

# OTAS AND THE NAC -PROVIDING RAPID INNOVATION AND PROTOTYPING

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"Armaments" is the ordnance, ammunition, munitions, weapon and sensor systems, and related <u>military materiel</u>, <u>equipment</u>, and <u>components</u> that enable the military to achieve <u>combat and mission effectiveness in all warfare</u> <u>environments</u>: air, land, sea, undersea and space.

### ... Everything in the "Kill Chain"



## NATIONAL ARMAMENTS CONSORTIUM

### **Our Focus:**

- Transition technology to the Warfighter fast
- Promote innovation
- Recruit a community of world-class technologists
- Collaboration between government, industry, and academia
- Remove barriers
- Promote nontraditional defense contractor contributions and participation
- Promote and enable the MIB
- Support the Nation's equities in RD&A, OTA, and future capabilities

#### We value:

- Collaboration and teamwork
- Innovation, creativity, agility
- Transparency and accountability
- Stewardship of precious resources
- Responsiveness, relevance, and timeliness
- Excellence in leadership and management
- Courage to act boldly, responsibly, and with vision
- Duty and service to the Nation and our Warfighter:





 <u>What We Do</u>: Form industry partnerships to collaborate with Government customers to innovate technology/ engineering solutions and rapidly deliver combat capabilities for the Nation's Warriors



631 Active Prototype Projects



### NAC GOVERNANCE AND MANAGEMENT

- NAC is governed by an 11-member board of trustees (Executive Committee)
  - 5 large companies, 5 small companies, 1 University
  - Executive Director and Director of Customer Affairs are ex officio members
  - Seats on board are elected every 3 years
  - No compensation for board members
  - Meets in person four times a year and monthly telecoms
  - Governs to Strategic Plan, SOPs, and CMA
- ExCom Subcommittees ensure compliance
  - Governance and nominating committee (includes ethics)
  - Finance committee
  - Strategic Communications committee
- ED and DCA lead execution
  - Statement of Objectives, labor, and travel agreed to annually
- Retains CMF (ATI) to manage day-to-day execution of OTAs

Chair of the NAC Executive Committee serves as Co-Chair of DOTC Executive Committee



## NAC APPROACH WITH DOTC AND AMTC

### Partnerships with government customers foster innovation and technology/engineering solutions

### • "Gold Standard" of Collaboration/Power of the Network to Innovate

- Link traditional and nontraditional contractors and government customers
- Collaborate with DOD and Industrial Base during requirements generation, proposal stage and within joint working groups in specific technology areas

### • Streamline Development-to-Acquisition with Speed and Flexibility

- Process designed to minimize cost-to-compete and speed-to-deliver
- Encourage cooperative and joint funded requirements, provide visibility across DoD Acquisition community

### • Onboard Nontraditionals and Remove Barriers to Innovation

- Provide training, education and mentoring for doing business with the government
- Link nontraditionals with traditional defense contractors to develop technology, optimize for production and provide a "bridge" between capital and risk
- Co-sponsor events to focus on technology/engineering/ programmatic threats, challenges, and opportunities.

## Rapidly and Effectively delivers combat capabilities for our nation's warriors



### COLLABORATION IS DISCIPLINED AND INTENTIONAL



We promote collaboration through a broad range of tools and virtual and in-person events and engagements.











Cyber training **General Membership** Annual technology plan support Periodic Meetings project reviews ITAR/EAR Business development training Data rights compliance Collaboration database with member capabilities, Assessment How to do business Proposer workshops Technology roadmapping and feedback interest and gaps with DOTC **Proposal Development** Join Consortium Evaluate Technology Gaps **Create Project Teams Project Execution** 



## COLLABORATION PORTAL

#### **DRAWS TO SITE**

- Blast emails with links
- Social media notifications with links
- Promotion of site at conferences
- Search for opportunities
- News and Events



#### Event Announcements

Advertises conferences, General Membership Meetings, Industry Days, and other collaboration events



#### Collaboration Database

Where members learn about one another to form strong project teams.



Documents Library

Shares membership documents, project concept submission forms, white paper templates, and other documents.



DoD Ordnance Technology Consortium (DOTC) serves as the focal point for armaments system

#### RFP Announcements

Distributes solicitations and calls for project concept White Papers. Describes challenges and requirements.



VENSER LODIN | DOVERIMENT ONLY

2018 DoD/DOE M&S Users Forum

ndustry Day

#### Sisense Project Dashboard

Informs viewers of project awards and status, promotes transition of technology.

#### Search Engine Optimization

**ATTRIBUTES OF SITE** 

- Section 508 compliant
- Fully responsive to various devices
- Segmented into private and public sites



How to Join

NAC

Potential members.

particularly non-

traditions, learn

in NAC.

how to participate



### How to Work with DOTC/NAC

Promotes sustainment, introduces DOTC/NAC to potential new Government sponsors.



### Single Point Contracting is the use of a Consortium Management Firm to facilitate high volume transactions in the solicitation, award, and execution of Government contracted efforts

#### **EFFICIENCY**:

Improved process, better communications, and lower costs

#### SPEED:

Faster transition of acquisition process and closer communication with technical community

#### CAPACITY:

Ability to execute thousands of transactions per year

#### FLEXIBILITY and EASE OF USE:

Ability to tailor resources to meet the requirements and guidance of the Government customer (e.g. surge, schedule adjustments, etc.)





## SINGLE POINT CONTRACTING (SPC) MODEL

#### Government Funded (through Administrative Rate)

#### **Single Point Contracting**

- Solicitation Preparation/Webinars
- Submission Portals
- Whitepaper & Proposal Receipt/Compliance Review
- Award Processing
- Project Administration/Close-out
- Milestone/Deliverable Tracking
- Invoice Receipt/Payment
- Technical and Financial Reporting
- Nontraditional Tracking/Reporting

#### **Consortium Funded** (through Member Dues/Assessments)

#### **Consortium Management**

- Consortium Leadership Support
- Member Training and Mentoring
- Collaboration Portal and Website
- Collaboration Events/Membership Meeting
- Member Application Processing
- Member Database (DD-2345, "good standing" tracking, etc.)
- Dues/Assessment Invoicing and Collection
- Program Status & Financial Reporting
- Conferences/Booth
- Other Support Services



### DOTC ENTERPRISE - MODEL FOR INNOVATION





## DOTC TECHNOLOGY OBJECTIVE AREAS

- Ammunition
- Demilitarization
- Directed Energy Warfare
- Enabling Technologies
- Energetic Materials
- Fuzes
- Hypersonics and Hypervelocity
- Information Operations, Cyber Operations and Electronic Warfare
- ISR, Sensors and Sensor Systems

- Joint Enhanced Munitions
- Manufacturing and Process Technology
- Multi-domain Battlespace Management
- Protection, Survivability, and Defense
- Rockets, Missiles and Bombs
- Warheads/Lethal Mechanisms
- Warrior as a System
- Weapon Systems





### Collaboration Drives Innovation







Uniting Academia, the Industrial Base, and DOD Developers can deliver significantly greater value to our Nation's Security



## DOTC PROTOTYPES BEING DELIVERED

DOTC TECH OBJECTIVE	# OF INITS
Warheads/Lethal Mechanisms	44
Enabling Technology	149
Fuzes & Sensors	72
Energetic Materials	65
Ammunition	66
Demilitarization	10
Joint Insensitive Munitions	5
Weapon Systems	95
Protection & Survivability	61
Rockets, Missiles & Bombs	59
Directed Energy Warfare	5
Total Active Initiatives:	631







49% of projects awarded directly to Nontraditionals; 99% of projects by Traditionals have Significant Participation by Nontraditionals



### DOTC PARTICIPATION BY SERVICE FY20

### \$1,118.90 Million Provided in FY20 by the Services ...

As of EOM June 2020





### AMTC ENTERPRISE



52 Projects award at \$651M 35 of those to NDC



### AMTC OTA SCOPE

#### **GUIDED MISSILE**

- Target Detection/ Acquisition/Tracking Sensors
- Missile Electronics
- Seekers to Defeat Moving Targets and Air Defense Threats
- Guidance/Control for Improved Precision and Global Positioning System (GPS)-Denied Precisions
- Lethality Mechanisms
- Warheads
- Fuzes
- Payloads
- Radar
- Datalink and Communication
- Materials and Structures
- Power Systems
- Aerodynamics
- Navigation Systems
- Modeling and Simulation
- Energetics
- Component Cyber Security
- Propulsion Systems for Increased Range and Decisive Effects
- Missile Launchers
- Support Equipment

#### MANUFACTURING & ENABLING/ DISRUPTIVE TECHNOLOGIES

- Innovation Enablers
- Additive Manufacturing
- High Energy Creation and Storage Systems
- Directed Energy
- Advanced Materials/Processes
- Advanced Manufacturing Techniques
- Manufacturing Cyber Security
- Modeling and Simulation
- Virtual Prototyping
- Robotics
- Automation
- High Temperature Materials
- Lightweight & Hybrid Materials
- Flexible Electronics
- Reclamation/Repair Technologies
- Open System Architectures for Enhanced Manufacturing Productivity (Digital Manufacturing and Industrial Internet of Things (IIoT))

#### AVIATION

- Platforms/Materials/ Structures
- Power Systems
- Engines/Propulsion Systems
- Drives/Rotors
- Mission Systems
- Avionics/Navigation
- Sensors Networks Data Link and Communication
- Survivability
- Sustainability
- Autonomy
- Manned/Unmanned Teaming (MUMT)
- Unmanned Aerial Vehicle
  (UAV)
- Component Cyber Security and Aviation Ground Support Equipment/ Systems (AGSE)



## OTA CONSORTIUM OPPORTUNITIES

#### The number of active OTA collaborations is growing and that growth is accelerating.

In 2000, there was 1 Prototype OTA Consortium Today there are ~ 33

Naval Surface Technology Innovation Consortium (NSTIC) Dahlgren NAWCAD Consortium NAWC AD S2MARTS Consortium NSWC Crane

AF Life Cycle Management Center Consortium Initiative (ACI) AFLCMC Aviation & Missile Technology Consortium (AMTC) AMRDEC Information Warfare Research Project (IWRP) SPAWAR Undersea Technology Innovation Consortium (UTIC) NUWC Sensors, Communications, and Electronics Consortium CERDEC Cornerstone OSD MIBP Space Enterprise Consortium (SpEC) SMC NGA Enterprise Innovation NGA Propulsion Consortium Initiative (PCI) AFLCMC Countering Weapons of Mass Destruction Consortium (CWMD) JPEO-CBD Training and Readiness Accelerator (TReX) PEO STRI

Medical CBRN Defense Consortium (MCDC) JPEO-CBD Open Systems Architecture Initiative (OSAI) AFRL Defense Automotive Technologies Consortium (DATC) TARDEC

National Technology Security Accelerator NSTXL DoD Medical Technology Enterprise Consortium (MTEC) AMRMC

National Spectrum Consortium (NSC) OSD Consortium for Command, Control, and Communications in Cyberspace (C5) ARDEC Consortium for Energy, Environment, and Demilitarization (CEED) ARDEC Border Security Technology Consortium (BSTC) DHS

Vertical Lift Consortium (VLC) OSD

System of Systems Security Consortium (SOSSEC)

National Advanced Mobility Consortium (NAMC) TARDEC

National Armaments Consortium (NAC)/DoD Ordnance Technology Consortium (DOTC) - OSD

Warheads and Energetics Technology Consortium (WETC) ARDEC/IH/ARL - Later renamed DOTC under OSD

2000

2002



### NAC CONTACTS

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