



# Space and Naval Warfare Systems Center Atlantic

## Role of Small Business in Emerging Technology

Presented to:  
**Small Business and Industry  
Outreach Initiative (SBI/OI)  
Thirty-Third Symposium**

30 July 2014

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CTO/7.0/D&I  
SPAWAR Atlantic

# Discussion Overview

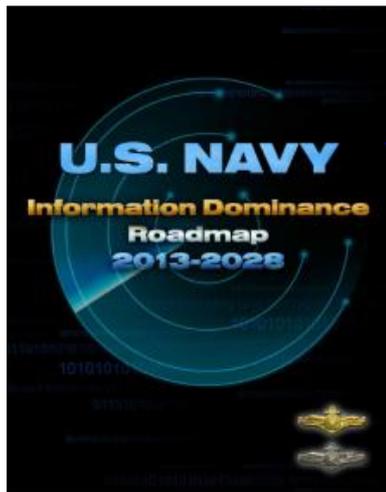
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- ▼ Small Firm Participation in Emerging Research
- ▼ Information Dominance Roadmap and Objectives
- ▼ Harvesting Government-Developed Technologies
- ▼ Strategy for New Opportunities

# Small Business and Emerging Technologies

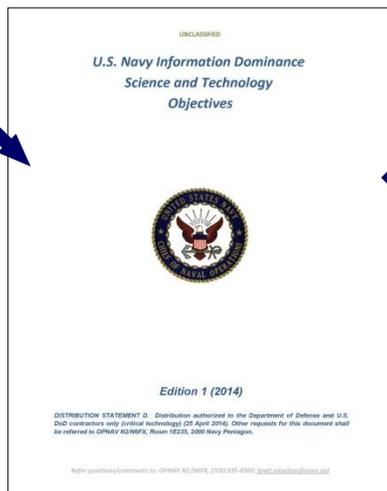
- ▼ Differences in the role of large and small business in emerging technologies
  - Small business tends towards a new technology
  - Large business tends towards improvements to a product line/business unit
  
- ▼ Small business is much more likely to develop new technologies and approaches

# ID S&T Gap Hierarchy



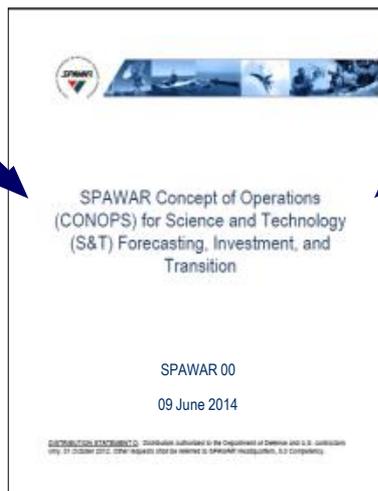
**OPNAV N2/N6  
ID Roadmap**

[http://www.defenseinnovationmarketplace.mil/resources/Information\\_Dominance\\_Roadmap\\_March\\_2013.pdf](http://www.defenseinnovationmarketplace.mil/resources/Information_Dominance_Roadmap_March_2013.pdf)



**ID S&T Focus Areas  
and  
Objectives**

Text Only Version Released  
Industry Day, 9 May 2014  
Distro Statement D



**PEO C4I S&T  
Acquisition Gaps**

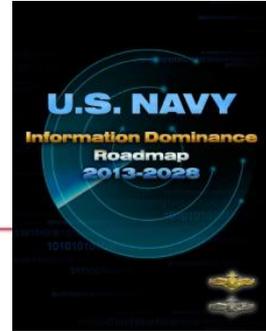
[http://www.defenseinnovationmarketplace.mil/resources/PEO\\_C4I\\_ST\\_AcquisitionGapsJune2014signed.pdf](http://www.defenseinnovationmarketplace.mil/resources/PEO_C4I_ST_AcquisitionGapsJune2014signed.pdf)



**Naval S&T Strategic  
Plan**

[http://www.defenseinnovationmarketplace.mil/resources/2011Naval\\_Strategic\\_Plan.pdf](http://www.defenseinnovationmarketplace.mil/resources/2011Naval_Strategic_Plan.pdf)

# OPNAV N2/N6 ID Roadmap

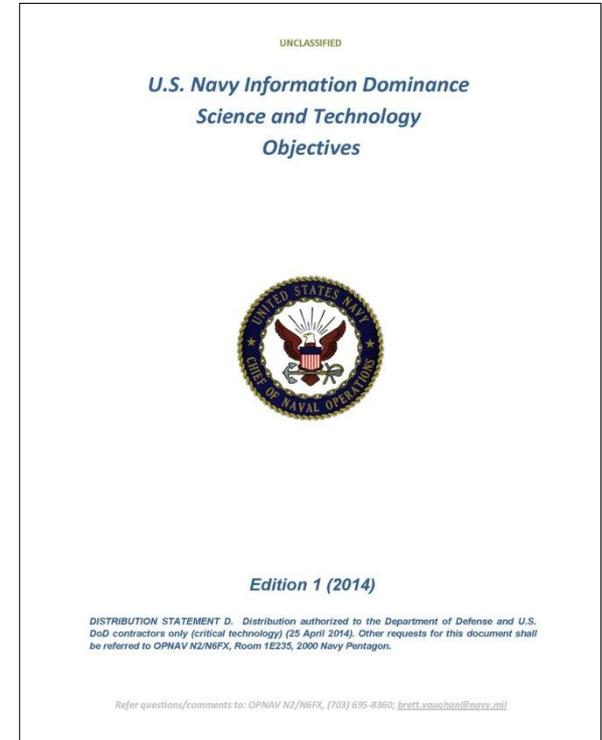


	<u>2013-2019</u>	<u>2020-2028</u>
<p><b><u>Assured C2</u></b> Network Force Any Environment</p>	<ul style="list-style-type: none"> <li>• High Band Width Over Horizon</li> <li>• Communications in Contested Environment</li> <li>• Tactical Network Common Computing</li> <li>• EM Spectrum Controls</li> <li>• Tactical Data Links</li> </ul>	<ul style="list-style-type: none"> <li>• Assured EM Spectrum Access</li> <li>• Dynamic Flexible Grid</li> <li>• Mission Relevant Data Assurance</li> <li>• Enhanced Data Link Networks</li> <li>• Smart Sensor Data Dissemination</li> </ul>
<p><b><u>Battlespace Awareness</u></b> Know the Enemy Know the Environment</p>	<ul style="list-style-type: none"> <li>• Manned and Unmanned Platforms, Extended Sensor Capacity, Commercial Space-Based Imaging, Automated Information Systems</li> <li>• Distributed Network, Multi-INT, High Performance Computing Virtual Environment</li> <li>• Sharing Enhanced Enterprise Solutions</li> </ul>	<ul style="list-style-type: none"> <li>• Streamline Tasking, Planning &amp; Direction</li> <li>• Advanced Sensor Development – All Domains</li> <li>• Automate Processing &amp; Fusion Data Delivery</li> <li>• Predict Physical &amp; Virtual Environment</li> <li>• Understand Intentions and Capabilities</li> <li>• Enable Informed Decisive Actions</li> </ul>
<p><b><u>Integrated Fires</u></b> Sustain Initiative, Disrupt Enemy and Intentions</p>	<ul style="list-style-type: none"> <li>• Mitigate Shortfalls in Data Links in A2/AD</li> <li>• Field Increments of:               <ul style="list-style-type: none"> <li>• Net Enabled Weapon (NEW)</li> <li>• Joint Standoff Weapon (JSOW-C1)</li> <li>• Small Diameter Bomb (SBD-II)</li> </ul> </li> <li>• Field Counter Red C4ISR Decoy-Deception</li> <li>• Modeling, Simulation &amp; Analysis from Engineering to Campaign Level</li> </ul>	<ul style="list-style-type: none"> <li>• Prevent Kinetic / Non-Kinetic Operations</li> <li>• Prevent Kinetic / Non-Kinetic Weapons</li> <li>• Reduce Blue Force Reliance on High-Risk Conv Operations</li> <li>• Integrate Targeting &amp; Fire Control</li> <li>• Exploit Spectrum as a Weapon</li> <li>• Dynamically Collaborate Across all Domains &amp; Services</li> </ul>

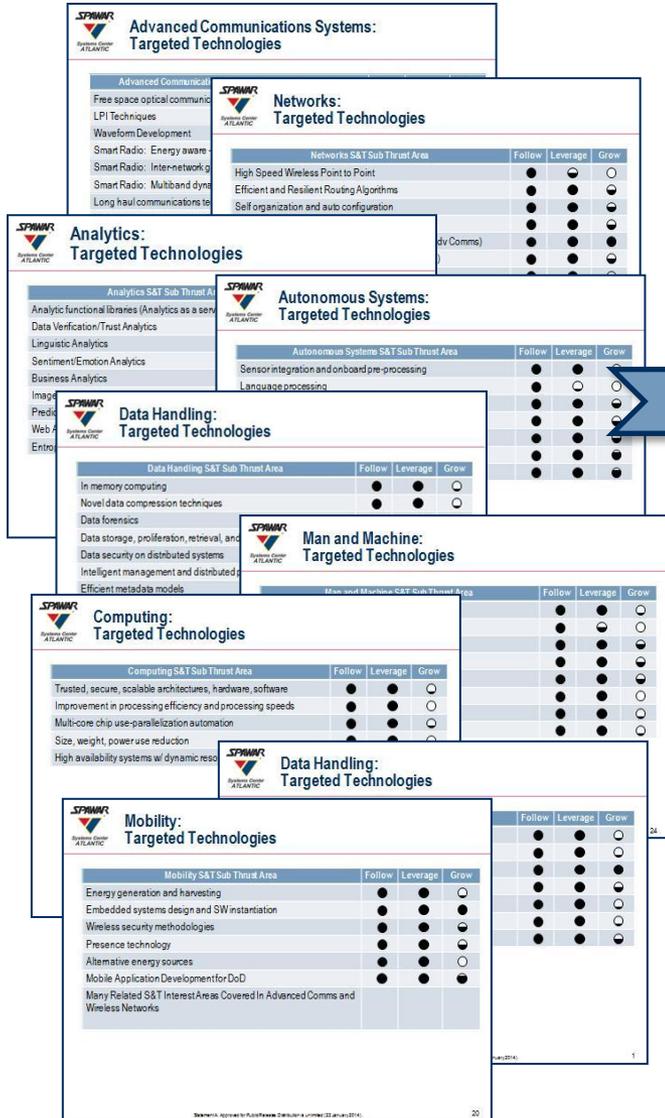
# ID Science & Technology Objectives (STOs)

(Eleven ID Focus Areas, 47 sub-component Technology Objectives)

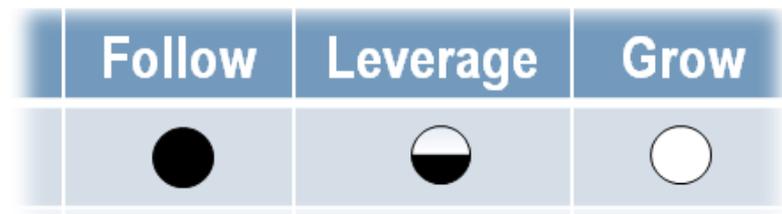
- ▼ Information Transport and Infrastructure
- ▼ Information Security and Assurance
- ▼ Advanced Sensing
- ▼ Data Integration and Decision Support
- ▼ Enhanced Targeting and Fire Control
- ▼ Electromagnetic Spectrum Operations
- ▼ Non-Kinetic Fires
- ▼ Positioning, Navigation and Timing
- ▼ Autonomy
- ▼ Human-Systems Interface
- ▼ Environmental Battlespace Awareness



# S&T Strategic Plan: Follow/Partner/Grow 3-5 Year Outlook



- ▼ Advanced Communications
- ▼ Networks
- ▼ Analytics & Artificial Intelligence
- ▼ Autonomous Systems
- ▼ Data Handling
- ▼ Mobility
- ▼ Computing
- ▼ Man & Machine



# Technology Transfer (T2) Partnerships

## ▼ Partnership Intermediary

- T2 Transactional Experts:
  - Helps companies with application & commercialization plans
  - Helps both parties on terms and expectations

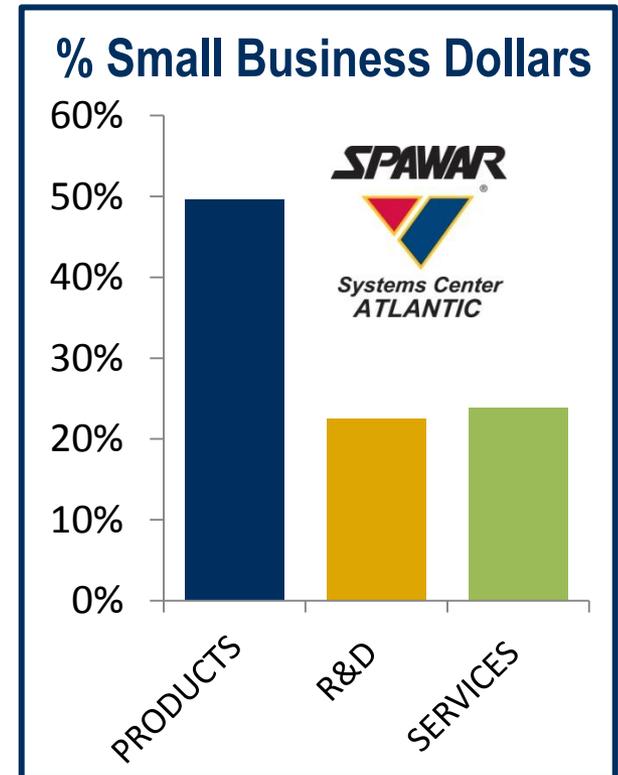
## ▼ Private sector partners

- Digital Corridor
- DIG South
- Charleston Chamber of Commerce
- College of Charleston, Entrepreneurial Studies Program



## ▼ Partnership benefits

- Innovation Discovery Events
- Patent Licensing
- CRADA



# S&T Gaps and Challenges

- ▼ The gulf between documented S&T gaps and S&T funding is widening
- ▼ Standup of Information Dominance (ID) Community has focused priorities
- ▼ Look for opportunities to communicate:
  - Educate Government on capabilities
  - Educate Small Business on our Needs/Technical Direction
- ▼ Opportunities for Small Business
- ▼ Know the various S&T programs and look for solicitations



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