



# RELIANCE 21

## Operating Principles

*Bringing Together the DoD  
Science and Technology Enterprise*

JANUARY 2014





## What is Reliance 21?

Reliance 21 is the overarching framework of the Department of Defense's (DoD) Science and Technology (S&T) joint planning and coordination process. The goal of Reliance 21 is to ensure that the DoD S&T community provides solutions and advice to the Department's senior-level decision makers, warfighters, Congress, and other stakeholders in the most effective and efficient manner possible. This is achieved through an ecosystem and infrastructure that enables information sharing, alignment of effort, coordination of priorities, and support for scientists and engineers across the Department.

Reliance 21 has roots that go back several decades, and has been continually renewed and refreshed to ensure relevance as circumstances have evolved. This emphasis on coordinated research planning is a key strength of DoD's S&T Enterprise.

The strength of Reliance 21 is demonstrated in the cross-cutting collaborative teams that provide strategic and technical leadership of the S&T workforce.

There are three principal reasons that the Department engages in S&T:

- 1) *Mitigate existing or emerging threats*
- 2) *Generate affordability in the systems the Department acquires and operates*
- 3) *Develop technology based surprise for our adversaries*

Reliance 21 is the construct to balance and ensure a coordinated response to address these three areas.

## Why do we need Reliance 21?

In this challenging budgetary environment, the Department's S&T leadership is further strengthening coordination and efficiency through a streamlined Reliance 21 framework to ensure the utmost value from investments in science and technology.

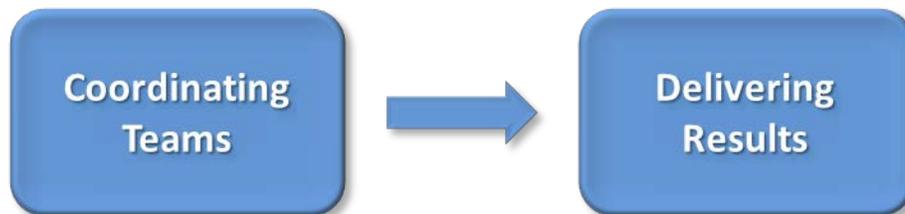
Reliance 21 ensures a collective understanding of the priorities, requirements, and opportunities of the DoD organizations that manage critical S&T resources. It is effective in continuously improving support to the warfighter, by propagating and coordinating an understanding of military capability gaps and defense needs throughout the S&T community. DoD S&T communities use Reliance 21 to coordinate and align S&T efforts against capability gaps, and jointly communicate their responses, exploiting synergies and potentially developing new opportunities.

## Purpose of this document

This document describes how the S&T leadership plans to coordinate, collaborate, and communicate strategic goals, objectives, and requirements across the Department. It will also define the technical framework and explain the expected output and outcome for all participants. This document provides the DoD S&T workforce with a basic understanding of where their work fits in to the overall Enterprise, and to build awareness of the processes and tools available to them to foster collaboration with their peers. This document also informs warfighters about how and when to connect with the S&T communities to ensure that their needs are being addressed. Finally, it will serve to improve the understanding of DoD S&T processes for external partners and stakeholders.

This is a living document that will be periodically updated to remain aligned with the Department's S&T strategy, policy and priorities.

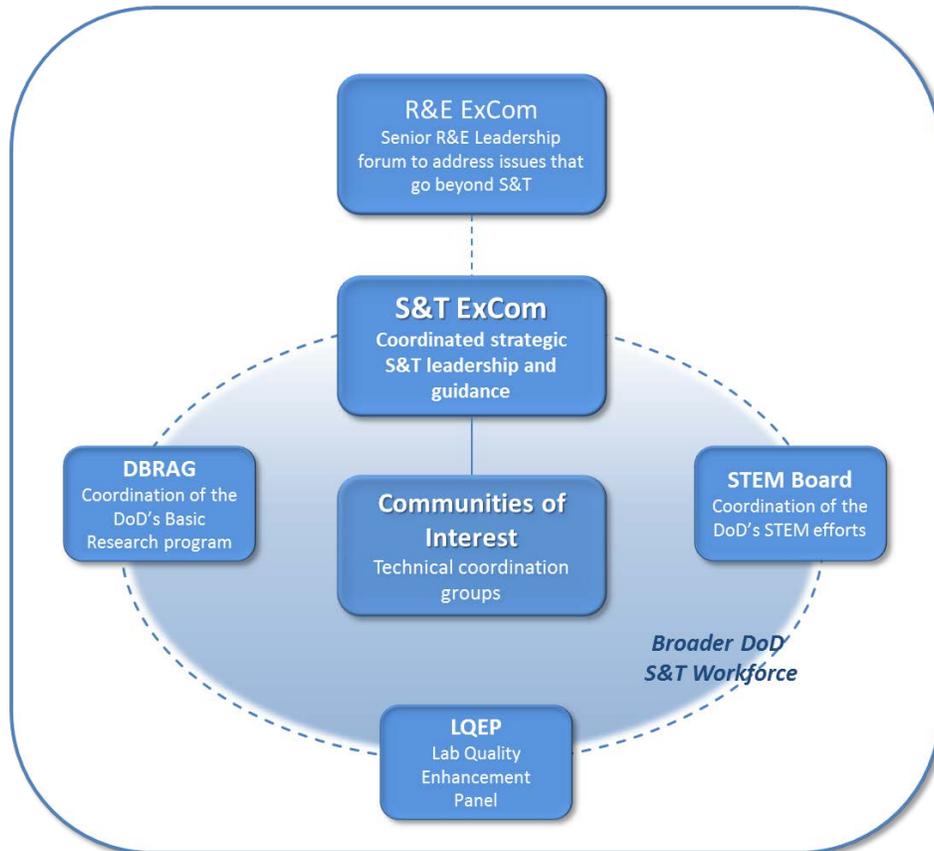
The first section of the document describes the various groups that form the ecosystem of Reliance 21, how they work and what they will achieve. The primary elements are the **S&T Executive Committee (ExCom)**, that provides leadership for the whole S&T enterprise and the **Communities of Interest (COIs)** - the engines that deliver results.



The second part of the document describes the events during the year that drive the key outputs of the Reliance 21 process. The first event is the **S&T Strategic Overview** meeting where the S&T leadership meets to discuss their organizations' priorities, portfolio content, and strategic direction. The other major activities are the **COI Portfolio Reviews** where capability and technical goals are presented and recommendations for the next planning cycle are derived.

Additional details of the process and participants are given in the Annexes to the main document, including the Knowledge Management Infrastructure that supports them.

## Coordinating Teams in Reliance 21



*The primary teams at the heart of the  
Reliance 21 process*

# S&T Executive Committee (S&T ExCom)

## S&T ExCom membership

### OSD

- *ASD for Research & Engineering*
- *Deputy ASD for Research*
- *Deputy ASD for Emerging Capabilities & Prototyping*
- *Deputy ASD for Force Health Protection and Readiness*
- *Deputy ASD for Manufacturing and Industrial Base Policy*
- *Deputy ASD for Chemical & Biological Defense*

### Military Departments

- *Deputy Assistant Secretary of the Air Force for Science, Technology, Engineering*
- *Deputy Assistant Secretary of the Army (Research and Technology)*
- *Chief of Naval Research*
- *Joint Staff, J8 Deputy Director for Resources and Acquisition*

### Agencies

- *Deputy Director, Defense Advanced Research Projects Agency*
- *Program Executive for Advanced Technology, Missile Defense Agency*
- *Deputy Director for Rapid Capability Delivery, Joint IED Defeat Organization*
- *Associate Director for R&D, Defense Threat Reduction Agency*

Reliance 21 is led by the S&T Executive Committee (ExCom), chaired by Assistant Secretary of Defense for Research & Engineering - ASD(R&E) - and comprising the major Departmental S&T organizations. The ExCom prioritizes resources and provides strategic oversight and guidance to the combined S&T workforce, laboratories, and facilities.

A strong connection with the warfighter underpins this group, through understanding needs and exploitation opportunities across the Services, and close interaction with the Joint Staff.

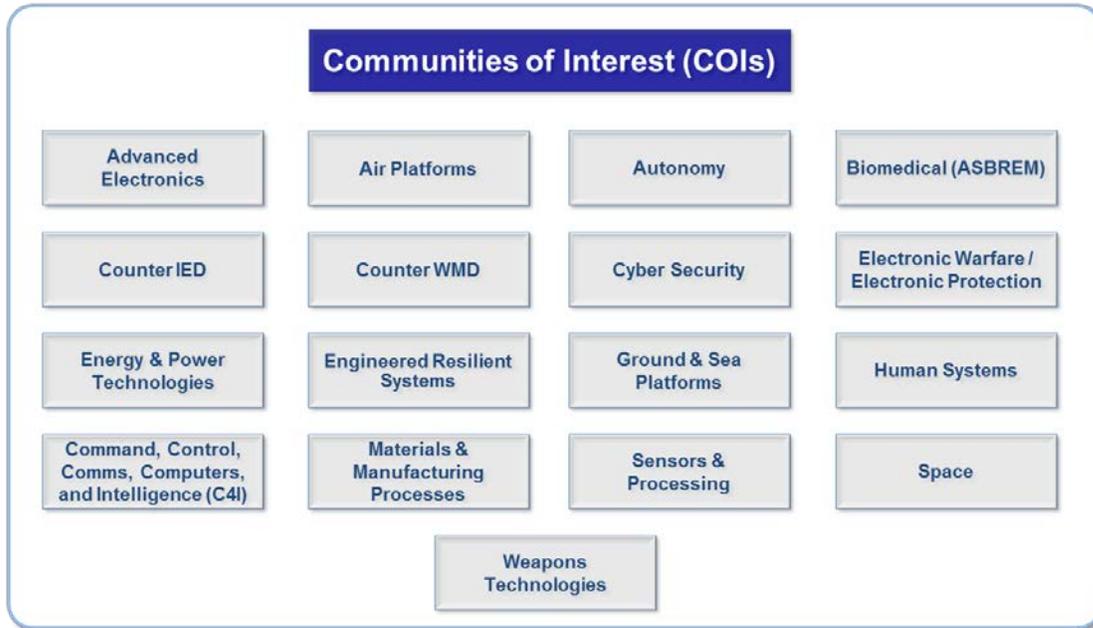


Through the ExCom, the S&T Leadership shapes and oversees the S&T Enterprise, establishing Communities of Interest and tasking those technical groups to conduct assessments and formulate strategies to address emerging challenges. The ExCom ensures delivery against the Department's S&T Priorities and recommends new priorities or redirects activities in response to changing Defense needs and Strategic Guidance.

The S&T ExCom meets on a monthly basis throughout the year, and is supported by its primary operating arm, the S&T Deputies Council. The Deputies Council meets weekly to address the strategic and tactical issues associated with maximizing the value and efficiency of Reliance 21.

# Communities of Interest (COIs)

Underpinning the S&T ExCom leadership is an ecosystem of technical groups known as Communities of Interest. These groups cover 17 technical areas that span the cross-cutting science and technology in the Department. The scope of each of these COIs and their associated technical sub-groups is shown in the Annex.



The collection of COIs serve as an enduring structure to integrate technology efforts throughout the DoD S&T enterprise. While they cover the majority of the DoD's S&T investment, some Service specific investments are not included in these groups.

## What are Communities of Interest?

COIs were established in 2009 as a mechanism to encourage multi-agency coordination and collaboration in cross-cutting technology focus areas with broad multiple-Component investment. COIs provide a forum for coordinating S&T strategies across the Department, sharing new ideas, technical directions and technology opportunities, jointly planning programs, measuring technical progress, and reporting on the general state of health for specific technology areas.

### Engaging the S&T Workforce in DoD

- Reliance 21 reaches out to the 35,000 scientists and engineers across the 62 DoD labs.
- This national resource is represented by the broad membership of each COI Steering Group.
- COI information, studies and briefs are made available to this wider community through a comprehensive Knowledge Management Infrastructure.

Each COI is led by a steering group comprising senior technical leaders with common technology interests - drawn from the Services, Joint Staff, Defense Agencies, OSD, and the acquisition community, if appropriate. They are organized with an appropriate break-down of sub-groups, in a fashion that best

## Reliance 21 Operating Principles

serves each technology area. These groups are populated by subject matter experts from across the Department, who often have decades of experience in the Defense S&T research enterprise and are an asset in DoD's efforts to generate technology surprise and deliver operational capabilities.

The COI technology areas will not change substantially from year to year. However, they are regularly reviewed by the S&T ExCom and the S&T Deputies Council who may constitute new groups, or retire existing groups, in response to major changes in Defense strategy or investment decisions.

### What do COIs achieve?

The principal outputs of COIs are strategic plans and roadmaps with a 10 year horizon that capture technical goals and mission impact. Their analyses identify common S&T needs and show where they are being addressed or where there are gaps or future opportunities. These plans are used to guide long-term budget decisions and to influence near-term program priorities in each of the Components.

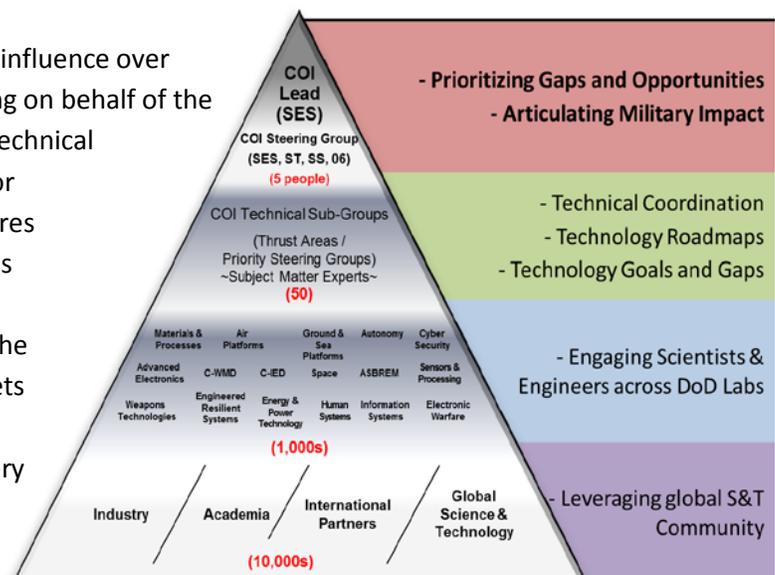
COIs work closely with program executives and warfighters throughout the Department, including supporting the Joint Staff in identifying potential solutions to warfighter needs. COIs are also expected to coordinate international S&T engagement for their technical area, taking Components strategic objectives into account.

The activities of the COIs are considered mission-critical to the effective conduct of the Department's S&T program. COI members will need to travel and conduct meetings, workshops, and attend conferences in person, although the COI / S&T collaboration infrastructure, video teleconferences and other alternatives should be considered first if they can be used effectively.

### How do COIs work?

Each COI has a senior Steering Group, who select a COI Lead from within the Group for endorsement by the S&T ExCom. COI Steering Group members should be SES, ST, Senior Scientist (or equivalent), and Armed Forces leaders, with clear objectives and mandate from their Component's S&T Executive. These should be individuals with significant influence over broad program decisions within his/her own Service.

The role of COI Lead is one with significant influence over technical policy and budget decisions, acting on behalf of the S&T ExCom to provide leadership to their technical community. The COI Lead is seen as a senior appointment in the Department, and requires a commitment of time and effort. COI Leads are empowered to make prioritized recommendations to the S&T ExCom, but the final authority for reprogramming of budgets and program decisions resides in the S&T ExCom. This position will usually rotate every two years to ensure a distribution of effort and a balanced perspective.



## Reliance 21 Operating Principles

Each COI has a Charter endorsed by the S&T Execs, confirming the responsibility of the COI Lead and the Steering Group and their commitment of time and resources.

**COI Steering Group.** The COI Steering Group is responsible for developing strategic roadmaps for the scope of S&T activities within the COI, with concrete and measurable goals. Members should represent their Service position in terms of budgeting, planning, and programming S&T investments, and provide timely feedback to their respective Service S&T Executive on funding allocation recommendations.

The Steering Group members should articulate how their Service S&T POM submissions address Combatant Command (COCOM) needs, capability gaps, and S&T needs identified by the COI and provide rationale for any shortfalls in funding needed to support capability gaps.

**COI Technical Sub-Groups.** The COI Steering Group determines the appropriate framework of technical sub-groups to support COI activities and objectives, and capture and report COI related investment information. The Steering Group also identifies subject matter experts, as appropriate, with the necessary breadth and depth of expertise to participate in the technical sub-groups and coordinate activities in that sub-area. These experts are expected to facilitate coordination and information sharing within the COI and across the S&T enterprise, and will identify any additional experts needed for specific COI thrust areas or specific technical activities.

### DoD S&T Priorities

- In April 2011, the SECDEF announced seven S&T investment priorities.*

Autonomy

Counter WMD

Cyber

Data to Decisions

Electronic Warfare /  
Electronic Protection

Engineered  
Resilient Systems

Human Systems

- In the subsequent 2½ years, the DoD S&T Enterprise has put considerable effort into developing strategic roadmaps for these topics.*
- These topics are still recognized as the highest priority cross-cutting technical areas in the Department, supplementing Service specific priorities.*
- These will now be taken forward through the COIs (note 'Data to Decisions' continues under the C4I COI).*

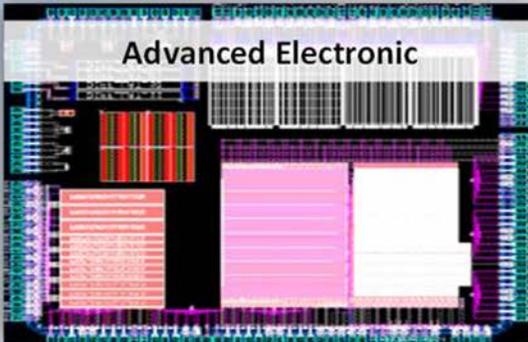
## COI Successes

Air Platforms



- Identified a gap in certification of composite aircraft structures, spurring research investment at AFRL and NASA to accelerate certification of bonded composites

Advanced Electronic



- Delivered a report to Congress including a detailed overview of the Department's investment and future strategy for electronics

ASBREM



- Awarded a DoD-sponsored Small Business Technology Transfer (STTR) contract to develop a powered prosthetic device for lower limb amputees called, the Powerfoot. (Now called the BiOM) To date, approximately 500 BiOM have been acquired by the DoD and the VA

Autonomy

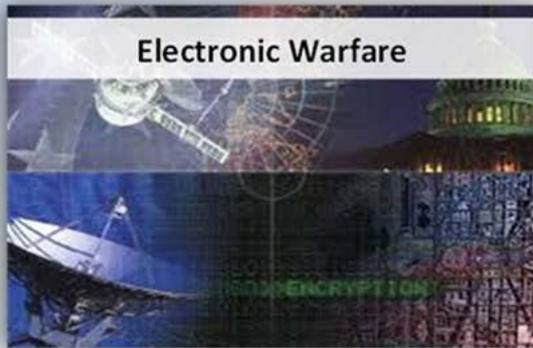


- Established the Autonomy Research Pilot Initiative and awarded seven programs totaling \$45M over three years for DoD Labs to mature autonomy technologies

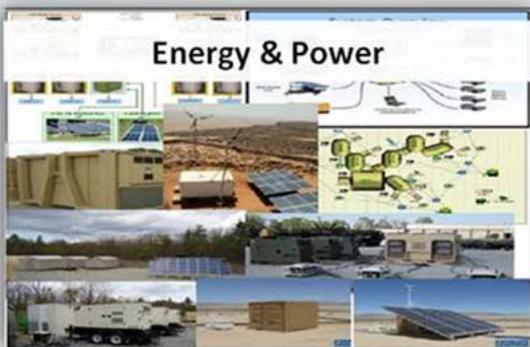
# COI Successes



- Collaborated with MIT / Lincoln Labs to deploy new “moving target” cyber defenses to PACOM Terminal Fury exercises



- Launched a major analysis of future game-changing, advanced components for EW (program known as ACE)



- Collaboratively developing scalable hybrid energy storage modules with the Advanced Research Projects Agency (Energy)

# Delivering Results Through Reliance 21

## S&T Strategic Overview

The S&T Strategic Overview is an annual two day event, during which the S&T ExCom shares information on programs and priorities and discusses the Department’s S&T budget request and out-year investments.

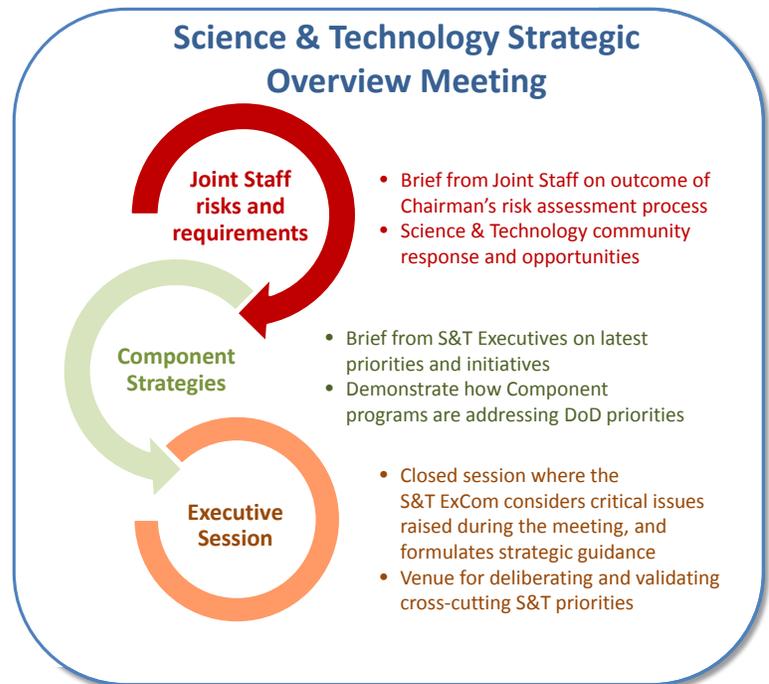
It is a central element of the Department’s process for ensuring S&T alignment with corporate directions and priorities. This meeting fosters awareness and joint planning among senior S&T leadership, contributing significantly to the effectiveness and efficiency of DoD’s S&T investment.

The S&T ExCom uses the Strategic Overview discussion to identify critical capability gaps and cross-cutting opportunities for further assessment, which may influence POM planning and investment strategies in each Component. This activity is

conducted in close coordination with the future requirements specialists of the Joint Staff, including a review of the outcomes from the Chairman’s Capability Gap and Risk Assessment.

This is a senior Department level meeting with representation from a wide range of DoD S&T organizations and invited participants from across Government. The meeting attendees benefit from hearing about the Department’s priorities and initiatives first hand, and the ability to interact with senior leadership.

The Strategic Overview Meeting is held in the second quarter of each fiscal year, in conjunction with the release of the President’s Budget Request (PBR) for the upcoming financial year. This enables the Components to share detailed information on their planned programs. The coordination and review of S&T priorities also informs the work in each Component developing the S&T Program Objective Memorandum (POM) for the subsequent year. Later in the planning cycle, following resolution of POM decisions, the S&T Executives will brief major changes to their programs and strategies to ASD(R&E) and each other.



# COI S&T Portfolio Reviews

Every year, each COI conducts a Portfolio Review addressing the topics in the box below. During this detailed assessment, each COI identifies priority technical gaps, issues and opportunities and describes how these impact warfighter and wider defense needs, as well as making recommendations for action to the S&T leadership of the Department. This culminates in Portfolio Review meetings, with the objective of informing the S&T leadership of risks and opportunities in the technical program.

The Portfolio Reviews are a catalyst for COI activity and a chance to highlight issues to leadership, but COI activity should inform POM planning and other decisions throughout the year.

Following the out-brief, each COI will ensure that the information is made widely available so that the broader S&T Community can set their work in context, understand recommendations that are being made, and can contribute to the S&T ExCom’s strategic discussions.

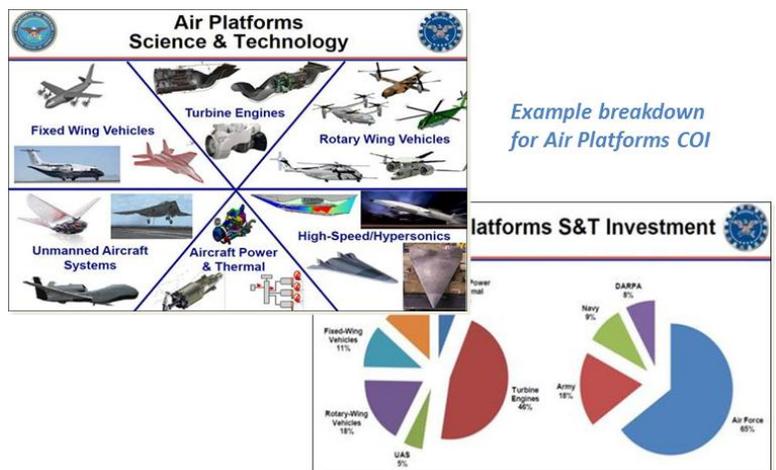


**2013 Portfolio Reviews:** In 2013, six COIs conducted Portfolio Reviews. These were:

- Advanced Electronics; Air Platforms; Counter-IED; Energy & Power Technologies; Materials & Processes; and Weapons Technologies.

**2014 Portfolio Reviews:** In 2014, all 17 COIs will present their Portfolio Reviews. However, for 8 of the groups the S&T ExCom has asked to see more detailed roadmaps, with concrete and measurable goals, clearly linked to military capability. The following 8 COIs will brief their roadmaps at an S&T ExCom meeting in May 2014:

- Cyber; EW; Autonomy; ERS; Human Systems (Training); Energy; C4I (Command & Control); Sensors



# Annex: Summary of topics / scope of COIs

- **Advanced Electronics:**

Electronics technologies that are key enablers for:

- Radio Frequency (RF) Components for sensing, transmission, communication;
- Electro-optics: infrared (EO/IR) sensing, transmission, communication, display components
- Nanoelectronics & Microelectronics: mixed signal, digital processing, emerging architectures ;
- Electronics Integration: packaging, reliability
- Electronic Materials

- **Air Platforms:**

- Fixed Wing Vehicles
- Rotary Wing Vehicles/Future Vertical Lift
- Gas Turbine Engines
- High-Speed/Hypersonics
- Aircraft Power and Thermal Management
- Unmanned Aircraft Systems (UAS)

- **Autonomy:**

The COI addresses four technical challenges:

- Human/Autonomous System Interaction and Collaboration
- Scalable teaming of Autonomous Systems
- Machine Perception, Reasoning and Intelligence
- Test, Evaluation, Validation, and Verification

- **Biomedical (ASBREM: Armed Services Biomedical Research Evaluation and Management):**

- Biomedical Informatics, Computational Biology, Simulation & Training
- Health Information Systems & Technology
- Combat Casualty Care
- Military Infectious Diseases & Biological Countermeasures
- Environmental Toxicology & Chemical Countermeasures
- Medical Radiological Defense
- Military Operational Medicine
- Clinical & Rehabilitative Medicine

- **Command, Control, Comms, Computers, and Intelligence (C4I):**

Thrust areas include:

- HCI for Decision Making
- Synthesis / Analytics / Decision Tools
- Information Collection / Management
- Advanced Computing / SW Development
- Networks and Communications

- **Counter IED:**

The C-IED COI will develop a blended and efficient approach to support the objective of defeating IEDs and their threat to national security objectives.

- **Counter Weapons of Mass Destruction (WMD):**

The CWMD COI is focused on:

- Enhancing C-WMD capabilities under combined threats, by assessing various combinations of threats and developing new capabilities, or enhancing existing capabilities, to respond to these scenarios.
- Expand the use of current and planned capabilities to address non-proliferation efforts. For example deploying data analytical models across various WMD scenarios; expanding countering mechanisms to CB threats.
- Predicting possible new threats and developing new capabilities to respond to these threats.

- **Cyber Security:**

Thrust areas include:

- Cyber Maneuver
- Cyber Situational Awareness
- Recovery & Reconstitution
- Science of Cyber Security
- Secure Mobility
- Security of Embedded & Weapons Systems

- **Electronic Warfare/Electronic Protection:**

The COI is organized around six technical challenges:

- Cognitive, Adaptive Capabilities
- Coordinated / Distributed / Network-Enabled Systems
- Preemptive / Proactive Effects (real-time sensing, assessment and optimization of EA effectiveness)
- Broadband / Multispectral Systems
- Modular / Open / Software-Configurable Architectures
- Advanced EP Techniques & Technology

- **Energy and Power Technologies:**

Energy and power technologies to enhance operational effectiveness and accelerate fielding of critical military platforms and weapons. The primary focus areas include:

- Power generation / energy conversion;
- Energy storage;
- Power distribution and control;
- Thermal transport and control;
- Electromechanical conversion.

- **Engineered Resilient Systems (ERS):**

ERS is a cross-cutting initiative that seeks to transform engineering environments so that warfighting systems are more resilient and affordable across the acquisition lifecycle. ERS is concerned with developing an integrated suite of modern computational modeling and simulation capabilities and systems engineering tools, which align with acquisition and operational business processes. ERS focus areas include infrastructure, information, design, tradespace analytics and decision support tools, and knowledge environments. The objectives are to increase the speed of system development, improve the effectiveness of fielded systems, and minimize life-cycle costs. Resultant tools and procedures seek to produce more complete and robust requirements against many more alternative mission contexts very early in the design process, or pre-Milestone A, for more deeply informed acquisition decisions. Manufacturability of a proposed design is explicitly considered from both engineering and cost perspectives, prior to design commitment.

- **Ground and Sea Platforms:**

- Design and Integration
- Survivability
- Mobility
- Modularity
- Maintainability
- Unmanned Platforms

- **Human Systems:**

- Personnel, Training, and Leader Development
  - Force Management & Modeling; Selection & Classification; Theory Of Learning; Adaptive, Tailored Instruction; Live, Virtual, Constructive Simulations; Realistic Immersive Training; Training Methods, Technology, & Media; Education & Training Strategies; Innovative Leader Development
- System Interfaces and Cognitive Processing:
  - Human-Machine Interfaces; Human Cognitive Process Modeling; Decision-Making Models; Human State Modeling; Applied Neuroscience; Trust
- Protection, Sustainment, and Physical Performance:
  - Extreme Environment Protection; Combat Clothing & Protective Equipment; Extended Combat Rations & Field Feeding Equipment; Physical Aiding; Performance Enhancement; Vehicle Escape & Crash Safety; Survival & Rescue; Aerial Delivery; Warrior-System Integration
- Social, Cultural, & Behavioral Understanding:
  - Cultural Situational Awareness; Socio-Cultural Models & Synthetic Entities For Socio-Cultural Data In Denied Areas; Social Network Analysis; Building Partnerships

- **Materials & Manufacturing Processes:**

The COI includes the following thrust areas:

- Materials and processes for Civil Engineering
- M&P for the Individual Warfighter
- M&P for Power and Energy
- M&P for Propulsion and Extreme Environment Materials
- M&P for Readiness
- M&P for Sensors, Electronics and Photonics
- M&P for Structures and Protection
- Corrosion

The Materials & Processes COI is also involved in various related DoD, National and International working groups, including for Laser Hardened Materials, Low Observables, Metamaterials, Nanotechnology, and Materials Genome.

- **Sensors and Processing:**

Physics-based maritime, ground, air-borne, and space-borne sensing capabilities to include:

- Electro-optic and infrared (EO/IR) sensors
- Radio Frequency (RF) sensors
- Acoustic, magnetic, seismic sensors, etc.
- Special purpose sensors including: nuclear, chemical, biological
- Sensor processing

- **Space:**

- Taxonomy TBD (note: due to issues with classification, the Space COI will not operate in the same open manner as the other COIs)

- **Weapons Technologies:**

Thrust areas include:

- Ordnance
- Guidance/Navigation & Control
- Propulsion
- Modeling, Simulation & Test Infrastructure
- Integrated Guided Weapon Demonstrators
- Undersea Weapons
- High Energy Lasers
- RF Weapons

# Annex: Reliance 21 Participants

## **Assistant Secretary of Defense, Research & Engineering - ASD(R&E)**

ASD(R&E) is the Chief Technology Officer for the DoD and provides management oversight for the Department's R&E Portfolio. ASD(R&E) chairs the S&T ExCom.

## **OASD(R&E) Staff**

OASD(R&E) Staff serve an important role in working with all the DoD S&T Components to ensure that corporate objectives are met in Reliance 21 activities and plans. OASD(R&E) Staff actively participate in all COIs.

## **DoD S&T Components**

The DoD S&T Components are critical members of the Reliance 21 process. They include strategic and technical leadership among the Services and Defense Agencies and underpin the Communities of Interest. Each Component contributes members to the S&T ExCom, S&T Deputies Council, COI Steering Groups, and subject matter experts in support of COI activities.

## **S&T Deputies Council**

The S&T Deputies Council is composed of deputies to the S&T ExCom principals, or other designated officials. They identify issues for potential policy changes and recommend strategic issues for S&T ExCom discussion. They ensure that staff and information are available as required and disseminate information and actions to their Components. The Deputies Council has responsibility for vetting and optimizing all S&T related data-calls. Meetings are held weekly, chaired by the Principal Deputy to the DASD(Research), who is also the Executive Secretary to the S&T ExCom. Activities and meetings of the Deputies Council are supported by the role of the Deputies Executive Secretary which is contributed by each Service on a 2 year rotation.

## **Joint Staff**

The Joint Staff is responsible for identifying the priority joint warfighting capability needs and gaps for S&T to be incorporated into Reliance 21 plans. To this effect, the appropriate member of the Joint Staff, as determined by the Reliance 21 Deputies Council member, participates in COI Steering Groups as appropriate.

## **Defense Advanced Research Projects Agency (DARPA)**

Note that DARPA projects are considered disruptive and high risk and should not be considered on the critical path for the COI technology roadmaps. As a consequence, DARPA may not participate routinely in COI activities but DARPA will brief each COI, in detail on an annual basis, regarding active projects relevant to that topic. This will ensure that DARPA is informed by Component S&T investments and inform the other Components of DARPA program focus.

# Annex: Associated Reliance 21 Governance Bodies

## ***R&E ExCom***

ASD(R&E) may convene an R&E ExCom, as required to address Research, Development, Test and Evaluation (RDT&E) issues that go beyond the S&T portfolio. This group includes the Service Acquisition Executives and will meet on an ad-hoc basis to consider outcomes from deep analyses it has commissioned on specific topics of concern.

## ***Science Technology Engineering and Mathematics (STEM) Executive Board***

The STEM Executive Board oversees a Department-wide approach to fostering the STEM enterprise for national security needs. It shares several members with the S&T ExCom, but also includes a wider membership from across the Department.

The Board assesses the adequacy of the Department's approaches to directing STEM investments, fostering the supply of high-caliber STEM candidates, recruiting STEM personnel, developing STEM human capital and retaining a stable, effective STEM workforce.

This group also leads the Department's contribution to the national STEM enterprise, with particular emphasis on supporting the Department's needs, the defense industrial base needs, and broader national competitiveness needs impacting the national security environment.

## ***Defense Basic Research Advisory Group (DBRAG)***

The DBRAG coordinates the DoD Basic Research program and assists in the clarification of issues and policy. The DBRAG includes Senior DoD Basic Research leaders from the Components and OASD(R&E).

## ***Laboratory Quality Enhancement Panel (LQEP)***

The LQEP reflects contemporary planning needs for the in-house DoD laboratory enterprise. The group holds quarterly meetings, including DoD lab directors, and representatives from the Services S&T Executives.

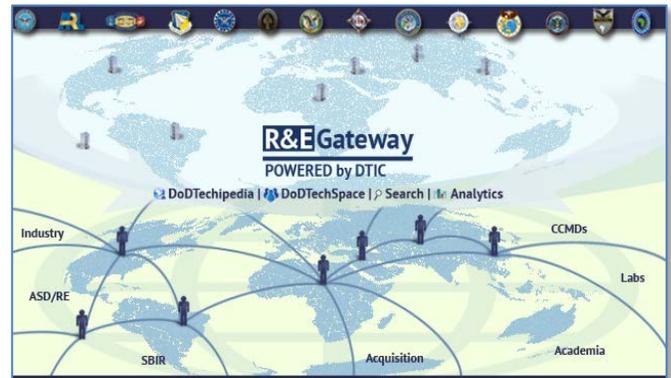
Areas of focus include laboratory workforce policies in support of the Department's S&T Reinvention Laboratory personnel programs - all personnel related efforts are in partnership with Under Secretary of Defense (Personnel and Readiness); identification and promulgation of in-house lab Core Technical Competencies (CTC); strengthening of linkages with the Department STEM and Basic Science programs; connectivity with industry and academia via Technology Transfer programs; and development and implementation of Department Laboratory military construction and Sustainment, Revitalization and Modernization strategic plans - in partnership with Deputy Under Secretary of Defense (Installations & Environment).

# Annex: Enabling Knowledge Management Infrastructure

## ***Research and Engineering Gateway - a Reliance 21 resource***

The R&E Gateway offers a collaborative environment, where DoD and industry partners can access information and data. This secure suite of tools enables dispersed scientists and engineers to collaborate virtually in their area of expertise.

The community can discover, create, and share current and past DoD science and technology information as well as, coordinate, integrate and optimize technology development efforts. This enables the R&E community to build on past work, collaborate on current challenges, avoid duplication of effort, accelerate the fielding of materiel solutions at reduced costs, aid decision makers, and support management of the S&T Enterprise. It is a secure, collaborative environment in which to discuss and coordinate with colleagues; analyze and connect with industry IR&D projects; and access analysis built on R&D and operational experience.



## ***The Defense Technical Information Center (DTIC)***

DTIC is a DoD Field Activity reporting to ASD(R&E). DTIC's mission is to provide essential technical RDT&E information rapidly, accurately and reliably to support our DoD customers' needs. DTIC's focus is to maximize DoD's investment in S&T and across RDT&E, by encouraging reuse of and building upon past research, and collaboration on current efforts.

In its holdings, DTIC has more than 2 million Technical Reports; Small Business Innovation Research (SBIR) reports; tens of thousands of in-progress reports; thousands of current IR&D reports; Combatant Command Integrated Priority Lists; and hundreds of articles in DoD's S&T wiki.

DOD's S&T budget information is captured in DTIC's analytics tool, and DTIC ensures access to DoD-related Congressional budget information through a searchable database of markups from House and Senate appropriation and authorization committees and full House and Senate reports.

## ***Collaborating via Communities of Interest***

The COI wiki provides a secure space to foster, facilitate, and streamline cooperation and coordination among DoD S&T scientists and engineers, many of whom are dispersed geographically and organizationally. Users can upload documents, briefings, and videos; post calendar entries; post, update and comment on content as well as add blog entries. The wiki has proven to reduce the proliferation of information silos while improving information sharing within and between COIs. The COIs site is open to DoD employees and vetted-in DoD contractors, and is located in the DoD Defense Communities site, part of DoDTechipedia.

## **Data-calls**

On behalf of the S&T ExCom, ASD(R&E) issues a data-call following release of the PBR. In this call the Components assign the programs and projects in their PBR submissions against an agreed taxonomy of technical areas and sub-areas. This data informs both the COI Portfolio Reviews and the continuing roadmapping efforts later in the year.

It is intended that this will be the only programmatic data-call associated with Reliance 21 during the year (there may be a need to request technical data for various requirements as part of routine business). In addition, the Unified R&E Database (URED) is automatically updated at the end of each financial year. URED captures actual contract level data, and the search tool allows analysis of investment across all of DoD S&T.



**R&E Gateway**  
POWERED by DTIC

### ***A Connected DoD = Challenges Solved***

#### **DoDTechipedia** (<https://www.dodtechipedia.mil>)

This collective wiki enables the sharing and updating of technology development information instantly by the community.

#### **DoDTechSpace** (<https://dodtechspace.dtic.mil>)

A virtual collaboration environment for the community to engage in dialogue, create content, coordinate projects and connect with colleagues.

#### **Search** (<https://www.dtic.mil>)

Quickly discover DoD research projects and documents, as well as people, places and content from the DoDTechSpace community on your topic of interest.

#### **Analytics** (<https://cbat.dtic.mil/>)

Through this tool you can access S&T funding information via the Unified R&E Database and other sources such as Congressional budget information.

#### **Defense Innovation Marketplace** (<http://www.defenseinnovationmarketplace.mil/>)

A resource for industry to view DoD S&T planning documents, acquisition resources, funding and financial information. It is also where industry submits proprietary Industry R&D (IR&D) summary reports for compliance with the Defense Federal Acquisition Supplement.

Access to these secure websites requires registration with DTIC, including for contractors without a Common Access Card (CAC) and non-DoD federal employees

(<http://www.dtic.mil/dtic/registration/>).

