



INNOVATION
THROUGH
COLLABORATION

DOTC ENTERPRISE OVERVIEW

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Presentation to:

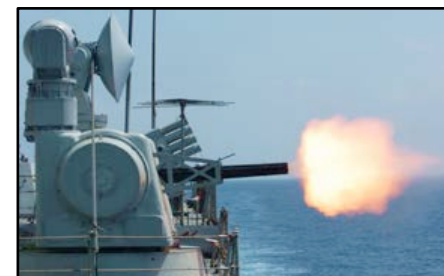
NDIA Armament Systems Forum

26 February 2016



OUTLINE

- DOTC Vision & Mission
- DOTC Management Organization
- DOTC Milestones & Technology Areas
- FY17 GARM/UEA Rqmts
- Enterprise Trends & Success Stories
- DOTC and BBP 3.0
- The DOTC Value Proposition



THE DOTC ENTERPRISE

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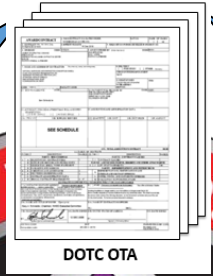


DoD Ordnance Community



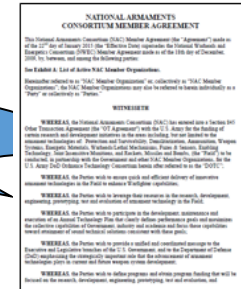
OSD Charter

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

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

DOTC MANAGEMENT ORGANIZATION



EXECUTIVE COMMITTEE

GOVT. Co-Chair Mr. Jose Gonzalez

NAC Co-Chair Ms. Diana-Lynn Herbst



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

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 SCRA



Program Manager
Contracts Manager
Program Support
Administrative Support

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

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

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



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Financial Analyst

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Ms. Noel Los
Ms. Maria C. Gonzalez (CTR)
Ms. Darlene Hopler
Ms. Anna Marcus

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Fuzes (FUZ)



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Energetic Materials (ENR)



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Protection & Survivability (PAS)



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Rockets, Missiles, and Bombs (RMB)



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Warheads/Lethal Mechanisms (WLM)



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Weapon Systems (WPN)



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Air Force Liaison



Mr. Devin Swanson
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SOW/Source Selection/Training



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NAVY Liaison



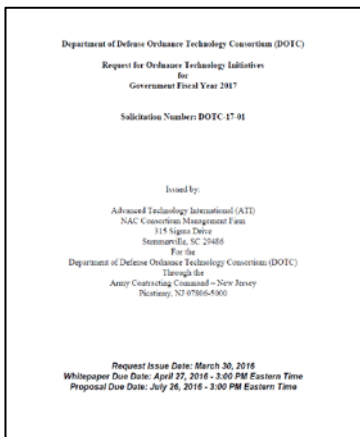
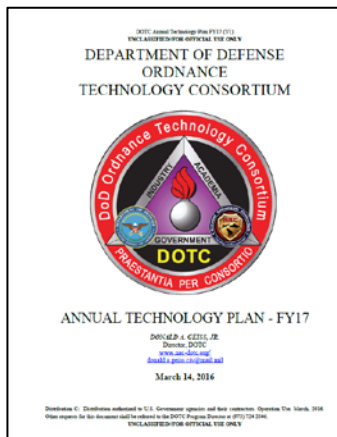
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SBIR Liaison



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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



PROJECTED NEW DOTC OBJECTIVE AREAS – FY18



Directed Energy Warfare Systems

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.



Sensor and Sensor Systems

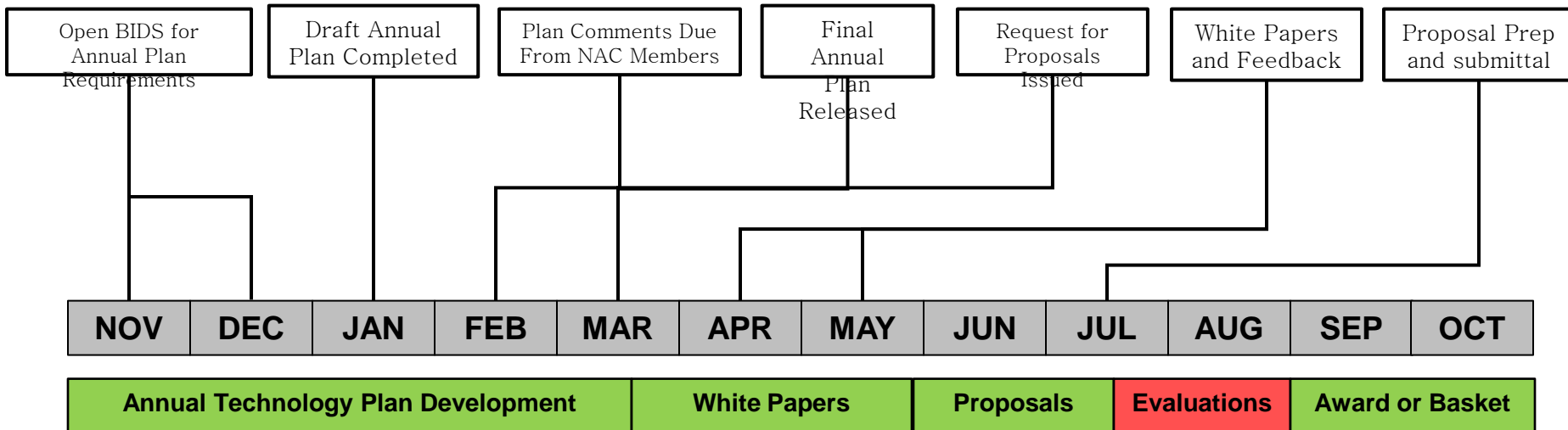
Sensors and Sensor Systems: Technologies, components, systems, and materials supporting the entire kill chain (target detection, identification, classification, tracking, engagement, and battle damage assessment) that are related to armaments, warheads, bombs, missiles, seekers, precision guidance and 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

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.

ANNUAL CYCLE & COLLABORATION



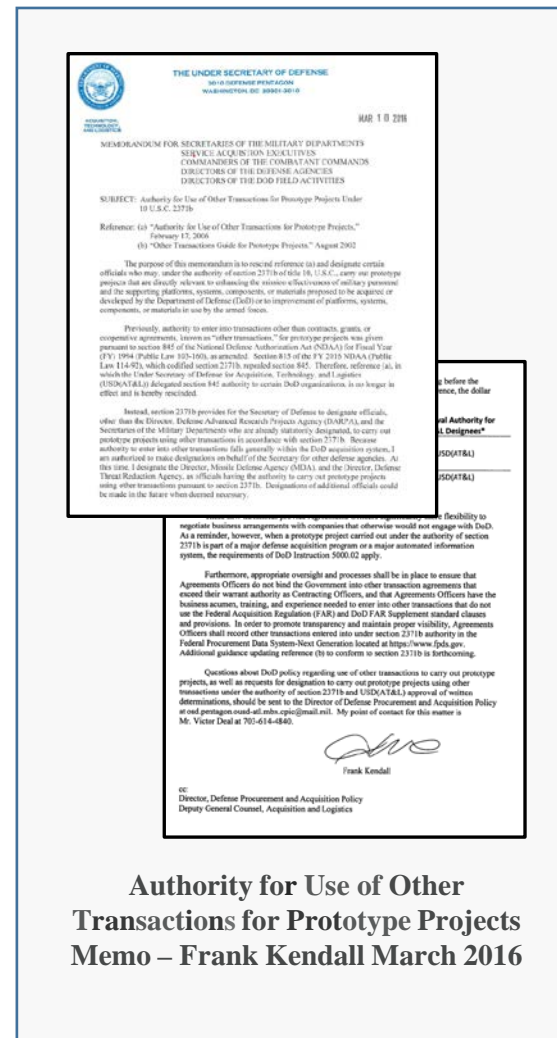
- Early engagement enhances industry, academia, and government collaboration
- Continued collaboration improves understanding and refinement of customer requirements
- Thorough understanding of requirements improves the fidelity of proposals that better meet the Customers' needs

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



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:

<p>2016 ARMAMENT SYSTEMS FORUM AGENDA</p> <p>GUNS, AMMUNITION, ROCKETS & MISSILES (GARM) FORUM</p>	<p>NDIA PROMOTING NATIONAL SECURITY SINCE 1919</p> <p>2016 ARMAMENT SYSTEMS FORUM</p>
<ul style="list-style-type: none"> – Long Range Precision Fires (LPRF) – Indirect Fire Protection Capability Increment 2 Intercept (IFPC-2I) 	

<p>2016 ARMAMENT SYSTEMS FORUM AGENDA</p> <p>UNCONVENTIONAL EMERGING TECHNOLOGY ARMAMENTS (UEA) FORUM</p>	<p>NDIA PROMOTING NATIONAL SECURITY SINCE 1919</p> <p>2016 ARMAMENT SYSTEMS FORUM</p>
<ul style="list-style-type: none"> – Hyper Velocity Projectile (HVP) – Electromagnetic Railgun – Directed Energy 	

FY17 LONG RANGE PRECISION FIRES (LRPF)



- 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.



DOTC enables LPRF to conduct prototype demonstration tests

FY17 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
- 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



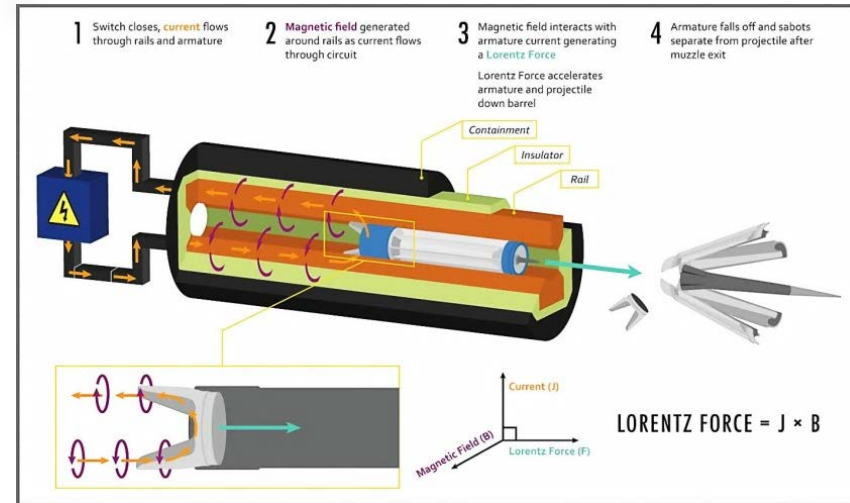
DOTC will have a critical role enabling HVP to counter future Naval threats



FY17 ELECTROMAGNETIC RAILGUN



- 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

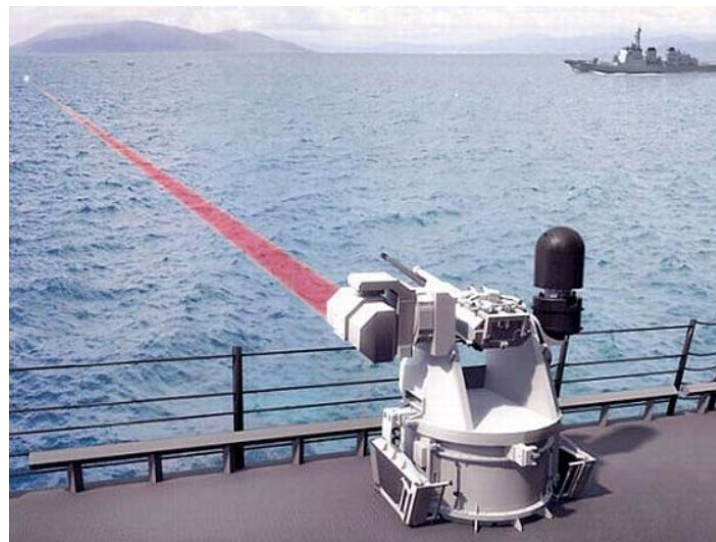


DOTC will be a critical acquisition tool for the Railgun Program



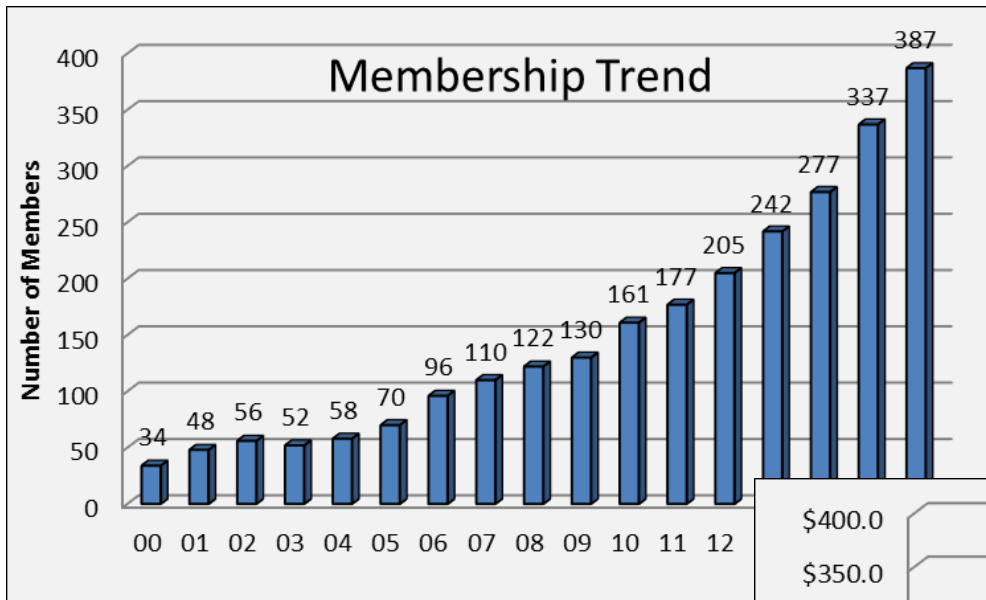
FY17 DIRECTED ENERGY

- 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



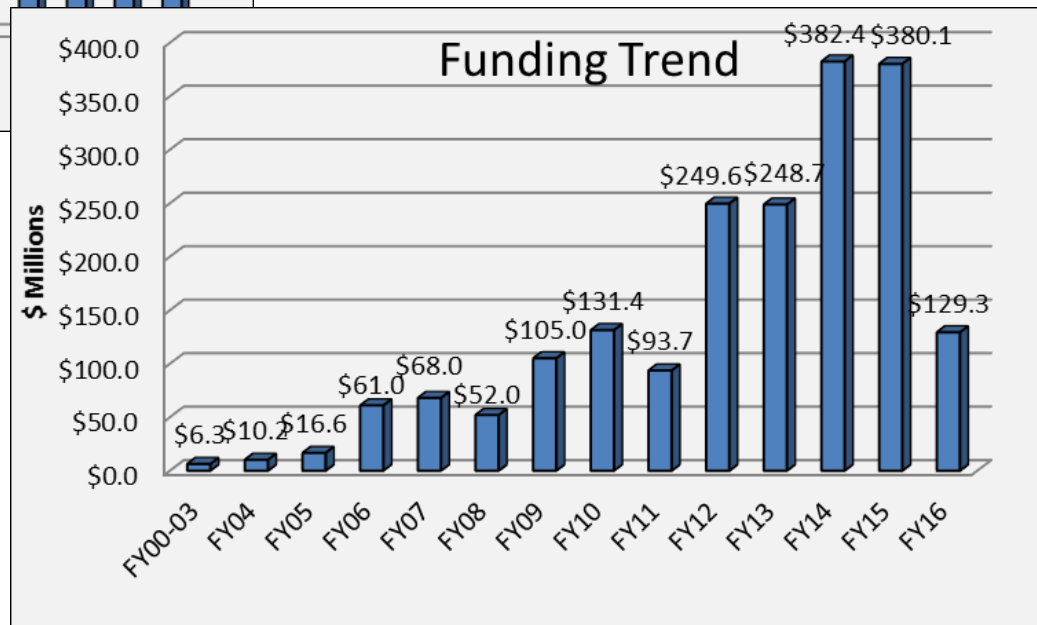
Directed Energy Warfare Systems will be a FY18 DOTC Objective Area

DOTC ENTERPRISE TRENDS



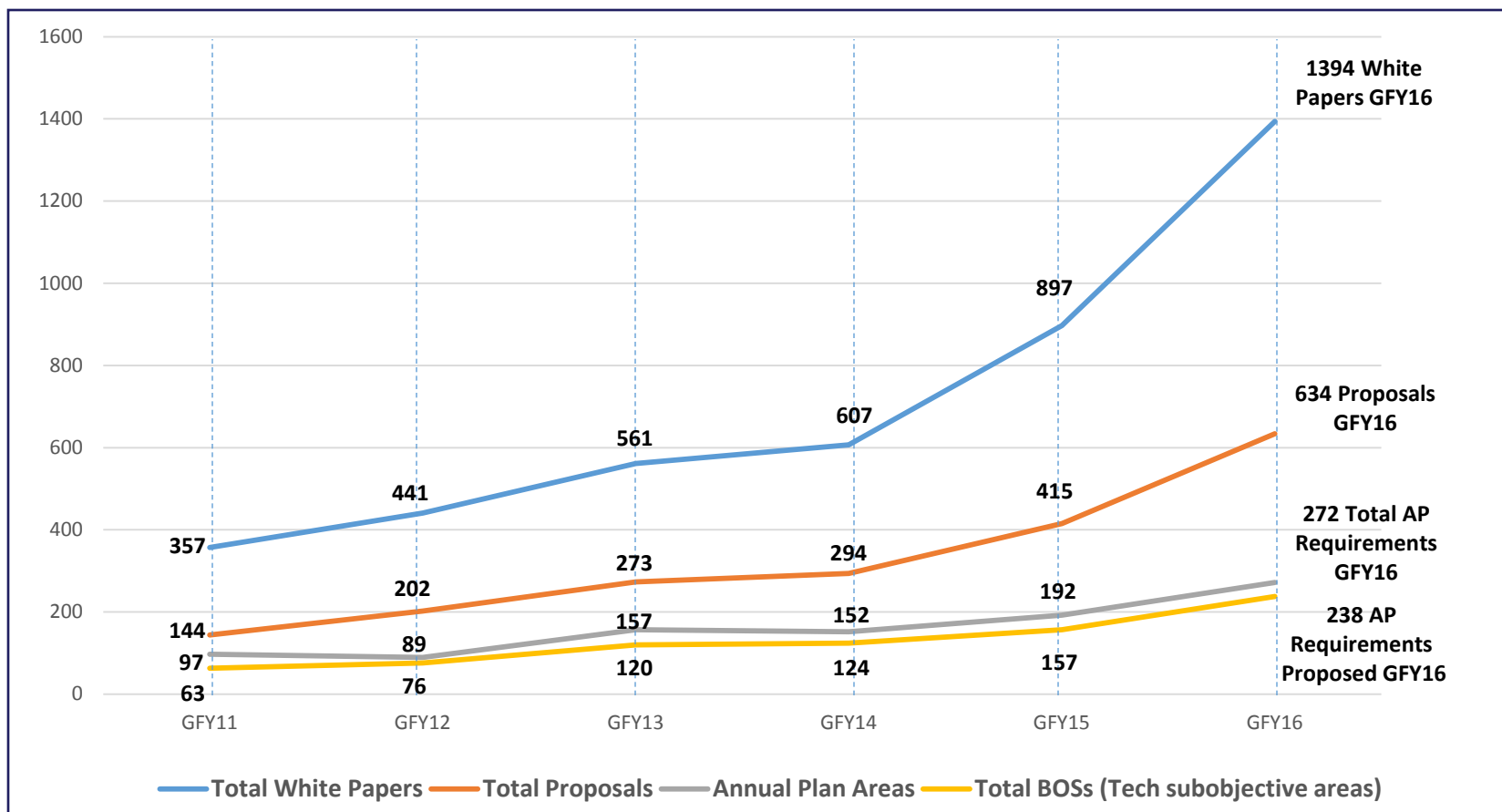
Commercial Industry Interest Continues to Grow

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



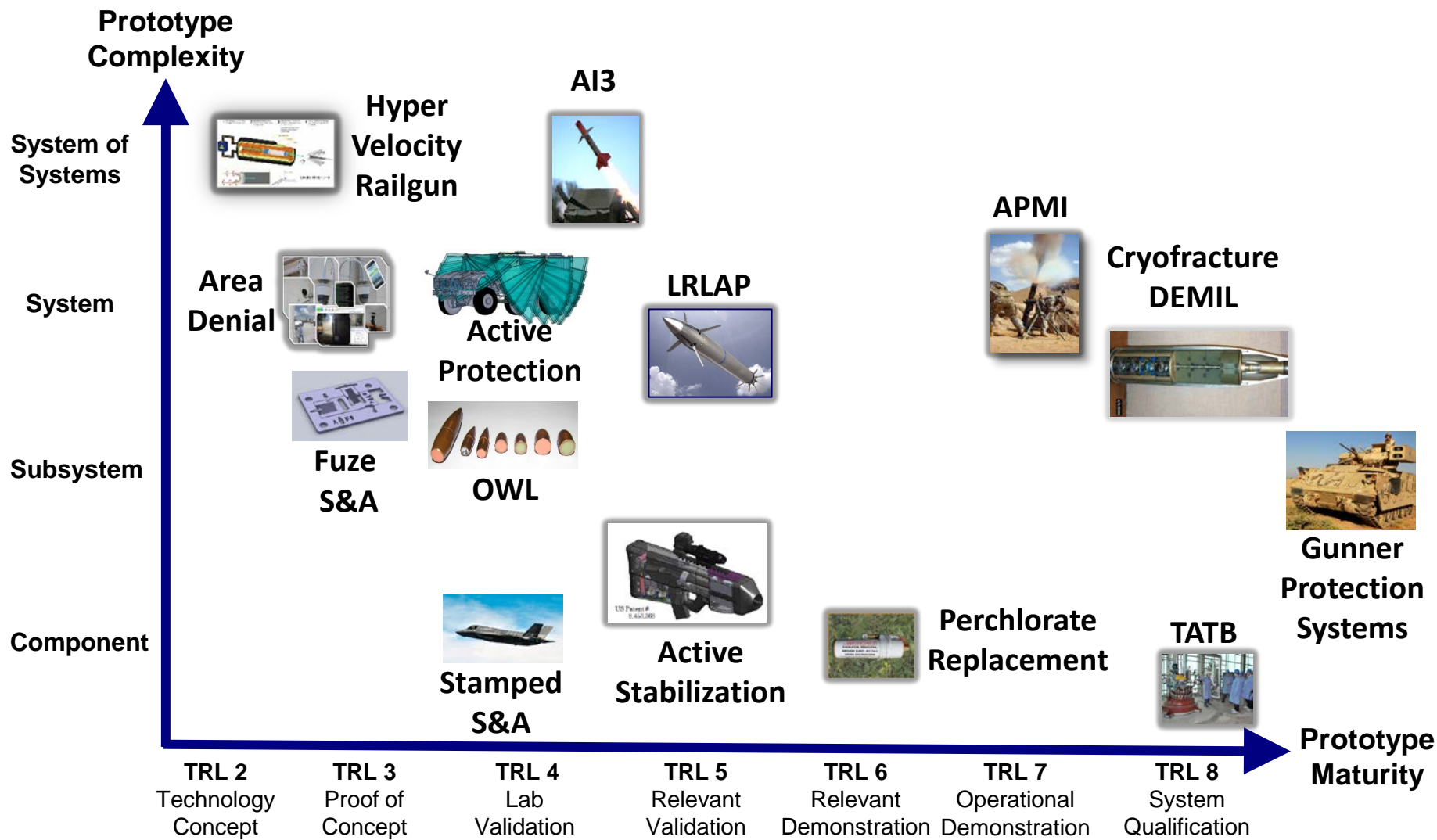


DOTC ENTERPRISE GROWTH



Over 250% growth across four key metrics - GFY's 11-16

DOTC SUCCESS STORIES



DOTC ALIGNMENT WITH BBP 3.0



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

DOTC ALIGNMENT WITH BBP 3.0



From the Under Secretary of Defense for Acquisition, Technology, and Logistics



Better Buying Power Principles

What Are They?

Frank Kendall

The Principles Suggested by 24 Acquisition Experts

Principle 1: Continuous improvement will be more effective than radical change.

Principle 2: Data should drive policy.

Principle 3: Critical thinking is necessary for success; fixed rules are too constraining.

Principle 4: Controlling life-cycle cost is one of our jobs; staying on budget isn't enough.

Principle 5: People matter most; we can never be too professional or too competent.

Principle 6: Incentives work—we get what we reward.

Principle 7: Competition and the threat of competition are the most effective incentives.

Principle 8: Defense acquisition is a team sport.

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

Principle 10: We should have the courage to challenge bad policy.

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”

The DOTC Enterprise... A Key Enabler for BBP 3.0



DOTC VALUE PROPOSITION

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

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