DOTC Enterprise Overview

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OUTLINE

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The DOTC Consortium... Partnership to Accelerate Warfighter Superiority
DOTC Vision & Mission

Vision:
- An integration of Government, Industry, and Academia into a single enterprise executing Joint and co-funded initiatives, sharing and developing goals and objectives, resources and assets, and utilizing existing personnel, facilities and equipment

Mission:
- To enhance our warfighters’ lethality, survivability and combat effectiveness by facilitating the industrial and academic research, development and technology demonstrations needed to advance and expand our military technological superiority
  - Rapid technology transfer to the Warfighter
  - Advocates a critical mass of world-class technologists
  - Leverages government, private industry and academia R&D resources
  - Promotes nontraditional defense contractor involvement
  - Promotes innovation
NAC DIRECTORS

NAC Executive Director  Mr. Charlie Zisette
NAC Director of Customer Affairs  Mr. George Solhan

AFRL-Eglin  COL John Gloystein
AMRDEC  Ms. Christi Dolbeer
ARDEC  Mr. John Hedderich
ARL  Dr. Pat Baker
NAVAIR  Mr. Dave Devine
NAWC-CL  Ms. Joan Johnson
NSWC-DD  Mr. Mike Till
NSWC-IH  Mr. Ashley Johnson
SOCOM  Mr. Karl Rozelsky

NAC CONSORTIUM MANAGEMENT FIRM

Program Manager  Ms. Dolly Pelto
Contracts Manager  Ms. Mica Dolan
Program Support  Mr. Shawn Gore
Administrative Support  Ms. Lindsey LePine

DOTC MANAGEMENT ORGANIZATION

EXECUTIVE COMMITTEE

GOVT. Co-Chair  Mr. Jose Gonzalez
NAC Co-Chair  Ms. Diana-Lynn Herbst

AFRL-Eglin  GD-OTS  Mr. Joe Buzzett
AMRDEC  Leidos  Dr. Paritosh Dave
ARDEC  Lewis M&T  Mr. Karl Lewis
ARL  MS Tech  Mr. Kurt Oschman
NAVAIR  Nammo Talley  Mr. Dan Haun
NAWC-CL  Orbital ATK  Mr. Rollie Dohrn
NSWC-DD  Penn State  Dr. Eric Boyer
NSWC-IH  Spectra Tech  Mr. Dan Hartman

PROGRAM OFFICE

Director  Mr. Donald A. Geiss Jr.

Senior Management Analyst  Mr. James J. Wilson (CTR)
Administrative Officer  Ms. Noel Los
AOR/Website Management  Ms. Maria C. Gonzalez (CTR)
Lead Financial Analyst  Ms. Darlene Hopler
Financial Analyst  Ms. Anna Marcus

TECHNOLOGY MANAGERS

Ammunition (AMM)  Mr. Tim Garry (CTR)  973-724-9745
Demilitarization (DEM)  Ms. Lynda Ru  973-724-4288
Joint Insensitive Munitions (JIM)  Mr. Ryan Ordemann  973-724-8742
Fuzes (FUZ)  Dr. Jyothi Krishnan  973-724-9669
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 (CTR)  973-724-9745
Weapon Systems (WPN)  Mr. Tim Garry (CTR)  973-724-9745
Air Force Liaison  Mr. Devlin Swanson  850-882-8992
NAVY Liaison  Mr. Butch Burgess (CTR)  813-362-1100
SBIR Liaison  Dr. Jyothi Krishnan  973-724-9669

OTA MANAGEMENT

Lead Agreements Officer  Ms. Kelly Gorman
Agreements Officer  Mr. Steven Ghazi
Lead Legal Council  Ms. Denise Scott
Legal Council  Mr. Jered Leo
Legal Council  Ms. Kelly Sledgister-Stehle

SOW/Source Selection/Training  Ms. Lia Sosa (CTR)  973-724-4110

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DOTC Annual Milestones and Technology Areas

DOTC Annual Cycle Milestones

- NAC Suggested Topics (NAC provides unsolicited ideas and innovative solutions)
- Collaborative Annual Technology Planning
- Request for Ordnance Technology Initiatives (Solicitation)
- White Paper and Proposal Submissions
- Project Evaluation, Selection and Award

DOTC Technology Areas

- Warheads/Lethal Mechanisms
- Ammunition
- Rockets, Missiles and Bombs
- Energetic Materials
- Fuzes & Sensors
- Enabling Technologies
- Protection & Survivability
- JointInsensitive Munitions
- Weapon Systems
- Demilitarization
PROJECTED NEW DOTC OBJECTIVE AREAS – FY18

**Directed Energy Warfare Systems**: Technologies, components, systems, and materials that produce lethal, less-than-lethal, and anti-materiel effects in a broad range of targets and tactical environments. These include, but are not limited to: all parts of the electro-magnetic spectrum (Electro-optic, Radio Frequency, Microwave, etc.); magnetism; acoustic; particle beam; thermal; and other technologies which may emerge which differ from conventional kinetic and energetic modalities. Applications may be offensive as well as defensive and include man-portable, crew-served, and combat systems on a variety of land, air, sea, sub-surface, and space platforms.

**Sensors and Sensor Systems**: Technologies, components, systems, and materials supporting the entire kill chain (target detection, identification, classification, tracking, engagement, and battle damage assessment) that are related to armaments, warheads, bombs, missiles, seekers, precision guidance and control, and weapon systems that include but are not limited to: Multispectral (radar, LIDAR, EO/IR, laser, and other optical and radio frequency approaches); Data Processing and Data Links; tactical Cyber; Electronic Warfare; GPS Denied; Intelligence, Surveillance, and Reconnaissance; and Command, Control, and Networking.

**Warfighter Performance Systems**: Technologies, components, systems, and materials that enhance the Warfighters' ability to accomplish the mission, survive, and prevail in combat that include but are not limited to: individual weapons; protection systems; individual mobility; warrior resilience; air delivery and parachute insertion; combat swimmer and insertion; combat readiness; expeditionary basing; mission performance; and reducing combat load.
• Early engagement enhances industry, academia, and government collaboration
• Continued collaboration improves understanding and refinement of customer requirements
• Thorough understanding of requirements improves the fidelity of proposals that better meet the Customers’ needs

DOTC offers a unique opportunity to engage customers through proposal submittal
NEW PROTOTYPE OTA LANGUAGE

• 10 U.S.C. § 2371b, expands applicability from directly relevant to “weapon systems” to “mission effectiveness of personnel, platforms, systems, components or materials”

• Significant participation by small business or nontraditional
  – No contracts subject to full CAS in past year ($50M/yr, was previously set at $500K/yr)

• Local authority increased
  – ACC-NJ increased from $20M to $50M
  – DA increased from $100M to $250M

• Now allows for follow-on production

• Four essential prototype project elements must be maintained
  – Prototype; Mission Effectiveness; NT or 1/3; Fair & Reasonable

Authority for Use of Other Transactions for Prototype Projects
Memo – Frank Kendall March 2016
FY17 GARM/UEA REQUIREMENTS

- FY17 Annual Plan has 393 new requirements for a potential value of $1.15B

- Relevant major programs for this forum include:
  - Long Range Precision Fires (LPRF)
  - Indirect Fire Protection Capability Increment 2 Intercept (IFPC-2I)
  - Hyper Velocity Projectile (HVP)
  - Electromagnetic Railgun
  - Directed Energy
• The DOTC Program Office enables LPRF prototypes to destroy, neutralize, or suppress soft or lightly armored, mobile or fixed, active or passive, precisely or imprecisely located targets at ranges up to 499Km with a vertical engagement capability throughout its range band.

• The DOTC Annual Plan FY17 contains requirements with potential funding of $37.5M and maximum value of $75M.

• Key FY17 prototype deliverables include: Three flight prototype missiles in Launch pod containers capable of interface and launch from the M270A1 and High Mobility Artillery Rocket System (HIMARS) launchers.
• 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

• The DOTC Annual Plan FY17 contains six major requirements with potential funding of $56.15M and maximum value of $115.5M

• Key FY17 prototype deliverables include: 2-8 prototype missile launcher systems and up to 40 launcher components, hardware for next generation Missile Data Link integrated solutions, next generation Small Footprint Radios (SFRs) supporting IFPC platoon configurations, software and algorithms for radar system control, and Integrated surface-to-air missile air defense interceptors

**DOTC will accelerate the development prototype launcher systems and components for demonstration and validation testing**
FY17 HYPER VELOCITY PROJECTILE (HVP)

• The DOTC Program Office enables HVP prototypes to prove out high speed launch effectiveness, high density electronics packaging and survivability, and advanced tracking and GNC algorithms

• The DOTC Annual Plan FY17 contains 24 requirements with an expected funding of $45.2M and maximum value of $184M

• Key FY17 prototype deliverables include: High-G guidance, navigation, control systems (GNC), telemetry systems, and hardened components; high density mechanical, digital, and RF electronics packages; fire control radar and EO/IR sensors

• DOTC Annual Plan FY16 also contained 30 total HVP relevant requirements

DOTC will have a critical role enabling HVP to counter future Naval threats
• The DOTC Program Office enables Railgun prototypes to employ a hypervelocity launch system to fundamentally change the way the United States will deter and defeat

• The DOTC Annual Plan FY17 contains 20 requirements with a potential funding of $28.5M and maximum value of $121M

• Key FY17 prototype deliverables include: pulsed power components, gas turbine generators, various launcher components and assemblies, large format batteries, and EO/IR sensors

• Electric Weapons (WPN) sub-objective specifically tailored for the Navy Railgun

**DOTC will be a critical acquisition tool for the Railgun Program**
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.
DOTC ENTERPRISE TRENDS

Commercial Industry Interest Continues to Grow

Growth is Important to All Stakeholders - Government, Industry and Academia

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DOTC ENTERPRISE GROWTH

Over 250% growth across four key metrics - GFY’s 11-16
Prototype Complexity

System of Systems

System

Subsystem

Component

Hyper Velocity Railgun

AI3

Prototype Maturity

Area Denial

Active Protection

Fuze S&A

OWL

Active Stabilization

Stamped S&A

Perchlorate Replacement

Gunner Protection Systems

APMI

Cryofracture DEMIL

TATB

SYSTEM OF SYSTEMS

Component

Subsystem

System

System of Systems

Prototype Complexity

Hyper Velocity Railgun

AI3

Prototype Maturity

Area Denial

Active Protection

Fuze S&A

OWL

Active Stabilization

Stamped S&A

Perchlorate Replacement

Gunner Protection Systems

APMI

Cryofracture DEMIL

TATB
Better Buying Power 3.0

Achieving Dominant Capabilities through Technical Excellence and Innovation

**Achieve Affordable Programs**
- Continue to set and enforce affordability caps

**Achieve Dominant Capabilities While Controlling Lifecycle Costs**
- Strengthen and expand “should cost” based cost management
  - Anticipate and plan for responsive and emerging threats by building stronger partnerships of acquisition, requirements and intelligence communities
- Institutionalize stronger DoD level Long Range R&D Program Plans
- Strengthen cybersecurity throughout the product lifecycle

**Incentivize Productivity in Industry and Government**
- Align profitability more tightly with Department goals
- Employ appropriate contract types, but increase the use of incentive type contracts
- Expand the superior supplier incentive program
- Ensure effective use of Performance-Based Logistics
- Remove barriers to commercial technology utilization
- Improve the return on investment in DoD laboratories
- Increase the productivity of corporate IRAD

**Incentivize Innovation in Industry and Government**
- Increase the use of prototyping and experimentation
- Emphasize technology insertion and refresh in program planning
- Use Modular Open Systems Architecture to stimulate innovation
- Increase the return on and access to small business research and development
- Provide draft technical requirements to industry early and involve industry in funded concept definition
- Provide clear and objective “best value” definitions to industry

**Eliminate Unproductive Processes and Bureaucracy**
- Emphasize acquisition chain of command responsibility, authority and accountability
- Reduce cycle times while ensuring sound investments
- Streamline documentation requirements and staff reviews
- Remove unproductive requirements imposed on industry

**Promote Effective Competition**
- Create and maintain competitive environments
  - Improve DoD outreach for technology and products from global markets
  - Increase small business participation, including more effective use of market research

**Improve Tradecraft in Acquisition of Services**
- Strengthen contract management outside the normal acquisition chain – installations, etc.
- Improve requirements definition for services
- Improve the effectiveness and productivity of contracted engineering and technical services

**Improve the Professionalism of the Total Acquisition Workforce**
- Establish higher standards for key leadership positions
- Establish stronger professional qualification requirements for all acquisition specialties
- Strengthen organic engineering capabilities
- Ensure development program leadership is technically qualified to manage R&D activities
- Improve our leaders’ ability to understand and mitigate technical risk
- Increase DoD support for STEM education
From Defense AT&L: January/February 2016

**Principle 9:** Our technological superiority is at risk, and we must respond

- “BBP 3.0 focuses on all the ways in which we expend research and development (R&D) funding (DoD laboratories, industry independent R&D, contracted R&D, etc.) and on the opportunities to spend those funds more productively”
- “BBP 3.0 also includes the increased use of experimental prototypes and other measures designed to spur innovation—such as early concept definition by industry and monetary incentives to industry to develop and offer higher-than-threshold performance levels”
- “We need to reduce cycle time, eliminate unproductive bureaucracy, and increase our agility by accepting more risk when it is warranted. All of these measures are BBP initiatives”
DOTC has become the benchmark for Defense-Industry consortia:

- DOTC has become an industry benchmark for Defense consortia
  - Since 2002 over $1.5B total funding, 600+ awards 390+ NAC members
- Focused on accelerating Warfighter superiority through extensive Government and Industry collaboration
  - Continuously streamlining the acquisition lifecycle to bring more rapid and innovative solutions to the field
  - Collaborative planning and agile processes allow for well aligned proposals
- Unique “can do” culture with Government, Industry, ACC-NJ and Legal
- Strong Government and Industry infrastructure to ensure your success (websites, help documentation, collaboration events, training sessions)
DOTC Points of Contact

- Government POCs should contact the DOTC Program office directly.
- Industry POCs should contact SCRA directly and join the NAC.
- Visit us at [www.nac-dotc.org](http://www.nac-dotc.org)

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