The Role of the Communities of Interest (COIs)
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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
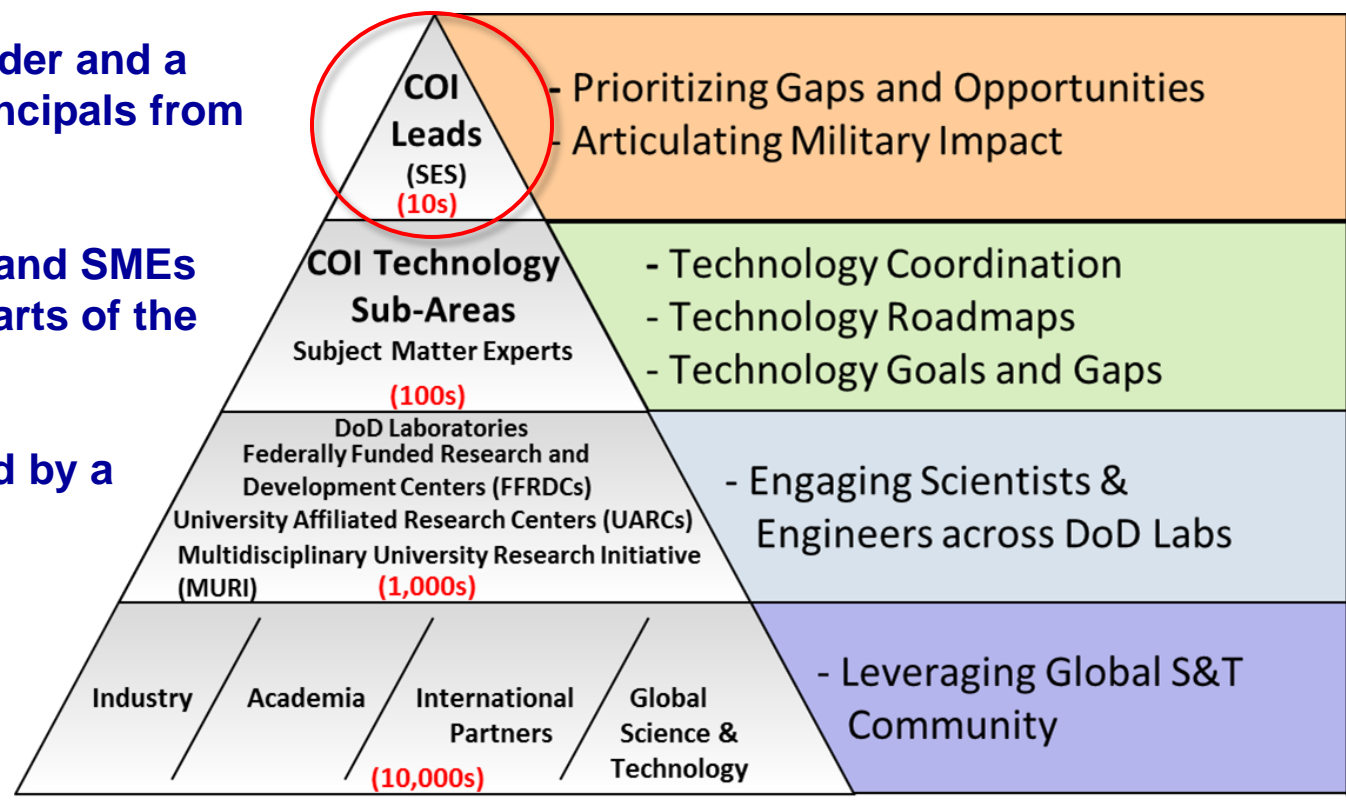Roadmaps describe technology goals with multiple applications

| 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**

Pyramid diagram:

COI Leads (SES) (10s)
- Prioritizing Gaps and Opportunities
- Articulating Military Impact

COI Technology Sub-Areas — Subject Matter Experts (100s)
- Technology Coordination
- Technology Roadmaps
- Technology Goals and Gaps

DoD Laboratories, Federally Funded Research and Development Centers (FFRDCs), University Affiliated Research Centers (UARCs), Multidisciplinary University Research Initiative (MURI) (1,000s)
- Engaging Scientists & Engineers across DoD Labs

Industry / Academia / International Partners / Global Science & Technology (10,000s)
- Leveraging Global S&T Community

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COI Taxonomies

- **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

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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

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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 - access to project summaries is restricted to registered and approved DoD government employees and military personnel with R&E/S&T or acquisition responsibilities**