES
- ❖ LEVERAGED FACILITIES

**85% OF ALL REVENUES**

- Life Cycle Systems Engineering
- Software Engineering - *Accredited Level 4 CMM*
- High-Fidelity System Level Simulations
- Independent Product / Process Assessment
- Airworthiness Qualification and Release Authority
- Sustainment Engineering Support
- Rapid Prototype Engineering / Integration
- Production / Quality / Reliability Engineering
- AMCOM Corrosion Program
- Technical / Acquisition Management

### ENGINEERING SERVICES



**AMRDEC'S S&T WORK BUILDS THE BASE FOR ENGINEERING SERVICES**

**— THESE TWO SIDES WORK HAND IN HAND TO BUILD KNOWLEDGE AND EXPERTISE —**

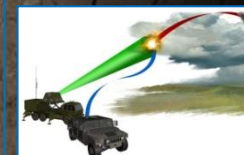
## FOSTER INNOVATION AND ACCELERATE/MATURE TECHNOLOGY TO ENABLE FUTURE FORCE CAPABILITIES WHILE EXPLOITING OPPORTUNITIES TO RAPIDLY TRANSITION TECHNOLOGY TO THE CURRENT FORCE

### CURRENT FORCE



ENABLING THE FUTURE FORCE

### FUTURE FORCE



ENHANCING THE CURRENT FORCE

## GROUND DOMAIN

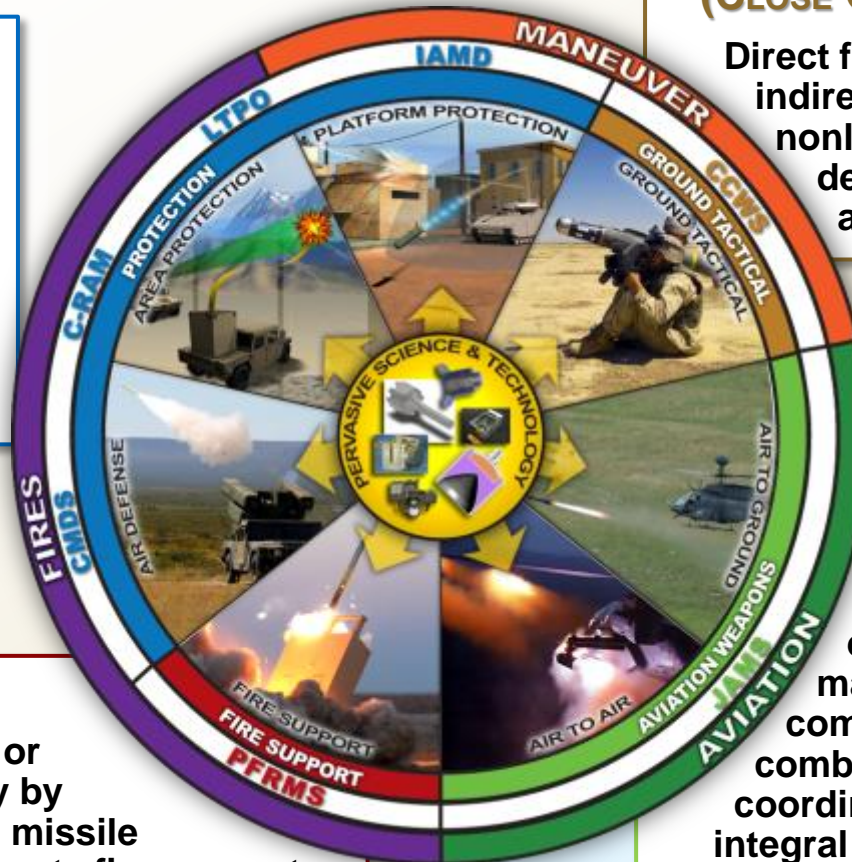
### PROTECTION

Protect the force and selected geopolitical assets from aerial attack, missile attack and surveillance

- Air Defense
- Area Protection
- Platform Protection

### GROUND TACTICAL (CLOSE COMBAT)

Direct fire weapons, supported by indirect fire, air-delivered fires, and nonlethal engagement means to decide the outcome of battles and engagements



### FIRE SUPPORT

Destroy, neutralize, or suppress the enemy by cannon, rocket, and missile fire and to help integrate fire support assets into combined arms operations

### AVIATION WEAPONS

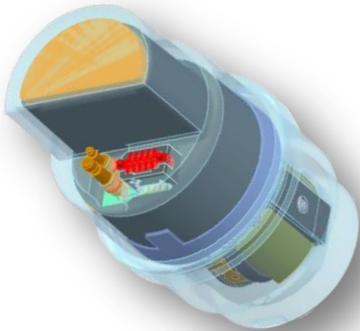
Find, fix, and destroy the enemy through fire and maneuver; and to provide combat, combat service and combat service support in coordinated operations as an integral member of the combined arms team

AIR DOMAIN

TECHNOLOGY DRIVEN. WARFIGHTER FOCUSED.

	NEAR-TERM	MID-TERM	FAR-TERM
<p><b>GROUND TACTICAL</b></p>	<p>LETHAL MINIATURE AERIAL MUNITION SYSTEM (LMAMS) <i>SOPM, DFP &amp; cUAS</i></p>	<p>CLOSE COMBAT MSL MODERNIZATION</p>	<p>FUTURE CLOSE COMBAT MISSILE</p>
<p><b>PROTECTION</b></p>	<p>AIR DEFENSE</p>	<p>LOW-COST EXTENDED-RANGE AIR DEFENSE (LOWER-AD)</p>	<p>PLATFORM PROTECTION</p>
<p><b>FIRE SUPPORT</b></p>	<p>TAIL CONTROL GMLRS</p>	<p>LOW-COST TACTICAL EXTENDED RANGE MISSILE</p>	<p>HIGHLY MANEUVERABLE FIELD ARTILLERY</p>
<p><b>AVIATION WEAPONS</b></p>	<p>HELLFIRE+ TECHNOLOGY INSERTION</p>	<p>MMT LIGHTWEIGHT MULTI-ROLE</p>	<p>MINIATURE HIT-TO-KILL</p>

## Electromechanical Fuzes



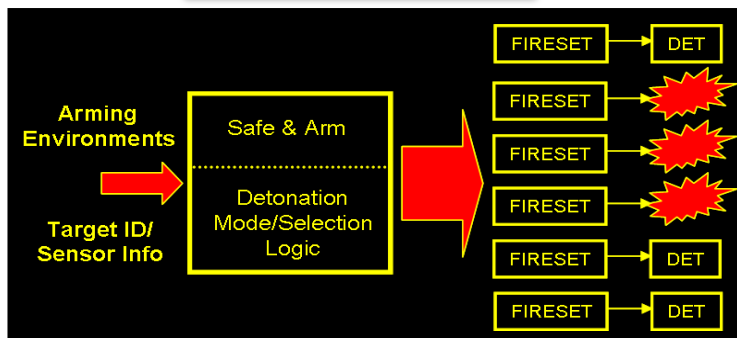
## Electronic Fuzes



## Rocket Motor ISDs



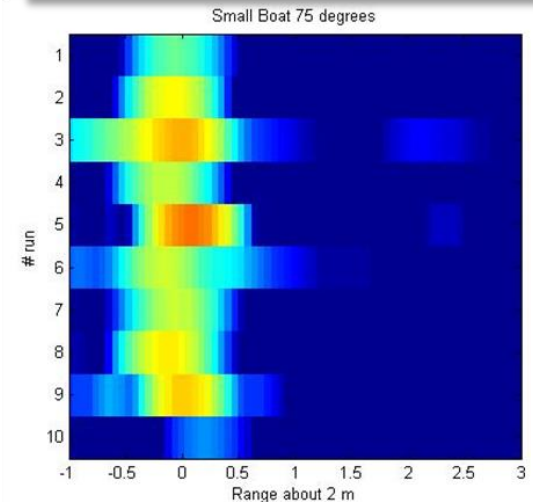
## Tailorable Effects



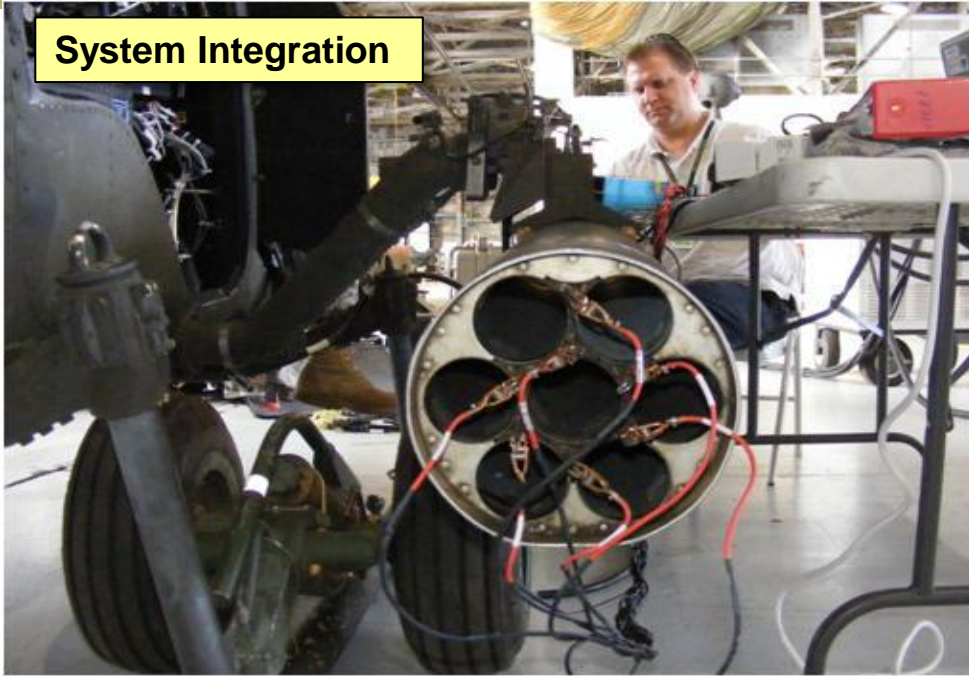
## Shock-Survivability



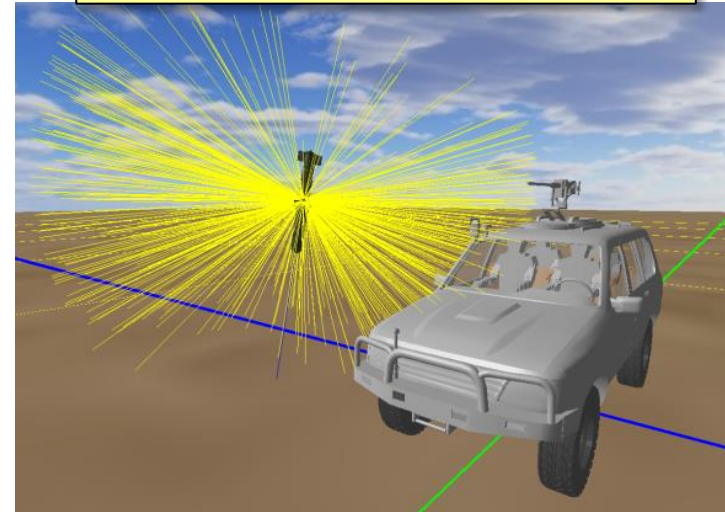
## Laser Prox Development & RF Prox Integration



## System Integration



## Endgame Analysis Support



## Test Hardware Development



### Plus a variety of engineering services:

- Independent technical analysis & program support
- Fuze & ISD safety certification process support
- FESWG
- DoD Fuze IPT
- JFTP and JMP (TCG X)
- Source Selection Evaluation Boards
- Failure Review Boards
- Prime & supplier ECP reviews
- Hazard Analysis Working Groups / Test Readiness Reviews



