



U.S. Department of Homeland Security **Global Innovation, Research and Development (IRD) Strategy**



Science and
Technology

INTRODUCTION



Since its inception in 2002, the Department of Homeland Security (DHS) focused on safeguarding U.S. economic and national security with special emphasis placed on countering terrorist threats. Today, DHS faces an even more challenging mission than it did two decades ago. From increased migration at our borders, to transnational criminal organizations that traffic people, drugs, and counterfeit goods, to digital attacks on our infrastructure, the world we live in is characterized by change and disruption. Our ability to adapt to this evolving world is a direct result of the partnerships we forge with likeminded nations across the globe.

The DHS Science and Technology Directorate (S&T) is legislatively mandated to develop strategic priorities and mechanisms to implement international research, development, test, and evaluation (RDT&E) cooperative activities on behalf of DHS. To that end, S&T coordinated across DHS to establish this strategic framework to guide efforts to build upon existing partnerships. S&T expanded its approach to further support DHS Components' distinct international missions and priorities in order to increase the impact of international-focused Innovation, Research, and Development (IRD) activities.

International coordination for science and technology is a tool of U.S. foreign policy that enables the United States to compete economically, defend national security interests, and maintain its resiliency to meet increasingly complex challenges that transcend national boundaries. Increasing DHS's global partnerships will serve multiple aims for improved domestic safety and security, including discovering and leveraging leading edge research and technology development, advancing economic and security relationships between countries, and addressing global challenges that require international technical collaboration.



MISSION & VISION



This strategy supports DHS across its mission areas, providing high-level direction for S&T to enhance its existing bilateral and multilateral partnerships, expand global innovation and cooperation networks, and increase the impact of international cooperation amongst DHS Components and stakeholders.

Mission Statement | Build international partnerships in innovation, research, and development to enhance DHS's ability to advance capabilities, prepare for an uncertain future, and strengthen foreign affairs to meet the overall national security mission.

Vision Statement | Be a global leader for security science expertise, capability development, and innovation.



GOALS



This strategy matures the role of science and technology international engagement within DHS through a network of innovative foreign counterparts. This is a Department-wide strategy, with DHS S&T as the lead Component for implementing this international R&D strategy in close coordination with other DHS Components. The goals outlined are interdependent and executing each requires elements of the others, particularly when establishing and enhancing bilateral or multilateral partnerships or standing up new scientific and technical areas of cooperation. Each goal is further discussed in the following sections.



International Goal #1 – Capability Delivery | Science for Mission

Optimize international cooperative activities to enhance DHS’s ability to develop and deliver homeland security capabilities.

- **Issue Statement** | Bilateral and multilateral cooperation provides DHS access to international R&D knowledge, funding, and other unique capabilities and resources. DHS will expand efforts to incorporate international science and technology into core programs and increase participation from stakeholders and customers. S&T will identify new tools, mechanisms, and partnership opportunities to enhance interoperability and affordability of capabilities that strengthen DHS mission areas.
- **End State** | Robust international cooperation that provides rapid and long-range delivery of technologies, evidence-based knowledge, and subject matter expertise.



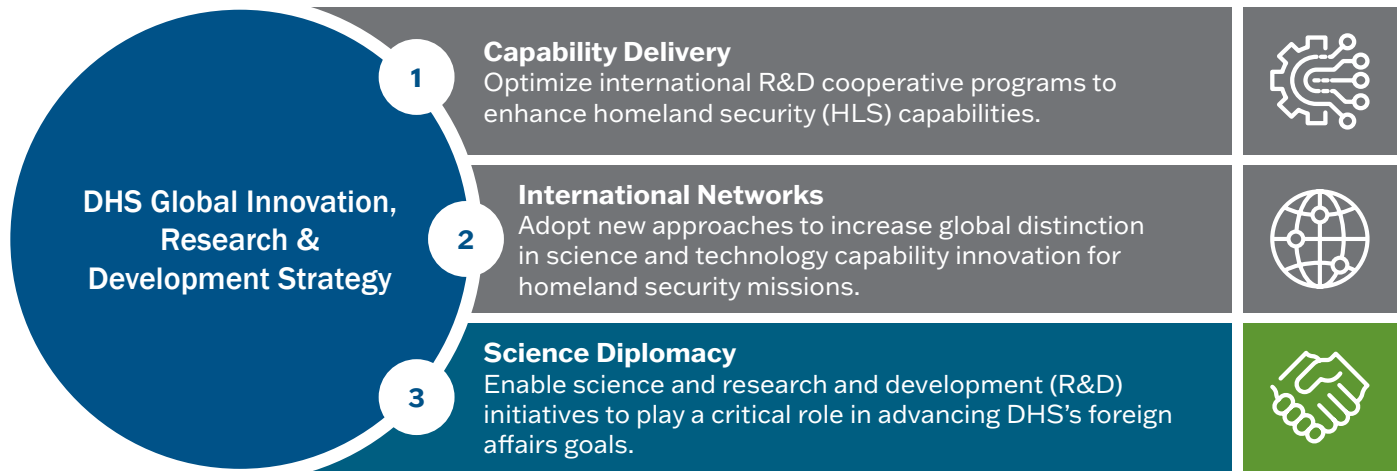


International Goal #2 – International Networks | Partnerships for Science

Expand novel, technical collaborations for DHS-wide entities to prepare for uncertain future scenarios and promote global innovation.

- ➔ **Issue Statement** | Scientific partnerships support U.S. Government goals to maintain a technological edge. DHS will build innovative, scientific engagement internationally to stay ahead of emerging risks, promote existing and develop new standards, methodologies and approaches, and position DHS as a leader in IRD for public safety and national security. DHS will expand its science and technology networks within sectors where innovation is taking place: government, the private sector, and academia.
- ➔ **End State** | Science cooperation that increases global security capability innovation and adoption, reducing the burden to domestic operations.





International Goal #3 – Science Diplomacy | Science for Partnerships

Enable innovation, research, and development initiatives to play a critical role in advancing DHS's foreign affairs.

- ➔ **Issue Statement** | International science and technology partnerships yield actionable, evidence-based information that informs Homeland Security operators and decision makers on emerging safety and security risks, threats, and solutions. Leadership at the highest levels will conduct international R&D discussions with foreign partners to strategize common priorities and reinforce DHS's R&D strategy. S&T will convene partners and stakeholders from various backgrounds to inform safety and security solutions
- ➔ **End State** | Strategic engagements that reinforce U.S. leadership on security science and technology issues on behalf of DHS, consistent with U.S. Government foreign policy objectives.



GLOBAL INNOVATION, RESEARCH, AND DEVELOPMENT STRATEGIC ROADMAP



This strategy guides the expansion of global IRD partnerships to address DHS challenges. S&T intends to work within DHS, across the U.S. Government, and with international partners to identify partners to successfully reach the goals outlined in this strategy. The implementation of this strategy will integrate lines of effort towards longer-term DHS Component priorities and Directorate-wide R&D objectives.

Enabling Execution | Effective partnerships require government-wide coordination to identify, prioritize, and facilitate opportunities for international R&D engagement. S&T will expand its efforts to increase the visibility, integration, and Component use of international R&D partnerships to address DHS challenges, sustain established relationships, and expand engagements where possible.

S&T's international goals require intense analysis of strategic, operational, and geopolitical drivers and communicating those needs to DHS's relevant and interested technical and operational leads. When making decisions on international partnerships, S&T accounts for strategic drivers and data, including but not limited to Executive Branch and Department priorities, Component-level international strategies, and S&T's Research Agenda on global trends and analysis of emerging technologies, to obtain a holistic view of the demand, return-on-investment, and short- and long-term impacts on the Homeland Security operators.

Engagement Priorities | This strategy sets the trajectory for DHS international cooperative partnerships. As S&T works to expand international IRD engagement, the Directorate will continue to strengthen enduring partnerships while expanding use of novel approaches to create new partnerships.

- ➔ **Expand Partnerships:** Deepen cooperation with existing partners while seeking opportunities with additional partners and multilateral engagements, pursue opportunities that bring international IRD discussions to the Ministerial level to strategize common priorities and ensure international partnership and science diplomacy considerations are considered
- ➔ **Increase Indo-Pacific Engagements:** Seek additional engagements and investments throughout the Indo-Pacific, including expanding S&T's footprint in the region to support foreign policy and scientific priorities.
- ➔ **Adopt Innovative Approaches:** Seek novel opportunities to impact global science and technology investments and strengthen global innovation systems, including visiting scientist and staff exchange programs, building networks and increasing participation in multilateral forums and international engagement.

CONCLUSION



S&T will leverage U.S. leadership and experiences in the field of science and technology to fulfill its mission as the lead science advisor and integrator for DHS. Working transparently on mutually beneficial research with international partners will increase our understanding of the global threat and solution landscapes, accelerate innovation, and further the adoption of new technologies. The mission of DHS is broad and has expanded significantly in the past 20 years. To meet the needs of an uncertain future, we must continuously evolve to be more flexible and strategic in our approaches, increasing our levels of international cooperation to receive and adapt new technologies, assess their benefits and risks, and seek partnerships in innovation for the benefit of all American citizens.



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