



INNOVATION
THROUGH
COLLABORATION

DOTC ENTERPRISE UPDATE

Mr. Donald A. Geiss Jr.
DOTC Program Director
Phone: (973) 724-3386
Email: donald.a.geiss.civ@mail.mil

Mr. Charlie Zisette
NAC Executive Director
Phone: (540) 239-0762
Email: ED@nac-dotc.org



Presentation to:
NDIA Armament Systems Forum
02 May 2017



OUTLINE

- Use of OTA
- DOTC Enterprise
- DOTC FY18 Scope & Technology Areas
- Innovative New Process
- Value Proposition





OTHER TRANSACTION AGREEMENT

- OTA is not part of the FAR. It is not a CRADA, Cooperative Agreement, grant, or a standard procurement...
 - **10 U.S. Code 2371**
- (a) Additional Forms of Transactions Authorized.—
The Secretary of Defense and the Secretary of each military department may enter into transactions (other than contracts, cooperative agreements, and grants) under the authority of this subsection in carrying out basic, applied, and advanced research projects. ***The authority under this subsection is in addition to authority*** provided in section 2358 of this title ***to use contracts***, cooperative agreements, and grants in carrying out such projects.



WHAT IS A PROTOTYPE OTA?

A Section 815 OTA Is:

- For **prototype** projects that are directly relevant to “mission effectiveness of personnel, platforms, systems, components or materials”
- A legally binding instrument encouraging traditional and nontraditional defense contractor participation
- An instrument that allows for negotiation of intellectual property and flexible payment provisions (payable milestones)
- Customizable to fit desired acquisition strategy



TWO CONSORTIA-ONE ENTERPRISE

- The National Armaments Consortium (NAC) is a consortium of 525+ organizations encompassing large, medium, and small businesses and academia, including traditional and non-traditional performers in the armaments community.
- The NAC is in a long and very successful partnership with the DoD Ordnance Technology Consortium (DOTC), an OSD chartered consortium made up of DoD's RDT&E organizations.
- Together, NAC and DOTC constitute an enterprise executing approximately \$1.2B in prototyping across a broad portfolio of 12 armaments technology areas.
- In order to streamline acquisition, reduce time to fielding, innovate technologies, and maximize collaboration between the DOD and the armaments industrial base, the Enterprise uses 10 USC 2371b - Other Transaction Agreements.
- The mission is to lead the Armaments Community in collaborating and fielding innovation to support the Nation and its warfighters.



THE DOTC ENTERPRISE

DoD Ordnance Community



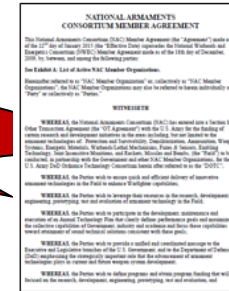
OSD Charter

Overarching Agreement for Prototype Other Transactions



DOTC OTA

National Armaments Consortium



NAC CMA



- OUSD (AT&L) LW&M
- Department of The Army
- Department of the Navy
- Department of the Air Force
- Special Operations Command
- DARPA
- DTRA
- Other Agencies and Departments

- Defense Contractors
- Small Businesses
- Academic Institutions
- Non Profit Organizations
- Not -for-Profit Organizations
- Non-Traditional Defense Contractors

The DOTC Consortium... Partnership to Accelerate Warfighter Superiority


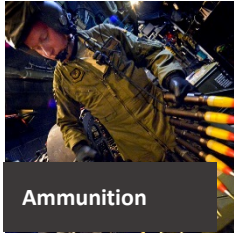

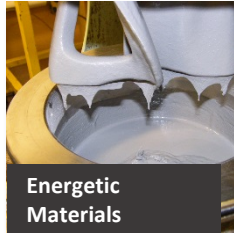







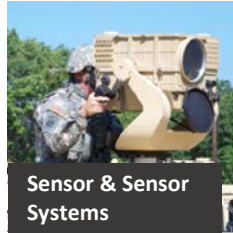


“ORDNANCE” DEFINED

Directly Relevant to Ordnance

“Ordnance” is the ammunition, armaments, munitions, weapons, systems and related military materiel such as equipment and components that enables the military to achieve combat and mission effectiveness in all warfare environments: air, land, sea, undersea and space. Ordnance to support all of the warfare environments is further defined in the below technology areas:

DOTC Technology Objective Areas


 <p>Warheads Lethal Mechanisms</p>	 <p>Ammunition</p>	 <p>Rockets, Missiles & Bombs</p>	 <p>Energetic Materials</p>	 <p>Demilitarization</p>	 <p>Directed Energy Warfare Systems</p>
 <p>Enabling Technologies</p>	 <p>Protection & Survivability</p>	 <p>Joint Insensitive Munitions</p>	 <p>Weapon Systems</p>	 <p>Fuzes</p>	 <p>Sensor & Sensor Systems</p>



DOTC TECHNOLOGY AREAS – FY18

- Small Caliber
- Medium Caliber
- Large Caliber
- Non-Lethal Ammo
- Mortars
- Grenades
- Logistics
- Other

Ammunition (AMM)




- Disassembly of Munitions
- Munitions Recycle, Recovery, and Re-Use
- Munitions Destruction and Final Disposition
- Removal of Energetic Materials from Munitions
- Waste Stream Treatment
- Disposal Logistics
- Other

Demilitarization (DEM)




- High Energy Lasers
- Electro-optic
- Radio Frequency
- Multispectral
- Magnetism
- Acoustic
- Particle Beam, Thermal and other Energy modalities
- Prime/Pulse Power
- Beam Forming
- Directed Energy Weaponization
- Other

Directed Energy Warfare (DEW)



- Materials
- Manufacturing and Process Technologies
- Modeling and Simulation and Virtual Prototyping
- Precision Guidance
- Power Sources
- Weaponization
- Autonomous Systems
- Soldier and Soldier Weapon Performance
- Other

Enabling Technologies (ENT)



- Explosives
- Propellants
- Pyrotechnics
- Ingredients
- Additive Manufacturing for Energetic Materials
- Other

Energetic Materials (ENR)




- Hard Target Fuzing Technologies
- Tailorable Effects Fuze Technologies
- High Reliability Fuze Technologies
- Enabling Fuze Technologies
- Safe & Arm Fuzes
- MEMS
- Fuze Producibility
- High G-Force
- Fuze Sensors
- Other

Fuzes (FUZ)



- High Performance Missile Propulsion
- Minimum Signature Missile Propulsion
- Blast Fragment Warheads
- Anti-Armor Warheads
- Gun Propulsion
- System Level Demonstration

Joint Insensitive Munitions (JIM)




- Threat Detection and Tracking
- Countermeasures, Counter Countermeasures & Anti-Tamper
- IED Detection and Destruction Technology
- Explosive Ordnance Disposal
- Armament Survivability
- Equipment Survivability
- Demolitions
- Active and Passive Armors
- Other

Protection & Survivability (PAS)




- Air-to-Air
- Air-to-Surface
- Surface-to-Air
- Surface-to-Surface
- Shoulder Launched
- Other

Rockets, Missiles, and Bombs (RMB)




- Multispectral
- Data Processing and Data Links
- Tactical Cyber
- Electronic Warfare
- GPS Denied
- Intelligence, Surveillance and Reconnaissance
- Command, Control and Networking
- Other

Sensors & Sensor Systems (SSS)




- Shaped Charge, Explosively Formed Penetrator
- Kinetic Energy
- Multipurpose
- Unitary
- Other

Warheads/Lethal Mechanisms (WLM)



- Small Caliber
- Grenade Launchers
- Medium Caliber Cannons
- Mortars
- Large Caliber Artillery
- Non-lethal Weapons
- Mechanisms & Effects
- Fire Control
- Accessories
- Electric Weapons
- Area Denial
- Other

Weapon Systems (WPN)





FY 18 INITIATIVES & FUNDING SUMMARY

TECHNOLOGY OBJECTIVES	# OF SUB-OBJECTIVES	CONFIDENCE LEVEL (\$M)			TOTAL \$M
		1	2	3	
AMM	29	\$54.45	\$91.72	\$66.80	\$212.97
DEM	11	\$0.00	\$0.00	\$33.40	\$33.40
DEW	13	\$0.00	\$23.46	\$60.80	\$84.26
ENT	77	\$120.44	\$224.00	\$147.50	\$491.94
ENR	30	\$22.53	\$45.70	\$4.30	\$72.53
FUZ	28	\$6.34	\$20.30	\$26.10	\$52.64
PAS	23	\$0.00	\$81.20	\$65.40	\$146.50
RMB	22	\$513.02	\$277.00	\$163.80	\$953.80
SSS	14	\$0.00	\$9.30	\$65.00	\$174.30
WLM	11	\$14.85	\$69.50	\$3.00	\$87.35
WPM	83	\$27.23	\$253.00	\$284.90	\$565.13
TOTAL (\$M)	341	\$802.42	\$1095.16	\$920.90	\$2818.48



DoD ARMAMENTS COMMUNITY IN DOTC

- NAC and DOTC have raised relevance of our Enterprise to key stakeholders
- DoD stakeholders participating:
 - RD&E Centers
 - > AFRL – Munitions (RW), Directed Energy (RD), Sensors (RY), Space Vehicles (RV)
 - > NAVSEA - NUWC, NSWC (Dahlgren, Indian Head, Crane, Panama City)
 - > NAVAIR – NAWC (China Lake, Lakehurst)
 - > Army RDECOM – ARDEC, AMRDEC, ARL, CERDEC, NSRDC
 - PEOs and PMs
 - > Air Force – PEO Weapons, PEO Space Systems, and PEO Strategic Systems
 - > Navy – PEO IWS, PEO Subs, PEO L&MW, MarCorSysCom,
 - > Army – PEO Ammo, PEO M&S, PEO Soldier
 - > USSOCOM – PEO SOF Warrior, JSOC, PEO SERSE
 - Service, OSD, and Agency
 - > OSD - AT&L (Acquisition, R&E, DPAP), SCO
 - > Air Force – AFLCMC, AFSMC
 - > Navy – N9, ASN RDT&E, ONR
 - > Marine Corps - MCCDC
 - > Army – ASAALT, ARCIC
 - > DTRA, DARPA, BMDO, NGIC, MDA



DOTC MANAGEMENT ORGANIZATION

EXECUTIVE COMMITTEE

GOVT. Co-Chair Mr. Jose Gonzalez

NAC Co-Chair Ms. Diana-Lynn Herbst



AFRL-Eglin
AMRDEC
ARDEC
ARL
NAVAIR
NAWC-CL
NSWC-DD
NSWC-IH
SOCOM

COL John Gloystein
 Ms. Christi Dolbeer
 Mr. John Hedderich
 Dr. Jeff Zabinski
 Mr. Dave Devine
 Ms. Joan Johnson
 Mr. Mike Till
 Mr. Ashley Johnson
 Mr. Karl Rozelsky

GD-OTS Mr. Joe Buzzett
Leidos Dr. Paritosh Dave
Lewis M&T Mr. Karl Lewis
MS Tech Mr. Kurt Oschman
Nammo Talley Mr. Dan Haun
Orbital ATK Mr. Rollie Dohrn
Penn State Dr. Eric Boyer
Spectra Tech Mr. Dan Hartman

NAC DIRECTORS

NAC Executive Director
NAC Director of Customer Affairs

Mr. Charlie Zisette
 Mr. George Solhan



NAC CONSORTIUM MANAGEMENT FIRM



Program Manager
Contracts Manager
Program Support
Administrative Support

Ms. Dolly Pelto
 Ms. Mica Dolan
 Mr. Shawn Gore
 Ms. Lindsey LePine

OTA MANAGEMENT

Lead Agreements Officer
Agreements Officer
Agreements Officer
Lead Legal Council
Legal Council
Legal Council

Ms. Kelly Gorman
 Mr. Steven Ghazi
 Mr. Bill Coolbaugh
 Ms. Denise Scott
 Mr. Jered Leo
 Ms. Kelly Sledgister-Stehle



PROGRAM OFFICE

Director Mr. Donald A. Geiss Jr.



Senior Management Analyst
Administrative Officer
AOR Management
Lead Financial Analyst
Financial Analyst

Mr. James J. Wilson (CTR)
 Ms. Noel Los
 Ms. Jennifer Ribeiro (CTR)
 Ms. Darlene Hopler
 Ms. Nicole Cohn

TECHNOLOGY MANAGERS

Ammunition (AMM)



Mr. Tim Garry
 973-724-9745

Demilitarization (DEM)



Ms. Lynda Ru
 973-724-4288

Joint Inensitive Munitions (JIM)



Mr. Ryan Ordemann
 973-724-8742

Fuzes (FUZ)



Ms. Lynda Ru
 973-724-4288

Enabling Technologies (ENT)



Dr. Jyothi Krishnan
 973-724-9669

Energetic Materials (ENR)



Mr. Ryan Ordemann
 973-724-8742

Protection & Survivability (PAS)



Mr. Killolkumar Parikh
 973-724-9527

Rockets, Missiles, and Bombs (RMB)



Dr. Jyothi Krishnan
 973-724-9669

Warheads/Lethal Mechanisms (WLM)



Mr. Tim Garry
 973-724-9745

Weapon Systems (WPN)



Mr. Vinh Vo
 973-724-9380

Directed Energy Warfare (DEW)



Mr. Killolkumar Parikh
 973-724-9527

Sensor & Sensor Systems (SSS)



Ms. Lynda Ru
 973-724-4288

NAVY Liaison



Mr. Butch Burgess (CTR)
 813-362-1100

Air Force Liaison



Mr. Devin Swanson
 850-882-8992

SBIR Liaison



Dr. Jyothi Krishnan
 973-724-9669



BUILDING CUSTOMER INTIMACY...

How are you perceived by the customer?



*Slimy
Contractor*

O
r

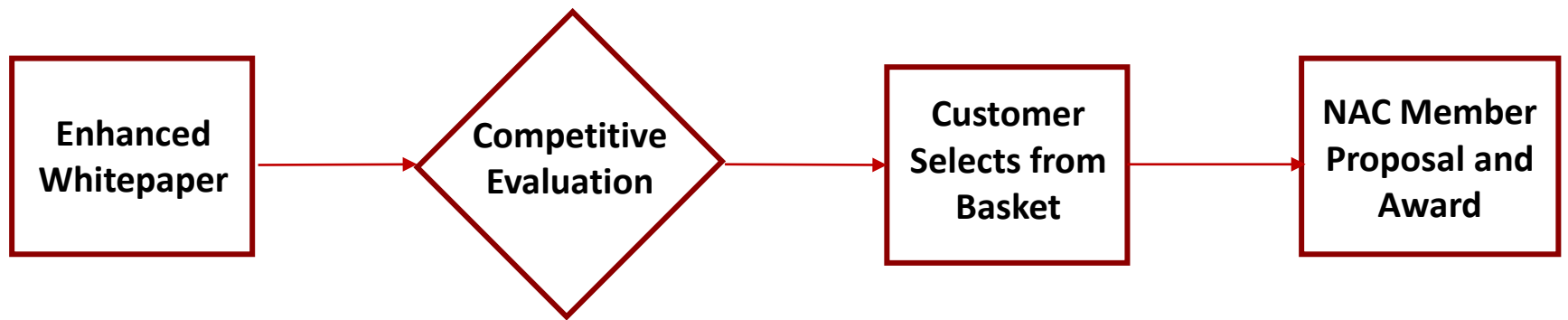


*Trusted
Advisor*

Becoming a trusted advisor gives you a positive discriminator and enhances competitive advantage



SIMPLE FLOW CHART FOR NEW “ENHANCED WHITEPAPER” PROCESS FY18



- 15 Pages
- Technical
- Cost Estimate
- NT Strategy
- **45 days (22 May 17)**

- Eligible (Good/Acceptable) = Basket
- Ineligible (Unacceptable) = Reject
- **30 days (22 June 17)**

- Selection Memo w/Rationale
- SOW
- > 22 June 17
- **20 days**

- Cost Proposal
- Funding
- W&R
- Awards as early as August 2017
- **68 days**

- Full cost proposals only submitted after the “Enhanced Whitepaper” is selected for award
- Eliminates five months from the FY17 process
- Potential to have more technical solutions available



NEW “ENHANCED WHITEPAPER” PROCESS

- **Streamlined process developed** to address the need for a **RAPID and Easy to Use**
- The new process replaces the whitepaper, technical proposal, and cost proposal with an Enhanced Whitepaper
 - Consists of a technical approach, schedule, Nontraditional strategy and a cost estimate within 15 pages
 - Is the basis for the competitive evaluation that will result in the Enhanced Whitepaper being rated “Good” or “Acceptable” (Eligible - placed in basket for up to 3 years) or “Unacceptable” (Ineligible - not in the basket)
- Enhanced Whitepaper is selected from the basket by the AOR
- DOTC Tech Manager (**Navigator**) is assigned to assist the **AOR** and **NAC** member every step of the way from selection memo through to Award
 - Team will collaboratively develop the SOW
- Following approval of the SOW, a cost proposal and nontraditional warranties and representations will be provided by the NAC member

88 days from Approved Selection Memo to Award
64 days from Approved SOW to Award



DOTC IS PLANNING FOR THE FUTURE

- The DOTC Enterprise anticipates award growth to 200+ awards annually within the next 3 years
- Our average award times have decreased by 30% since GFY15
- DOTC Enterprise Team conducted a thorough “Value Stream Improvement” off-site to address anticipated growth
- Our process improvement plans target reduction in award times to 64 days from SOW approval



The DOTC Enterprise Team with BG Abramson - Deputy Program Executive Officer Ammunition and Senior Commander Picatinny Arsenal NJ

DOTC is the “way to go” to bring effective technologies faster to the Warfighter



BENEFITS OF NEW PROCESS

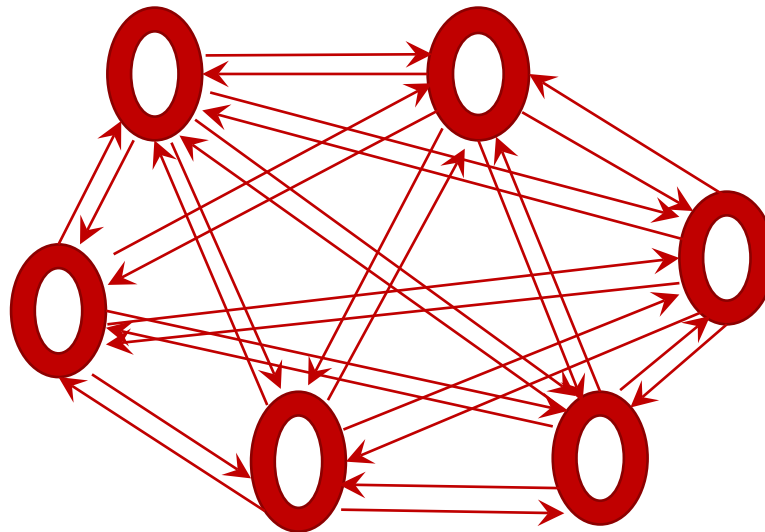
- **NAC Members:**
 - **WIN:** Members only submit SOW, cost proposal and W&R after selection for award, thereby *significantly* reducing B&P cost per submission
 - **WIN:** Members will receive evaluation feedback for each submission
 - **WIN:** Streamlined process positions NAC for multiple award cycles per year
- **Government Customers/AORs:**
 - **WIN:** More technical solutions available for award with increased customer flexibility
 - **WIN:** Streamlined approach expedites the evaluation processes and requires less resources
 - **WIN:** Shorter time for awards – Cycle time from solicitation to award will be reduced from 9 months to 4 months
- **Government Acquisition Team (DOTC/ACC-NJ/ARDEC Legal):**
 - **WIN:** Streamlined selection process reduces workload
 - **WIN:** Accommodates future growth and increased volume
 - **WIN:** Well documented selection rationale promotes fair and competitive



INNOVATION THROUGH COLLABORATION

Power of the Network!

- ✓ 2200 users among NAC and DOTC
- ✓ 4000 on distribution
- ✓ 1600 BIDS users
- ✓ 53% of GFY16 awards to nontraditional contractors (lead)
- ✓ 350 nontraditional NAC members





DOTC VALUE PROPOSITION

DOTC is the benchmark for Defense-Industry consortia:

- Never satisfied with the “Current State”
- Committed to Rapid and Effective Prototyping
- 125 new awards in FY17 – 376 active prototype projects
- Expanding Technology Objective Areas to meet customer demand
- 1,300 proposals in the “Basket” for DoD to pull immediately
- 341 new requirements for FY18 (\$2.8B)
- Collaborative planning and agile processes allow for well aligned proposals
- Strong Government and Industry infrastructure to ensure your success (websites, help documentation, collaboration events, training sessions)

The success of this program rests with the NAC and DoD Users



DOTC POINTS OF CONTACT



- Government POCs should contact the DOTC Program office directly
- Industry POCs should contact ATI directly and join the NAC
- Visit us at www.nac-dotc.org

Mr. Donald A. Geiss Jr.
DOTC Program Director
Phone: (973) 724-3386
Mobile: (973) 534-4582
Email: donald.a.geiss.civ@mail.mil

Mr. Charlie Zisette
NAC Executive Director
Phone: (540) 239-0762
Email: ED@nac-dotc.org

Mr. Jamie Wilson (CTR)
Senior Management Analyst
Phone: (973) 724-2379
Mobile: (973) 738-0096
E-mail: james.j.wilson.ctr@mail.mil

Mr. George Solhan
NAC Director of Customer Affairs
Phone: (813) 839-0952
Email: DCA@nac-dotc.org

Ms. Lindsey LePine (ATI)
NAC Consortium Mgmt Firm
Phone: (843) 760-3481
Email: naccmf@nac-dotc.org



CUSTOMER CARE IS PRIORITY #1



**The DOTC Enterprise Team with BG Abramson -
Deputy Program Executive Officer Ammunition and
Senior Commander Picatinny Arsenal NJ**



BACKUP SLIDES

BACKUP SLIDES

- The DOTC Program Office supports OWL prototypes enabling the integration of a non-pyrotechnic, one-way visible, full day/night tracer into current ammunition production products in order to improve warfighter capability, reduce logistical burden, and reduce ammunition cost
- DOTC has supported OWL prototypes for the last 3 years
- The DOTC Annual Plan FY18 contains requirements calling for small scale prototyping with the ability to scale the tracer line to future full qualification quantities (3,000 cartridges / month to 60,000 cartridges / month).

Visual Signature Comparison

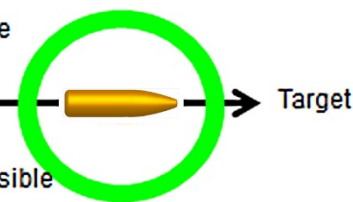
Current Tracer



• Trace visible

Origin of shot

• Trace not visible



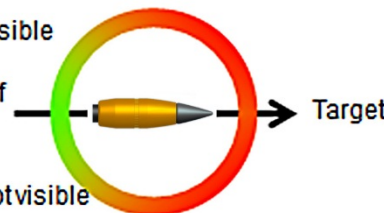
Visual Signature with Current Tracers

LOT/OWL Concept

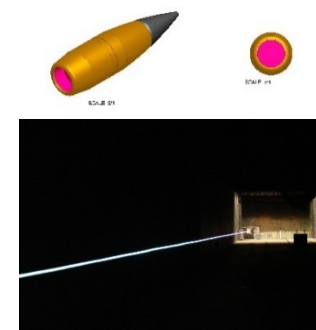
• Trace visible

Origin of shot

• Trace not visible



Approximate Visual Signature with One Way Luminescent Tracers





HIGH EXPLOSIVE GUIDED MORTAR (HEGM)



- The DOTC Program Office will enable prototypes for inert mass simulators and full-up energetic cartridges applicable to XM1160 High Explosive Guided Mortar (HEGM) Program
- HEGM will provide the maneuver commander an organic precision solution to address non line-of-sight targets, line of sight (LOS) targets beyond organic LOS precision assets, targets in defilade, moving targets and targets that have moved, which cannot be addressed by any other organic assets.
- The DOTC Annual Plan FY18 contains HEGM requirements with potential funding of \$38M



HEGM is a follow on to DOTC's Accelerated Precision Mortar Initiative (APMI) success story



FY18 INDIRECT FIRE PROTECTION CAPABILITY INCREMENT 2 INTERCEPT (IFPC-2I)



- The DOTC Program Office enables IFPC-2I prototypes to protect ground forces and critical assets from attack by Unmanned Aircraft Systems, cruise missiles; and rockets, artillery, and mortars
- DOTC FY18 Prototypes include surface-to-air missiles capable of effectively defeating rocket, artillery, and mortar (RAM) targets with residual capability against cruise missiles and unmanned aerial systems associated with the IFPC-2I program
- The DOTC FY18 Annual Plan contains multiple requirements for a potential funding of \$35M



The DOTC Program Office directly supported the IFPC-2I Program through hosting the IFPC-2I Industry Day at the March 2017 NAC General Membership Meeting



DOTC PHASE III CONTRACT AWARD: INJURY MITIGATION TECHNOLOGY THROUGH VIRTUAL PROTOTYPING AND TESTING



The DOD Ordnance Technology Consortium (DOTC) Program Office enables the U.S. Army Research Laboratory, along with ground combat and wheeled vehicle programs, to improve vehicle and crew survivability through upgrades to underbody protection, gunner protection kits, and blast shields for exposed crew members.

The DOTC Phase III award for \$19M to Corvid Technologies LLC., was based on the Small Business Innovation Research (SBIR) Topic: A09-051, “Innovative manufacturing research on forming of large light armor alloy sections resistant to blast and penetration.”

This Phase III contract will transition the methods and tools developed during the SBIR program to the survivability community as well as reduce/supplement test frequency and cost.



The DOTC Program Office facilitates SBIR Phase III awards to mature prototype technologies to accommodate customer needs



FY17 DIRECTED ENERGY

- DOTC Directed Energy (DE) requirements have grown exponentially over the last several years
- The DOTC Annual Plan FY17 contains 28 DE requirements across all three services with an expected funding of \$104M and maximum value of \$209.3M
- DE requirements support multiple programs utilizing High Power Radio Frequency (HPRF) systems, AC-130 Gunship integration, and various airborne platforms
- Key FY17 DE prototype deliverables include: laser weapon prototypes and laser subsystems, antennas for mobile HPRF systems, and energy storage capacitors



Directed Energy Warfare Systems will be a FY18 DOTC Objective Area