The Defense Innovation Marketplace and Virtual Technology Interchanges

Useful Resource for DoD and Industry

February 5, 2015
The need for collaboration in Research and Development has increased: across the Department, with our industrial base partners and Internationally.

Opportunities exist for industry/academia to learn about our challenges and provide solutions.

Two-way Communication between the DoD and potential solution providers is key.

Maintaining Tech Superiority is the foundation of the ASD(R&E) strategy.
Better Buying Power (BBP) Continuous Improvement Process

- USD(AT&L) Frank Kendall

- **BBP 1.0**: Focused on **Best Practices** and Business Rules
  - Affordability, ‘Should-Cost’, Performance-Based Contracting

- **BBP 2.0**: Focused on **Critical Thinking**, making better business decisions
  - Supplier Incentive Programs, Open Systems Architectures and Risk Reduction

- **BBP 3.0**: Continues and builds upon prior elements – and takes the focus to our Products
  - **Innovation**
  - **Technical Excellence**
  - **Speed to Market**
Reliance 21: Operating Principles

- **Operational Framework of the DoD S&T Joint Planning and Coordination process (Updated January 2014)**
  - Executes the DoD R&E Strategies

  - Portfolio Management infrastructure to enable:
    - Information sharing
    - Alignment of effort against capability gaps
    - Coordination of priorities and investments
    - Exploit synergies and develop new opportunities
    - Support for scientists and engineers across the DoD R&E Enterprise

- **Communities of Interest (COI)**
  - 17 *cross-domain* technical areas, each with their own Steering Group Lead and multiple technical ‘challenge areas’ or sub-groups, staffed with Subject Matter Experts (SMEs)

  - Specific cross-cutting technology areas where there is substantial investment *across multiple Components*

**Mission:** Leverage global commercial and non-commercial research and development (R&D) to ensure superior and affordable development in areas critical to defense, including but not limited to:

- **DoD Engagement Strategy**
  - Communities of Interest
  - Weapons Technologies
  - Sensors & Processing
  - Materials & Manufacturing Processes
  - Engineered Resilient Systems
  - Counter-IED
  - Counter-WMD
  - Electronic Warfare / Electronic Protection
  - Space
  - Ground & Sea Platforms
  - Cyber
  - Biomedical (ASBREM)
  - Command, Control, Comms, Computers, and Intelligence (C4I)
  - Energy & Power Technologies
  - Human Systems

* Denotes DoD cross-cutting S&T Priorities (Data-to Decisions is found in C4I)

**Presenters at NDIA Spring Conference, March 2015**
Reliance 21
Technology Roadmaps

• COIs Build Technology Roadmaps
  – Collect, coordinate and align technical capabilities, requirements, gaps, opportunities and priorities into Investment-grade Technology Roadmaps for their respective focus area
  
  – Motivations: What is military need / impact of meeting these technical needs?
  
  – Goals and Metrics: What technical plans are in place and where are the gaps?
  
  – Analysis: Where are the opportunities to leverage external investments and expertise?
  
  – Produced every two years, used to update the COI Portfolio Reviews, and the Annual S&T Overview

  – Public versions will be posted on the Defense Innovation Marketplace

  – More detailed versions will be posted on DoD Techipedia ASD(R&E) COI Wiki

COI Roadmaps: An ideal framework to improve engagement with Industry; identify technical challenges
DoD-Industry Engagement

The Marketplace: Your DoD S&T/R&D Resource

Defense Innovation Marketplace website - communication resource between DoD S&T/R&D and Industry/Academia

- DoD R&E Strategic Guidance
- Long-Range Research and Development Program Plan
- Virtual Technology Interchanges
- Independent Research & Development (IR&D) Secure Portal

Are YOU using the Marketplace and the IR&D portal?
Independent Research and Development (IR&D)

• **What is it?**

  IR&D is an R&D effort that is neither sponsored by a grant, nor required in performing a contract, and which falls under any of the following four areas: 1) Basic Research, 2) Applied Research, 3) Development or 4) Systems and other concept studies.
  
  – Independently-selected, company-funded, R&D of potential interest to DoD.
  – Industry costs for IR&D are allowable as indirect expenses (overhead) on contracts to the extent they are allocable and reasonable.

• **Better Buying Power Initiative** drove a 2012 DFARS Rule Change requiring ‘major defense contractors’ submit IR&D project summaries to a secure, restricted-access database (via www.DefenseInnovationMarketplace.mil)

• **Contractors that do not meet the DFARS requirement are also** submitting project summaries to improve DoD visibility into their IR&D efforts.

• Since the secure portal opened in January 2012, more than 15,000 IR&D efforts have been submitted, by more than 100 organizations.
IR&D: Why is it important?

- **DoD – and industry – benefit from** IR&D efforts to address technical challenges – reduce cost, technical and schedule risk early.

- **IR&D as Market Research:** DoD uses the IR&D Secure Portal to find projects that address, mitigate, or improve a DoD technical challenge – transition to a program of record.

- **Encourages greater contribution to technology** related to future defense systems.

- **Creates technology surprise.**

- **Hedges** against the uncertainties, inflexibilities and short time horizon of defense planning and systems development.

- **Translates new ideas and technologies** into defense capabilities.
The Marketplace: Resources for DoD and Industry

- **For DoD**
  - Hosts the IR&D Secure Portal with more than 18,000 project summaries **broken down by COI**.
  - Hosts Virtual Technology Interchanges focused on specific technology challenges

- **For Industry**
  - Contains information, links, documents, and events on DoD R&E / S&T priorities.
  - Links to DoD R&E solicitations.

The Marketplace: Resources for DoD and Industry

**For DoD**
- Clear channel to communicate to industry.
- Register for access to Secure Portal to find IR&D efforts of interest to DoD.

**For Industry**
- Information sorted and posted by target agency or audience, funding vehicle.
- Links to DoD R&E-related solicitations (FedBizOps).
- Links to DoD Licensable Patents for use by industry.
- Option for updates through Twitter and RSS feeds.

Twitter: @DoDInnovation
Secure Access to Industry IR&D Projects for DoD Leadership, R&E, S&T and Acquisition Professionals

Marketplace: Resources for DoD

- Secure portal with more than 18,000 IR&D Project Summaries submitted by more than 100 companies
- Projects searchable by COI and sub-areas.
- Access for government civilian and military DoD S&T/R&D and Acquisition Professionals Only (no contractors)
- Request access at: www.defenseinnovationmarketplace.mil/government.html
- DoD Searchers encouraged to contact the Industry POC listed on project summaries of interest
### Search Results: Projects View

**On Defense Innovation Marketplace**

#### Company Proprietary Data警告：此数据可能受出口管制。

Your search returned too many results. Please refine your search to improve accuracy of results. Shown totals are calculated from the most relevant results and might be inaccurate.

#### Filter Options
- **Projects**
- **Companies**

#### Search Results (Showing 1 to 10 of 1,162 entries)

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Defense Innovation Marketplace: Dashboard of IR&D Projects
Search Results: Single Project

FAKE-TECH USA PROPRIETARY DATA
Warning - This Report May Be Subject to Export Control

Title: This is a fake record
Type: IR&D
Year: 2012

Summary
Chinese manufacturer Huawei's flagship Ascend P2 smartphone can be operated by users wearing gloves. It's just one of the innovations on display at year's Mobile World Congress -- a showcase of gadgets and gizmos that will allow us to wave goodbye to dying batteries, water damage and a whole range of perils that dare to threaten the lives of our beloved mobile phones.

IR&D Record Number: 12001598
Project Number: 123-246
Status of Effort: New Start
Anticipated Expenditures: $500K

Tech Readiness Level: 4 - Laboratory Validation

Community of Interest/Sub-Area: Autonomy/Human/Autonomous System Interaction and Collaboration

Contact information is provided – Connections can be made...
The Marketplace:
Industry Engagement – Virtual Technology Interchanges

• **For Industry:**
  - Specific technology challenges posted to engage with industry – use of Multimedia and podcasts to ensure message is delivered.
  - AFRL Autonomy General Purpose Documents posted.
  - Responses submitted through the IR&D Secure Portal; efforts already in the Portal can be identified to Host for review with no further action required.

• **For DoD**
  - All responses are in same format, accessible to all Subject Matter Experts to review.
  - Most relevant efforts selected for more detailed, in-person review; more effective and efficient process.
Virtual Technology Interchanges: Specific Technology Challenges for Industry Engagement

Joint Service/Industry Human Systems COI

Selection of Projects

Response:
• 44 Companies submitted 206 Projects online

Selection:
• 19 companies selected to brief 43 projects

Secure Video Teleconference was used when Gov’t could not attend

Results/Value

• Good “discovery” mix
• Targeted discussions with industry leaders vs. long briefings
• 6 CRADAs/partnerships underway
• Proposals in discussion

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defenseinnovationmarketplace.mil/humansystems.html
• Technology Domain Awareness (TDA) is the effective understanding of the technology landscape as it relates to current and future defense capability needs.

“DOD must be able to access which commercial innovations have military potential, rapidly adopt them, adapt them, and then test and refine them, including through war-gaming and demonstrations.”

The Honorable Chuck Hagel, Secretary of Defense
Fiscal Year 2015 Budget Preview (delivered February 24, 2014)

• IACs’ approach to providing TDA incorporates data, analysis, and tools to:
  – Identify and harness synergistic efficiencies within the DOD and USG to develop joint capabilities based on shared lessons-learned from programs and operational engagements (including rapid innovation activities undertaken by DoD in recent years);

  – Collaborate on solving warfighter-centric challenges in ways that better frame the problem sets and the opportunities to solve them;

  – Properly engage technology markets (traditional and non-traditional) to offset costs and innovate ahead of the threat.
DOD R&E Gateway
Community of Interest Wiki

COI Collaboration Wiki – Accessible to all DoD Civilian and Military (CAC Required) – DoD Contractors can access with approval of Government Sponsor

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Summary

• The need for collaboration in Research and Development has **increased:** across the Department, with our industrial base partners and Internationally

• **Opportunities exist** for industry/academia to learn about our challenges and provide solutions
  – Long Range Research and Development Program Plan (LRRDPP)
  – Defense Innovation Initiative (DII)
  – Technology Domain Awareness (TDA)

• **Communications** between the Department and potential solution providers is key. Several communications vehicles are available:
  – Virtual Technology Interchanges
  – Assistant Secretary of Defense for Research and Development Community of Interest (COI) Collaboration site (COI Wiki)

**Maintaining Tech Superiority is the foundation of the ASD(R&E) strategy**
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DoD Research and Engineering Enterprise:
http://www.acq.osd.mil/chieftechnologist/

Defense Innovation Marketplace

Twitter: @DoDInnovation