The Department of Defense Ordnance Technology Consortium (DOTC)

Enabling: Collaboration, Communication, and Cooperation across the Munitions Enterprise

Presented by:

Mr. Tony Melita
Senior Advisor, NWEC Executive Committee

February 29, 2012
What is DOTC?
Who is Involved?
How is It Organized?
Why Should I Use It?
How do I Use It?
Enterprise Statistics
DOTC Collaboration Days
Summary
Q&A
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What is DOTC?
The DoD Ordnance Technology Consortium (DOTC)…

- DOTC is a collaborative partnership between the Department of Defense and the National Warheads and Energetics Consortium (NWEC)

- Commissioned by USD (AT&L) as a DoD initiative in 2002, DOTC was established to facilitate collaboration between the Government, Industry, and Academia in the advancement of munitions technologies

- DOTC is available for use by all Service Laboratories, Program Offices, and other Agencies for the development and prototyping of advanced concept warheads, energetics, fuzes and other related enabling weapon system technologies

DoD and NWEC… Partnering to Leverage Each Others Capabilities and Investments
Two Consortia, One Enterprise… A Different Way of Doing Business

DOTC…a consortium of Government Laboratories and Agencies, and its NWEC component; commissioned by the USD(AT&L); operating under an Other Transaction Agreement (Public Law 103-160, Section 845); and, governed by an eighteen (18) member Government, Industry and Academic Executive Committee co-chaired by representatives from the Government and NWEC.

NWEC…an open and competitive consortium of traditional and non-traditional defense contractors, and academic institutions operating under the provisions of an NWEC Consortium Member Agreement, executed by the participating member organizations, and governed by a 9 member Executive Committee of small business, large business and academic institutions.
$269.4 million and 129 Initiatives Currently Under Contract…

As of 3 Feb 2012

- **Explosives**: $70.7 M
- **Fuzes**: $32.79 M
- **Warheads**: $44.57 M
- **Enabling Technology**: $52.53 M
- **Protection & Survivability**: $35.3 M
- **Pyro**: $16.42 M
- **Propellant**: $12.44 M
- **DEMIL**: $4.2 M
- **IM**: $0.43 M
Who is Involved?

Who Is Involved?
$93.6 Million Provided in **FY11** by the Services …

As of 30 September 2011

- **Department of the Army**
  - ARDEC’s, PEO’s, PM’s and Others
  - $83.8 Million (89%)

- **U.S. Navy**
  - $3.28 Million (4%)

- **USAF**
  - $5.28 Million (6%)

- **OSD - Science, Technology, Engineering and Math (STEM) Educational Program**
  - $1.28 Million (1%)
Broad Participation Across the Country

AAI Corporation
Accurate Energetics Systems LLC
Accurate Munition Systems, Inc.
Action Manufacturing Company
ADEX Machining Technologies
Advanced Materials & Manufacturing Technologies, LLC
Advanced Powder Products, Inc.
Aerotech
Ahura Corporation
Aliant Tech Systems, Inc.
Alliant Tech Systems, Inc. Launch Systems
Alloy Surfaces Company, Inc.
American Ordnance LLC
American Pacific Corporation
American Systems Corp.
Applied Energy, Inc.
Arlington Machine and Tool Company
Armtec Defense Products Esterline Defense Group
Artis, LLC
BAE Systems
BAE Systems Armament Systems
Bailey Tool & Manufacturing Company
Battelle
Blue Juice, Inc.
Brinkman International, Inc.
CarboMet, LLC
Cartridge Actuated Devices, Inc.
Ceramatec, Inc.
Charles F. Day & Associates, LLC
Chemring Energetic Devices
CLogic Defense
Combined Systems, Inc.
Concurrent Technologies Corporation
Cornerstone Research Group, Inc.
Corvid Technologies
Custom Analytical Engineering Systems, Inc.
Cyalume Technologies, Inc.
David Earl Cain Consulting
Day & Zimmermann - Munitions & Government DE Technologies, Inc.
Decilog, Inc.
Digital Solid State Propulsion LLC
Dindi Firearms Manufacturing, Inc.
Directed Energy Technologies, Inc.
Dynamic Flowform Corporation
Dynetics, Inc.
Eagle-Picher Technologies, Inc.
EFW Inc.
El Dorado Engineering, Inc.
Electronic Warfare Associates, Inc.
Electronics Development Corporation
Energetics Materials & Products
EnerSys Advanced Systems Inc.
Ensign-Bickford Aerospace & Defense Company
EOIR Technologies, Inc.
Ervin Industries Inc.
Excellitas Technologies Sensors, Inc.
Fibertec, Inc.
FluidSystem Inc.
Franklin Engineering Group, Inc.
Frontier Performance Polymers Corporation
G. Schneider & Associates, Inc.
General Atomics
General Dynamics Armament & Technical Products, Inc.
General Dynamics Ordnance & Tactical Systems
General Sciences, Inc.
Georgia Tech Applied Research Corporation
GG Greene Enterprises Inc.
Gomez Research Associates, Inc.
GOTec Sensors and Integrated Systems
Gradient Technology (G.D.O., Inc.)
Gunter Engineering
Hi-Shear Technology Corporation
Hittite Microwave Corporation
Honeywell International, Inc.
HT Microanalytical Inc.
IllinoisRocstar LLC
Imperial Machine & Tool Company
Infocitex Corporation
Kaman Aerospace Corporation
Keystone Automation, Inc.
Kilgore Flares Company, LLC
L-3 Fuzing & Ordnance Systems
L-3 Interstate Electronics Corporation
Laserlith Corporation
Lasertel, Inc.
Latrobe Specialty Steel Company
Lockheed Martin Company
Logistics Engineering & Systems Integration Services, LLC
Luna Innovations Incorporated
Manufacturing Techniques, Inc. (MTEQ)
Marotta Controls, Inc.
Martin Electronics, Inc.
Matrix Technologies
Matrix Systems, Inc.
MaxPower, Inc.
Mayflower Communications Company, Inc.
Mecar USA Inc.
Medico Industries, Inc.
Miltec Corporation
Militronics Manufacturing, Inc.
Mixed Signal Integration
M-Mech Defense, Inc.
MSE Technology Application, Inc.
Mustang Technology Group, L.P.
Nalas Engineering Services, Inc.
Nammo Talley Inc.
nanoPrecision Products, Inc.
NASCENTechology
National Technical Systems, Inc.
NAVSYS Corporation
NI Industries, Inc.
nLIGHT Photonics Corporation
Northrop Grumman Electronic Systems – ISR Systems Division
Northrop Grumman Systems Corporation, acting through Northrop Grumman Information Systems
Northrop Grumman Information Systems Division
Novatech
Nu-Stock Industries, Inc.
Olin Corporation - Winchester Division
Omnitek Partners, LLC
Orbital Research, Inc.
Pacific Scientific Energetic Materials Company
Paramount Metal Finishing
Phillips Plastics Corporation
Physical Sciences, Inc.
Polestar Technologies, Inc.
Polymer Processing Institute
QorTek, Inc.
R4 Incorporated
Raytheon Company
RDM Engineering, LLC
Resodyn Acoustic Mixers
Reynolds Systems, Inc.
Rockwell Collins
Rocky Mountain Scientific Laboratory
Rocky Research
Sabre Consulting and Training LLC
Safety Consulting Engineers
SAIC
SAIC - Systems Engineering and Advanced Technology Division
Savit
Scientific Engineering, Inc.
Security Signals, Inc.
Sentel Corporation
SMH International, LLC
South Carolina Research Authority (SCRA)
Spectra Technologies LLC
SRI International
St. Mark’s Powder
Stevens Institute of Technology
STG, Inc.
Strategic Innovative Solutions, LLC
Subsystem Technologies, Inc.
Synopsys Technologies Inc.
Sytronics, LLC
Systima Technologies, Inc.
Tanenhaus and Associates, Inc.
Tanner Research, Inc.
TDA Research, Inc.
Technology & Management International (TAMI), LLC
Technology Service Corporation
Teledyne RIS
Textron Systems Corp.
Thales USA Defense & Security, Inc.
The Boeing Company
The Pennsylvania State University
The Research Foundation of State University of New York
The Timken Company
Touchstone Research Laboratory, LTD
TPL, Inc.
TRAX International Corporation
Universal Propulsion Company, Inc.
Universal Technical Resource Services, Inc.
University of Florida
University of Hartford
University of Rhode Island, Research Office
UTRON, Inc.
UXB International, Inc.
Verilat Technology, Inc.
Vermillion Incorporated
Victory Solutions, Inc.
West Virginia University Research Corporation
Wilkes University
Woodward HRT, Inc.

Color Key
Executive Committee
Member Organizations
How is it Organized?
Why Should I Use It?
## Features and Benefits

<table>
<thead>
<tr>
<th>FEATURES</th>
<th>BENEFITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open Membership</td>
<td>Affords opportunity for all to participate by lowering barriers to entry.</td>
</tr>
<tr>
<td>Streamlined Acquisition</td>
<td>Existing contract and annual business processes reduce duplicative FAR-based upfront contract processes, thus reducing overall development and fielding time for prototype materiel solutions.</td>
</tr>
<tr>
<td>Collaborative and Competitive Environment</td>
<td>Enables Government and Consortium members to collaborate in an upfront technology planning process. Consortium members (or teams of members) then compete in response to government Request for Ordnance Technology Initiatives in anticipation of technology development funding against the tech development plan. The Government solicits, evaluates, selects and awards.</td>
</tr>
<tr>
<td>Targeted Research Investment</td>
<td>Provides Consortium members early insight into technology requirements which in turn allows them to focus their Independent Research and Development (IRAD) resources on items that matter to the Government.</td>
</tr>
<tr>
<td>Small Business and Non-traditional Participation</td>
<td>Encourages participation by small and non-traditional defense contractors that can bring innovative technologies and solutions to both the Government and the Consortium member organizations.</td>
</tr>
<tr>
<td>Resource Leveraging</td>
<td>Allows Government and Consortium members to leverage their financial resources and employ each others’ facilities, technology and human capital investments to achieve critical mass.</td>
</tr>
<tr>
<td>Single-Point Contracting</td>
<td>Reduces proposal preparation, contract award, and congressional reporting burdens on both the Government and Consortium members.</td>
</tr>
<tr>
<td>No Protests Allowed</td>
<td>Prohibits formal protests against the government's project selections and awards.</td>
</tr>
<tr>
<td>DoD / Industry, Academia Partnering</td>
<td>Minimizes ordnance technology development duplication across Services, Agencies and Industrial/Academic enterprise components.</td>
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</tbody>
</table>
“...the DOTC process has been very valuable for the development of new weapon system technologies that meet a wide variety of Warfighter mission requirements and to support the rapid transition of these new technologies to the Industrial Base. An additional benefit is DOTC allows us meet DA obligation goals which is vital to keep the S&T activities funded.”

Ms. Barbara J. Machak, SES - Executive Director, Enterprise and Systems Integration Center, ARDEC

"Over the past four years PM CAS has used the DOTC to advanced its strategic objectives. The annual plan has proven to be an effective and efficient tool in aligning Industry IRAD investments with PM CAS goals. The flexibility and responsiveness of the DOTC staff enabled key programs such as the Accelerated Precision Mortar Initiative (APMI) to advance rapidly toward qualification."

Mr. Martin Moratz, Chief, Conventional Ammunition Division, PM-CAS

"DOTC has provided an easy-to-use mechanism to access multiple ordnance-related companies for the purpose of doing Research & Development on critical DOD materials. Through the use of DOTC, a tri-service explosives development program for TATB was able to be established, which ultimately could lead to a CONUS source of TATB."

Mr. Charles R. Painter, Director, Navy Energetics ManTech Center

"We have used DOTC initiatives with great success to meet the growing demands of PEO Ammunition and PM Close Combat Systems. The DOTC acquisition approach has been one of the single most important tools to provide my growing organization with flexible and timely contract awards to get the job done effectively."

Mr. James L. Wejsa, Chief, Pyrotechnics Technology & Prototyping Division, ARDEC

"Utilizing a Single Point of Contact approach has provided maximum flexibility to manage the contractual aspects of a dynamic program like this. All parties are benefitting from a more efficient and effective way to execute DOTC requirements. It significantly reduces processing times and the need to interface with individual member companies."

Mr. Bruce B. Berinato, Principal Assistant Responsible for Contracting, US Army Contracting Command

Customer Satisfaction… Assured Through Timely Performance and Successful Execution
Recent Success Stories

Advanced Precision Mortar Initiative (APMI) --
Initiated by ONS, rapid acquisition of development effort along with simultaneous production contract, RDTE to fielding in 9 months

Accelerated Improved Intercept Initiative (AI3) --
Initiated by JUONS, RDTE award in 129 days from initial Industry engagement

1,3,5 Tri-amino 2,4,6-trinitrobenzene (TATB) --
Single Point Failure addressed, Joint services engaged through annual cycle, 92 day award from $\$$ received

Defense Protection System (DPS) --
Basket proposal used, funding obligated before expiration, rapid 36 day award -- TARDEC benefitted through collaboration without redundant spending
How do I Use It?
The Standard Process:

- **Submit Annual Plan Requirement:** DoD PMs and Lab Technologists -- submit technical requirement(s) to the DOTC office for inclusion in the Annual Plan in the year prior to funding availability

Options for Currently Available Funding:

- Government can review current database of selected and basket proposals on NWEC-DOTC web site
  
  - **Incrementally Fund an Existing Initiative:** There may be an open initiative for a similar requirement that can be collaboratively worked (work can be initiated in less than 30 days)
  
  - **Award a Basket Proposal:** Determine if there are any proposals in the basket that meet your requirement (60-80 days award time)
  
  - **Out-of-Cycle Request:** For requirements that will directly effect the soldier in the field or significant RDTE funding investment for urgent transition, an out-of-cycle request can be submitted (4-6 month award time)
Annual Plan Development to Initiative Award…

**NOV - JAN**
- Technology IPTs
- Government Project Officer/NWEC Planning

**FEB - MAR**
- Draft Annual Plan
- Gov’t S&T Guidance
- Input from NWEC
- Collaboration Days

**APR - JUN**
- Annual Plan Finalized Call for Ordnance Technology Initiatives
- ExCom Meeting

**JUL - SEP**
- White Papers & Government Feedback
- NWEC General Membership Mtg

**SEP - OCT**
- Proposals Submitted & Evaluated
- ExCom Meeting

**Basket Proposals Remain Valid for 3 years from Submission Date**

**Funding Available for Selected Proposals?**
- Yes
- No

**Electronic Basket**
- INIT 001
- INIT 002
- INIT 003

**Prefer RDT&E Funding**
- Can accept APA/PAA w/justification
- Can not accept OMA funding
Enterprise Statistics
## DOTC Award Status

<table>
<thead>
<tr>
<th>Status as of 2/3/12</th>
<th>10-01 INITs</th>
<th>11-01 INITs</th>
<th>12-01 INITs</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whitepapers</td>
<td>572</td>
<td>357</td>
<td>441</td>
<td>1,977</td>
</tr>
<tr>
<td>Proposals</td>
<td>214</td>
<td>144</td>
<td>202</td>
<td>862</td>
</tr>
<tr>
<td>Remaining in Basket/Rejected</td>
<td>150 / 13</td>
<td>122 / 5</td>
<td>131 / 20</td>
<td>515 / 40</td>
</tr>
<tr>
<td>“Selected” Proposals Awaiting Funding</td>
<td>--</td>
<td>1</td>
<td>34</td>
<td>36</td>
</tr>
<tr>
<td>Proposals Funded to Date</td>
<td>51</td>
<td>16</td>
<td>17</td>
<td>186</td>
</tr>
<tr>
<td>Awarded to Date</td>
<td>48</td>
<td>13</td>
<td>0</td>
<td>161</td>
</tr>
<tr>
<td>Ceiling Awarded to Member ($M)</td>
<td>$90.70</td>
<td>$44.50</td>
<td>$0</td>
<td>$515.40</td>
</tr>
</tbody>
</table>
## Execution Status

### Report Period: 01 Jan - 03 Feb 2012

<table>
<thead>
<tr>
<th>Initiative</th>
<th>Current Initiatives</th>
<th>New Start Initiatives</th>
<th>Initiative Completions</th>
<th>Initiative Adjustment</th>
<th>Member Planned Amount</th>
<th>Members Invoiced Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Qty</td>
<td>Value</td>
<td>Qty</td>
<td>Value</td>
<td>Qty</td>
<td>Value</td>
<td>Qty</td>
</tr>
<tr>
<td>Warheads</td>
<td>22 $ 44,568,298</td>
<td>1 $ 868,594</td>
<td>0 $ -</td>
<td>4 $ 957,005</td>
<td>$ 47,893,328</td>
<td>$ 32,100,437</td>
</tr>
<tr>
<td>Explosives</td>
<td>27 $ 70,659,094</td>
<td>1 $ 730,400</td>
<td>1 $ 1,683,527</td>
<td>3 $ 1,202,900</td>
<td>$ 65,394,697</td>
<td>$ 54,317,918</td>
</tr>
<tr>
<td>Fuzes</td>
<td>24 $ 32,793,781</td>
<td>0 $ -</td>
<td>0 $ -</td>
<td>2 $ 196,519</td>
<td>$ 31,138,279</td>
<td>$ 27,765,192</td>
</tr>
<tr>
<td>Propellants</td>
<td>10 $ 12,438,642</td>
<td>0 $ -</td>
<td>0 $ -</td>
<td>1 $ 500</td>
<td>$ 13,397,780</td>
<td>$ 9,584,188</td>
</tr>
<tr>
<td>Pyrotechnics</td>
<td>12 $ 16,418,381</td>
<td>0 $ -</td>
<td>0 $ -</td>
<td>1 $ 100,000</td>
<td>$ 14,602,923</td>
<td>$ 9,264,737</td>
</tr>
<tr>
<td>Demilitarization</td>
<td>3 $ 4,199,370</td>
<td>0 $ -</td>
<td>0 $ -</td>
<td>0 $ -</td>
<td>$ 4,153,141</td>
<td>$ 3,934,944</td>
</tr>
<tr>
<td>Enabling Technology</td>
<td>29 $ 52,534,271</td>
<td>1 $ 257,033</td>
<td>0 $ -</td>
<td>6 $ 1,641,353</td>
<td>$ 34,024,231</td>
<td>$ 31,232,101</td>
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<tr>
<td>Inert Munitions</td>
<td>1 $ 428,166</td>
<td>0 $ -</td>
<td>0 $ -</td>
<td>1 $ 93,466</td>
<td>$ 226,632</td>
<td>$ 83,332</td>
</tr>
<tr>
<td>Protection &amp; Surv</td>
<td>1 $ 35,308,289</td>
<td>1 $ 35,308,289</td>
<td>0 $ -</td>
<td>0 $ -</td>
<td>$ -</td>
<td>$ -</td>
</tr>
<tr>
<td><strong>Total</strong>:</td>
<td><strong>129 $ 269,348,292</strong></td>
<td>4 $ 37,164,316</td>
<td>1 $ 1,683,527</td>
<td>18 $ 4,191,743</td>
<td>$ 210,831,011</td>
<td>$ 168,282,848</td>
</tr>
</tbody>
</table>
DOTC Collaboration Days
DOTC Collaboration Days

What are Collaboration Days?

- DOTC or DoD laboratory-hosted events to improve collaboration opportunities between DoD and NWEC throughout the DOTC annual cycle
- Opportunities to bring DOTC to the DoD laboratories and/or their PEO/PM customers

What is the Purpose?

- Facilitate DoD, industry and academia partnerships
- Increase opportunity for Joint and Co-funded initiatives
- Capture DoD technology gaps and challenges
- Leverage DoD and industry resources to maximize return on investment
- Assemble a critical mass of world-class technologists for information exchange leading to better technical solutions
FY12 Calendar of Events

<table>
<thead>
<tr>
<th>Event</th>
<th>Dates</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>PEO Missiles &amp; Space</td>
<td>26 JAN</td>
<td>Huntsville, AL</td>
</tr>
<tr>
<td>Collaboration Day</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DoD Fuze Collaboration</td>
<td>7-8 FEB</td>
<td>Crystal City, VA</td>
</tr>
<tr>
<td>DOTC Executive Committee</td>
<td>28 FEB</td>
<td>Phoenix, AZ</td>
</tr>
<tr>
<td>AFRL MEMs Industry Days</td>
<td>13-14 MAR</td>
<td>Eglin, FL</td>
</tr>
<tr>
<td>JIMTP Spring Review</td>
<td>26-29 MAR</td>
<td>La Plata, MD</td>
</tr>
<tr>
<td>Air Armaments Center Weapons</td>
<td>3-4 APR</td>
<td>Eglin, FL</td>
</tr>
<tr>
<td>Portfolio</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NWEC General Membership</td>
<td>6-7 JUN</td>
<td>Parsippany, NJ</td>
</tr>
<tr>
<td>Meeting</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DOTC Executive Committee</td>
<td>20 AUG</td>
<td>Livermore, CA</td>
</tr>
<tr>
<td>JIMTP Fall Review</td>
<td>OCT</td>
<td>TBD</td>
</tr>
<tr>
<td>DOTC Collaboration Committee</td>
<td>NOV</td>
<td>Crystal City, VA</td>
</tr>
</tbody>
</table>

Collaboration Days
Summary
Summary

DOTC is a healthy and growing enterprise for DoD ordnance technology development, demonstration, and prototyping; DOTC:

- reduces the upfront contracting time and administration burden with streamlined and measured processes
- engages small and non-traditional defense businesses equally among the traditional defense contractors in an open and competitive environment
- enables focused IRAD within industry; and resource leveraging among government, industry and academia

DOTC enables Collaboration, Communication, and Cooperation across the Munitions Enterprise
Questions?

A Premier Government, Industry & Academic Partnership

Q&A?
Points of Contact
Points of Contact

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