The Role of the Communities of Interest (COIs)
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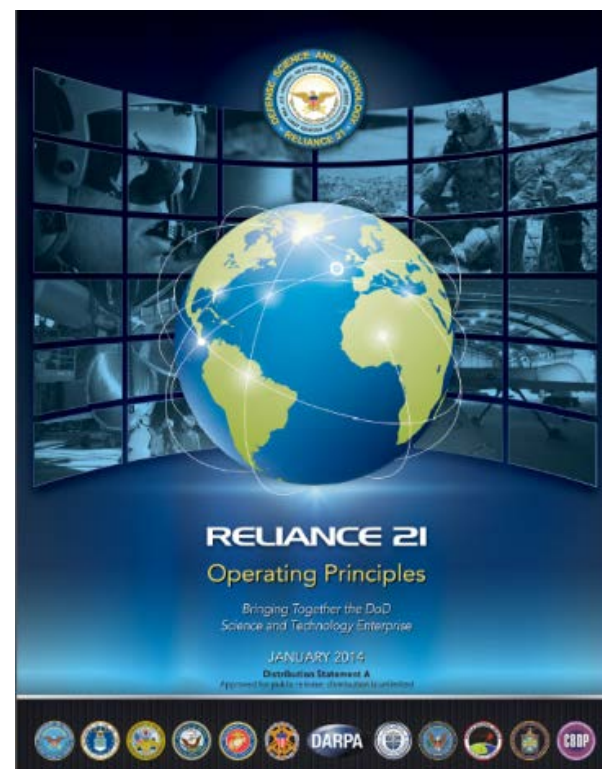*PD, DASD(Research)*

Reliance 21

Reliance 21 is the overarching framework of the DOD's S&T joint planning and coordination process

JOINT PLANNING (S&T Oversight)

- **Mitigate existing or emerging threats**

- **Generate affordability in the systems the Department acquires and operates**

- **Develop technology based surprise for our adversaries**

JOINT COORDINATION (S&T Delivery)

- **17 Communities of Interest (COIs)**

- **COI S&T Roadmap Reviews**

- **COI Information Exchange Meetings**

- **COI Steering Groups**

  – **All Services and DoD Agencies Represented**

RELIANCE 21
Operating Principles
Bringing Together the DoD
Science and Technology Enterprise
JANUARY 2014
Distribution Statement A
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Reliance 21 Overview

Reliance 21 is led by the S&T Executive Committee (S&T ExCom)

- **Comprised of the major Department Components**
- **Provides executive oversight and overarching guidance on S&T investments**
- **Ensures a collective understanding of the priorities, requirements, and opportunities of the DoD organizations that manage critical S&T resources**

Reliance 21 is implemented through the Communities of Interest (COIs)

- **Established in 2009 as a mechanism for multi-agency coordination and collaboration**
- **Comprised of S&E SMEs in specific technology areas where there is substantial investment across multiple components**
- **Produces S&T Roadmaps and Reports in their area detailing program goals and objectives, capability gaps, and leveraging opportunities**

Communities of Interest (COIs)

17 cross-cutting, S&T areas staffed with Senior Leaders and Subject Matter Experts from the Services and Defense Agencies

Mission focus
Capabilities enabled by advanced technologies and systems

- Counter-IED
- Counter-WMD
- Biomedical (ASBREM)

Systems/ Capability focus
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
- Sensors
- Air Platforms
- Ground & Sea Platforms
- Weapons Technologies
- Space

Technology focus
Technology goals with multiple applications

- Advanced Electronics
- Energy & Power Technology
- Materials & Manufacturing Processes

The Role of the COIs

- **Enable the defense of the Department's S&T investments**

- **Create multi-Service / Agency collaborative efforts to reduce duplication**

- **Develop joint S&T roadmaps**

- **Provide technology options and advice to DoD S&T senior leadership**

- **Monitor key technology developments and engagement opportunities**

- **Provide recommendations to Service S&T Executives regarding opportunities to leverage other Services' investments**

Defend the Department's S&T Investments

- **Describes the Department's S&T investment in detail**

- **Identifies opportunities and efficiencies that will allow the Department to achieve maximum return on investment**

- **Provides the data that ensures the Department that the Warfighters are receiving the greatest benefit from S&T resources and efforts**

Create Collaborative Opportunities to Reduce Unknown Duplication

- **Examine, comprehend, and quantify Service operational needs and explore multi-Service/ Agency collaborative opportunities**

- **Organize working groups across different organizations to investigate and understand inner connections and/or overlaps within the technology areas**

- **Create clear multi-Service/ Agency program dependencies - identified by 'Lead, Shape, or Follow' roles**
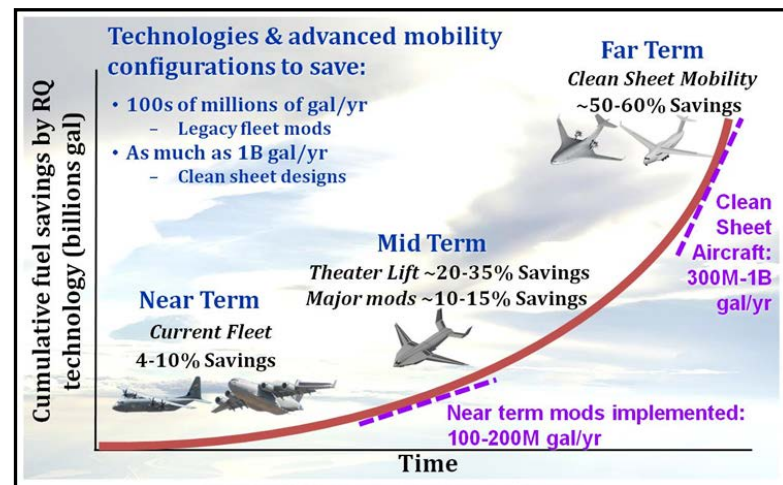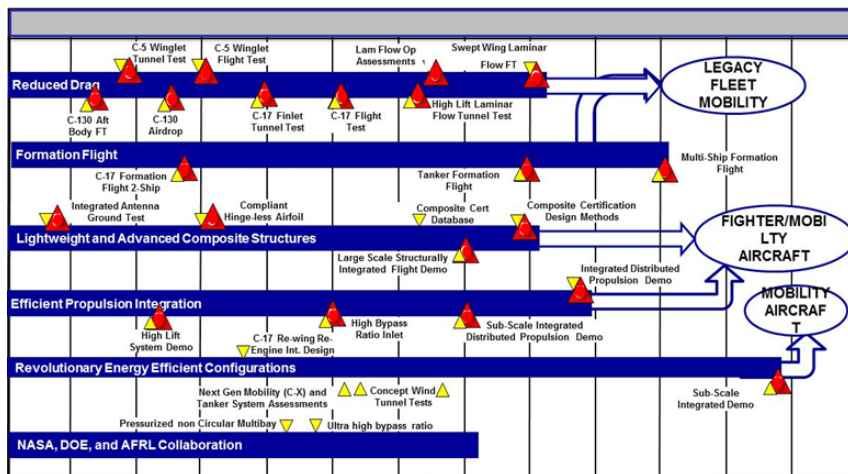
Develop Joint S&T Roadmaps

Roadmaps project a shared vision of DoD's S&T Portfolio

- Describe program objectives and key technical challenges

- Assess and address capability gaps and operational impact

- Indicate the requirements timeline and threat development

- Propose potential Prototypes/Experiments to address the most challenging technology development needs

Maintain Vital Engagements to Maximize Capability Development

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

- **Combatant Command (CCMD) S&T Advisors (Operator Community)**
  - **Provide a forum to articulate S&T priorities and investments with the potential to address CCMD capability gaps**

- **Intelligence Community**
  - **Evaluate intelligence information regarding current and future threats as well as emerging technologies to best align research and acquisition priorities**

- **Basic Research Community**
  - **Review Basic Research priorities and identify opportunities to engage future scientists and engineers**

- **Industry Independent Research and Development**
  - **Industry can use COI Roadmaps to identify technical challenges**

External inputs influence DoD Technology Strategy and goals

CCMD S&T Advisor Engagement

- **Gain an understanding of the Operational Environment, strategic objectives, current and projected threats**

- **Raise the CCMD S&T Advisor's awareness of the technologies that are currently addressing their needs**

Intelligence Community Engagement

- **Maintain awareness of the fast-moving global environment, the wide array of threats, and the innovative technologies being developed around the world**

- **Focus on the development of US capabilities, while maintaining awareness of our adversary's capabilities to ensure continued US technological advantage**

- **Leverage Intelligence Community activities, global threat reports and insights to inform a strategic S&T investments**

Basic Research Community Engagement

- **Ensure an understanding of DoD's Basic Research investment priority in basic science**

- **Maintain awareness of emerging opportunities for transition to applied research and the COIs**

- **Inform Basic Research of potential areas for investment that could resolve technical challenges in capability development (e.g. materials and hypersonics)**
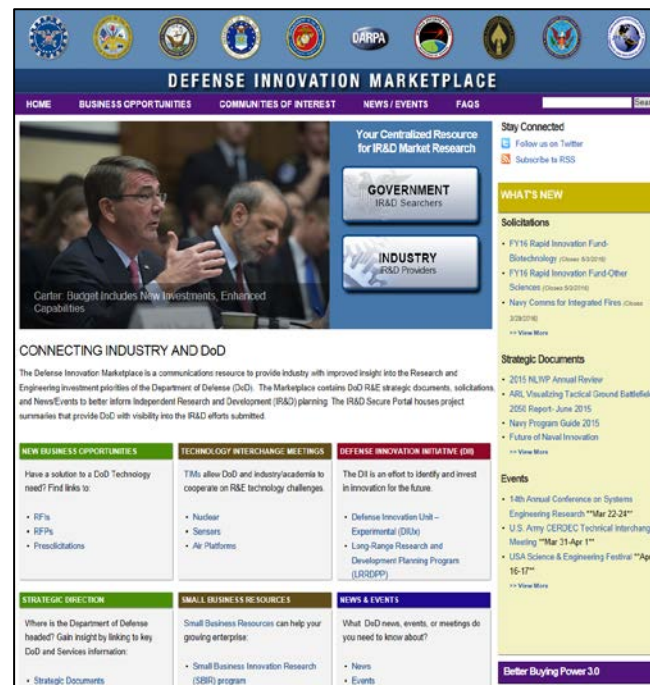
Industry Engagement

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

Provides 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**

Provides DoD:

- **Research for approved DoD S&T, R&D and Acquisition professionals**
- **>19,000 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**

Industry Engagement

National Defense Industrial Association (NDIA)

- **"Creating Innovative DoD S&T Partnerships"**

- **COIs present joint S&T Roadmaps to promote communication and collaboration with industry**

- **Unique opportunity for industry to discuss roadmaps with COIs and share new ideas and related work that may help fill capability gaps**

  - One-on-one sessions with members of COI Steering Groups to review on-going IR&D efforts, innovative ideas, and rapid commercial sector work

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Summary

- **Established in 2009, COIs have grown from mechanisms of information sharing and multi-agency coordination to an infrastructure that identifies opportunities for collaboration to reduce duplication**

- **COIs enable the S&T ExCom to deliver maximum S&T impact with reduced risk:**
  - **Coordinate S&T strategies**
  - **Share new ideas, technical directions, and technology opportunities**
  - **Jointly plan programs**
  - **Measure technical progress**
  - **Report on the general state of health of technology areas**

- **Joint S&T Roadmaps project a shared vision of the Department's S&T portfolio, showcase joint activities, and enable defense of investments**

- **COIs are in a unique position to engage with industry through NDIA to promote innovation in DoD and maintain awareness of the rapid technology development taking place in the commercial sector**

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