2015–2019 Strategic Plan Summary
Science and Technology Directorate

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Role Description
Air Security  Transform immigration and customs inspection of international travelers.
Border Security  Create data-driven methodologies that directly support key goals.
Border Awareness  Improve situational awareness to effectively and efficiently deploy resources to areas of high risk.
Information  Create and apply a decision support system for community risk assessment and resilience planning.
Next Gen Cyber  Deliver advanced sensing tech, situational understanding, response & recovery, and network predictions across all levels.
APEX and Technical Engines  Next Gen First Responder  Create game-changing tools, tech and wearable comm devices for first responders.
Biothreat Awareness  Develop environmental sensors to detect biothreats.

The Science and Technology Directorate’s mission is to deliver effective and innovative insight, methods, and solutions for the critical needs of the Homeland Security Enterprise. The successful execution of this mission rest significantly on whether we can transform our approach to research and development (R&D). Our strategy serves as the directorate’s roadmap for how it plans to serve as a model for federal R&D.”

Dr. Reginald Brothers
Under Secretary for Science and Technology
Department of Homeland Security

S&T engages the whole of government and Homeland Security Industrial Base (HSIB) to develop a capability roadmap. Each of the five S&T Homeland Security Advanced Research Projects Agency (HSARPA) divisions, the three First Responders Group divisions, and APEX programs and Technical Engines have developed Capability Roadmaps aligned to the needs of their operational end users. These high-level roadmaps formalize a vision, identify strategic drivers, and list R&D objectives.
WHO WE ARE

In the last twelve years, the Science and Technology Directorate (S&T) has grown into a trusted partner for DHS operators, and state, local, tribal, and territorial first responders. S&T maintains a diverse and complex set of roles and responsibilities that extend beyond traditional research and development. These technology-based solutions will provide homeland security operators and first responders with the most advanced tools and capabilities they need to complete their missions.

VISIONARY GOALS

In collaboration with the Department of Homeland Security Components, Congress, first responders, industry and academia, S&T was challenged with the task of developing a set of visionary goals with the objective of creating a more cohesive research and development agenda. These goals provide horizon points to drive innovation within S&T and its ecosystem of technical expertise — both inside and outside of the government.

ENGAGING INNOVATORS

The goal of any innovator is to leverage new methods, ideas, and creativity to provide a unique solution to a problem. At S&T, we are dedicating to finding the solution-makers and engaging them in projects, prizes, and opportunities to help make communities safer and more resilient, and to make public safety sectors more effective. Together we can work toward a more productive, innovative future. Think differently with us.

APEX

APEX programs are high-priority, high-value projects. These multidisciplinary programs span 3 - 5 years and undergo quarterly reviews by an executive steering committee. Each APEX program consists of a balanced portfolio of projects with scientifically feasible risk that span from basic research to advanced technology development.

ACCELERATOR PROGRAMS

The Accelerator program incorporates business accelerators to identify companies whose technologies could represent the next generation of solutions for DHS end users. S&T is piloting its accelerator program in the field of wearable technology, a high priority for its Next Generation First Responder initiative.

PRIZE COMPETITIONS

Have an idea for some great new technology, or how to help make communities safer, but not sure what to do with it? The S&T Prize Competition incentivizes innovative ideas and solutions to address a wide range of challenges while inspiring and mobilizing diverse, non-traditional talent.
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FROM COUNTERTERRORISM TO NATURAL DISASTERS, S&T USES BOTH THE KNOWLEDGE OF SCIENCE AND THE TOOLS OF TECHNOLOGY TO MAKE OUR COUNTRY, OUR COMMUNITIES, AND OUR FAMILIES MORE SECURE ACROSS THE BROAD SPECTRUM OF THREATS FACING THE HOMELAND.

## OUR MISSION

- **S&T ROLES**
  - APEX and Technical Engines
    - Air Security: Transform immigration and customs inspection of international travelers.
    - Border Security: Create data-driven methodologies that directly support key goals.
    - Border Awareness: Improve situational awareness to effectively and efficiently deploy resources to areas of high risk.
    - Information: Create and apply a decision support system for community risk assessment and resilience planning.
    - Next Gen Cyber: Deliver advanced sensing tech, situational understanding, response & recovery, and network predictions across all levels.
    - Next Gen First Responder: Create game-changing tools, tech and wearable comm devices for first responders.
    - Biothreat Awareness: Develop environmental sensors to detect biothreats.
  - HSARPA
    - Security: Develop and transition technical capabilities that strengthen U.S. border, maritime, and POE security.
    - Cyber Security: Provide the infrastructure necessary to support cyber R&D.
    - Chem & Bio Threat Defense: Develop, incorporate and promote best approaches to prevent, prepare, respond and recover from chem/bio threats.
    - Resilient Systems: Identify and innovate practical solutions to enhance national hazard resilience.
    - Explosives: Identify and innovate practical solutions to enhance national hazard resilience.
    - Interoperability: Develop force multiplying tools and solutions to save lives and maximize preparedness.
    - Technological Security: Empower first responders with the ability to communicate with data, info and each other.
    - Research: Test, evaluate, and assess services and radiological nuclear response recovery tools.

## CAPABILITY DEVELOPMENT SUPPORT

The Capability Development Support (CDS) Group works closely with the DHS components to ensure programs and systems reduce or mitigate the challenges in the safest, most efficient and most cost-effective manner. CDS provides an innovative, systems-based approach to help operators define their needs, and to develop technologies and solutions that can be quickly deployed to frontline operators. The CDS also assesses the operational environment and fiscal limitations to ensure the best solutions are chosen.

## R&D PARTNERSHIPS

The Research and Development Partnerships (RDP) Group supports the Homeland Security Enterprise (HSE) access to science-based capabilities and solutions through trusted partnerships! Through these capabilities, RDP strives to become a more innovative, integrated and effective contributor to DHS and the HSE. DHS also collaborates with international partners to enhance information sharing, increase situational awareness, improve incident response capabilities and overall incident management, support law enforcement activities, and coordinate strategic policy issues.

For the full Strategic Plan 2015-2019, go to:

To learn more about S&T: scitech.dhs.gov


Capability Development Support (CDS):
www.dhs.gov/science-and-technology/cds

Research and Development Partnerships (RDP):
www.dhs.gov/science-and-technology/rdp

First Responders Group (FRG):
www.dhs.gov/science-and-technology/first-responders

First Responders Community: www.firstresponder.gov

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