



# The Role of the Communities of Interest (COIs) March 25, 2015

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# Communities of Interest (COIs)

## Role in Reliance 21



**Communities of Interest (COIs) enable the S&T Executive Committee (ExCom) to deliver maximum S&T impact with reduced risk**

- 1) COIs lead cross-cutting S&T areas where there is substantial investment across multiple Components**
  - Single COI taxonomy, including for data-calls
- 2) COI Steering Groups take on a leadership role for their S&T area**
  - Build and implement strategic roadmaps
  - “Identify, lead, collaborate and follow” relationships across the Components
  - Identify flagship successes and opportunities to leverage external investment and expertise
- 3) COIs engage across the S&T Enterprise**
  - Collaborate across the COIs and explore COI overlaps
  - Strategic partnerships with international partners, COCOMs, IC, and industry
  - Communicate community goals and opportunities to stakeholders
- 4) The S&T ExCom provides leadership to optimize investment and impact across the S&T portfolio**
  - Act to mitigate or accept risks, deliver opportunities, or exploit burden sharing (Reliance)



# COI Focus



Each COI has a different focus area; Mission, Capability or Technology

### Mission focus

Roadmaps describe capabilities enabled by advanced technologies and systems

Counter-IED

Counter-WMD

Biomedical (ASBREM)

### Systems/ Capability focus

Roadmaps describe how multiple technologies are integrated into complex systems to achieve mission impact

Command, Control, Comms, Computers, and Intelligence (C4I)

Human Systems

Cyber

Autonomy

Engineered Resilient Systems

Electronic Warfare / Electronic Protection

Sensors

Air Platforms

Ground & Sea Platforms

Weapons Technologies

Space

### Technology focus

Roadmaps describe technology goals with multiple applications

Advanced Electronics

Energy & Power Technology

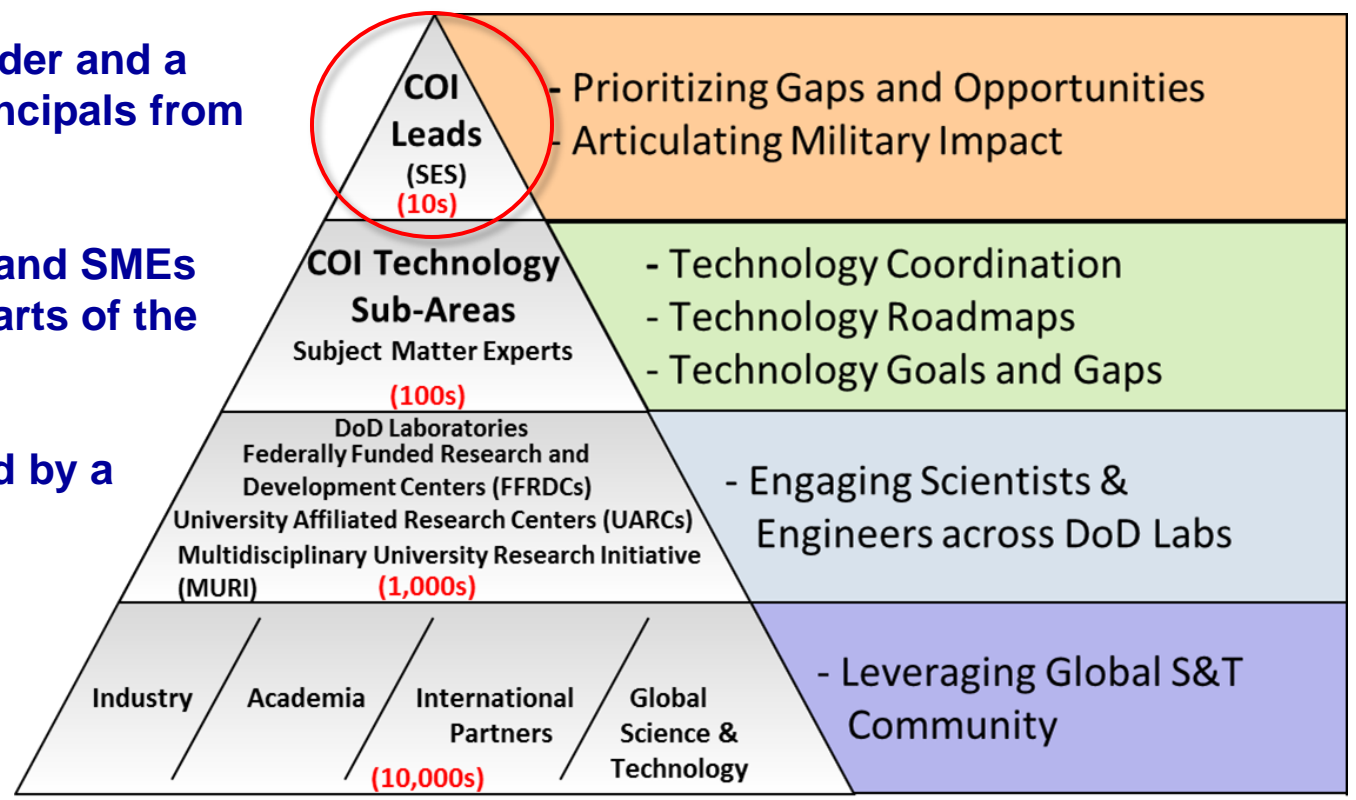
Materials & Manufacturing Processes



# COI Structure

Each COI leverages a global S&T community

- COIs have an SES leader and a Steering Group of Principals from each of the Services
- COI Working Groups and SMEs function as integral parts of the S&T community
- Each COI is supported by a MITRE representative





# COI Taxonomies



**COIs have described each of their technical areas using an unclassified, Tier-1 Taxonomy at DIST A**

- **Tier-1 (DIST A) Taxonomies to be:**
  - Presented on Defense Innovation Marketplace to help Industry bin their IR&D
  - Used for President’s Budget Request data calls.
    - Services and Defense Agencies will be asked to bin their S&T programs and projects into Tier-1 taxonomy areas of primary and secondary (if applicable) COIs
  - The database of S&T funding for BA 2 and 3 accounts is being updated. Information is binned against the DoD S&T COIs and associated Tier-1 sub-areas.
    - The data will provide the COIs with more accurate information on projects in their area of responsibility, to better inform their S&T roadmap development
  - Used to inform academia about areas of interest and alignment
  - Used at Roadmap and Portfolio reviews to tell the S&T story from requirements through to technical challenges, supported by financial data



# PB16 Data Call



## Characterizes Component Budget Activity (BA) 2 and 3 investment areas

- **Components to bin BA 2 and 3 efforts against the agreed COI Tier 1 Taxonomies**
- **Provides COIs with information on investments and projects in their area of responsibility, to better inform their S&T roadmap development**



# COI Engagements



## COI engagements are vital to addressing wide-ranging S&T needs

- **Intelligence Support**
  - S&T Enterprise requires up-to-date intelligence information about the nature of current and future threats as well as emerging technologies to best align research and acquisition priorities
- **COCOMs**
  - The COIs provide a construct to help articulate S&T priorities and investments in achieving mission and operational capability impact
- **International S&T Engagement**
  - USD(AT&L) International Cooperation team works with each COI Steering Group to assess which specific technology gaps can be addressed internationally
- **Basic Research**
  - Basic Research (6.1) can help identify research opportunities and provide an opportunity to engage future S&Es
- **Industry**
  - Industry can use the COI Roadmaps to identify technical challenges



# Intelligence Community Engagement



## Understanding how the adversary will innovate and adapt

- **Improving targeted intelligence support to DoD leadership**
  - Pushing towards more threat roadmaps and kill chains that make sense of the huge volume of analytic products
  - Examples: Research, Development and Acquisition Task Force (RDA TF) and Anti-Access and Area Denial (A2AD); Communities of Interests (COIs) technology roadmaps
- **Pushing intelligence down to the working/program level**
  - Historically, the closer you are to the work, the harder it is to access relevant intelligence
  - Examples: Read folders, monthly S&T intelligence updates on SIPR, regular brown bags and briefings with young analysts, half-day topic-specific workshops, etc.
- **Clearly articulating S&T intelligence needs**
  - Drive increased analysis in priority areas
  - Example: OASD(R&E) S&T Intelligence Needs plan, Input into the Intelligence Communities Strategic Intelligence Plans





# ASD(R&E) & OSD(AT&L)/IC International S&T Engagement Strategy



## Objectives & Implementation Responsibilities

- **Develop a baseline of relevant global S&T concepts, existing and emerging technologies, and capabilities.**
  - ASD(R&E) with Services' Global offices
- **Identify, analyze, and substantiate the existing DoD international S&T engagements across the DoD research communities.**
  - Populate and utilize the International Agreement Database
- **Identify engagement gaps (i.e., missed opportunities) in S&T priority areas to inform DoD decisions (lead, collaborate, follow, watch).**
  - COIs
- **Develop and implement international cooperation to address engagement gaps in S&T priority areas.**
  - IC's Proposed Role, working with Services' Program Offices



# COI Industry Engagement



## COI Roadmaps are an ideal framework to build improved engagement with industry

- Industry can use the COI Technology Roadmaps to identify technical challenges
  - COIs can use the IR&D Secure Portal to find potential industry solutions

- **2015 Spring NDIA S&T Conference**

- Six Parallel COI sessions for in depth briefing and discussion of challenges and priorities
- Seventeen Poster Board Displays detailing the Technology Roadmaps
- Break-outs for 1-on-1 sessions with COI Leads.

- **DoD Hard Problems**

- Provided an opportunity for industry to gain an in depth understanding of these problems at a classified level
- Potential follow-up sessions, where industry would be afforded one-on-one opportunities with DoD to present proprietary solutions.



# Building COI Roadmaps – Why?



## Roadmaps communicate the value and impact of S&T investment

- **Value of the COI S&T Roadmapping effort to DoD and Components**
  - Peer interaction and review. The roadmap helps to create, articulate, and solidify connections between S&T investments and warfighter/operational needs.
  - Important to understand and explore commonality and differences across the COIs, in order to identify investments that can be leveraged across Components and opportunities for joint collaboration.
  - Each Component representative is able to update their thinking with respect to current technology status and expectations for the future
- **The roadmaps will be used to:**
  - Ensure the COI has constructed a well-conceived and integrated story, including a comprehensive understanding of the Components' complementary S&T investments
  - Ensure understanding about the benefits of accelerating, or risks in delaying, S&T programs
  - Enable industry/academia to understand and influence DOD needs, strategy and goals to shape their IR&D and research accordingly
  - Enable a strategic approach to international engagement targeted at DOD needs, with specific goals while presenting a coherent technical strategy to international partners



# S&T Priorities PE Funding



## S&T Priorities PE funds on behalf of the Components

- **Technical/administrative support funding provided to all the COIs**
  - Each COI allocated \$300K in direct funding (\$200K in FY14)
  - Execution of FY14 funds is a determinant in amount and timing
- **2014 S&T Seedlings**
  - Program briefings are currently being presented to the S&T Deputies
  - Briefings also provide material for inclusion in Spring briefs to Congressional staff
- **S&T Priorities FY16-18 Program Candidate White Papers**
  - 25 applied research efforts (BA2) proposals received which intended to address operational challenges and S&T needs
  - One successful proposal will be chosen by the S&T ExCom and announced in May by USD (AT&L) at the DOD Laboratory Event Day (14 May, 2015)



# Way Ahead



- **Each COI is developing a well- integrated story**
  - Annual delineation of COI goals and objectives prior to each fiscal year
  
- **Continue to identify S&T gaps and exploit opportunities**
  - Note impact of technical goals on operational capabilities
  
- **Enhance engagements and sustain collaboration apparatus**
  - Examine opportunities to leverage external (non-DoD) investments
  - Address COI overlaps and clarify needs across communities
  
- **Harmonize Defense S&T portfolio**
  - Identify investments that can be leveraged across Components
  - Articulate changes in S&T investment and priorities due to COI activity



# COI Industry Engagement Defense Innovation Marketplace



**Defense Innovation Marketplace is a key communication resource between DoD and Industry**

## For Industry:

- DoD R&E Strategic Guidance
- Service-specific S&T priorities, Virtual Technology Interchanges, events and solicitations are posted.
- DoD Investment Strategies and Technology Roadmaps
- Secure Portal to share IR&D Project Summaries

## For DoD:

- Research for approved DoD S&T, R&D and Acquisition professionals
- >18,000 IR&D Project Summaries on Portal
- Technical Maturity and Surveillance
- Guide DoD R&E investments
- Potential for risk / cost reduction
- Opportunity to grow and expand new relationships and partnerships



Available at [www.defenseinnovationmarketplace.mil](http://www.defenseinnovationmarketplace.mil) - access to project summaries is restricted to registered and approved DoD government employees and military personnel with R&E/S&T or acquisition responsibilities