

GAO Highlights

Highlights of [GAO-19-210](#), a report to the Honorable Scott Perry, House of Representatives

Why GAO Did This Study

Conducting R&D on technologies is vital to enhancing the security of the nation. The Homeland Security Act of 2002, as amended, designates S&T as responsible for coordinating all R&D activities of DHS. Questions have been raised about S&T's ability to demonstrate the impact of its R&D investments. Since DHS began operations in 2003, GAO has made recommendations to help improve DHS's efforts to coordinate and oversee R&D.

GAO was asked to review DHS's R&D efforts. This report examines (1) how much DHS has obligated for R&D and what types of R&D DHS conducts, (2) to what extent S&T coordinates R&D across DHS, and (3) how, if at all, DHS identifies and tracks R&D efforts.

GAO reviewed documentation from DHS related to the conduct, coordination, tracking, and evaluation of R&D projects. GAO interviewed DHS officials with responsibilities related to, among other things, R&D financial reporting, performance evaluation, and the IPT process, including officials from the 10 DHS components that participate in the IPTs. GAO also reviewed DHS R&D budget and obligation data from fiscal years 2010 through 2017.

What GAO Recommends

GAO is making four recommendations, with which DHS concurred, including that DHS: 1) ensure all components participate in the IPT process, 2) develop a mechanism that aligns R&D project tracking sources, and 3) collect feedback from R&D customers.

View [GAO-19-210](#). For more information, contact William Russell at (202) 512-8777 or russellw@gao.gov.

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HOMELAND SECURITY

Research & Development Coordination Has Improved, but Additional Actions Needed to Track and Evaluate Projects

What GAO Found

The Department of Homeland Security (DHS) obligated more than \$10 billion for research and development (R&D) from fiscal years 2010 through 2017. Seven DHS components have budget authority to conduct R&D, and the Science and Technology Directorate (S&T) obligated nearly 80 percent of all DHS R&D funds during this time period. These components conduct a wide range of R&D, from cybersecurity to border security projects. S&T generally leads or funds R&D projects by providing technology and knowledge products to support four homeland security mission areas:

- **Disaster resilience.** Improving community resilience to natural disasters through technology and tools;
- **Critical incidents.** Improving response technological capabilities;
- **Border security.** Improving the nation's ability to detect, interdict and prosecute illegal activity across air, land and sea.
- **Cybersecurity.** Developing technologies and tools to secure systems and critical infrastructures against cyberattacks.

S&T strengthened its R&D coordination efforts across DHS, but some challenges remain. In 2015, DHS established an R&D coordination mechanism, to be led by S&T, and in 2017 issued R&D coordination-related guidance. Specifically, to improve coordination, DHS established an Integrated Product Team (IPT) process to serve as the key R&D coordination mechanism within DHS. All ten DHS components that GAO interviewed stated that the IPT process improved visibility into DHS R&D efforts. However, the component that obligated approximately 17 percent of DHS R&D funds in 2017, or \$176 million, did not participate in the IPT process in 2018, as required. Nonparticipation poses a risk to R&D coordination efforts across DHS, including R&D project information not being shared among components. Furthermore, ensuring that all required components participate in the IPT process would help S&T maintain visibility of R&D projects in order to fulfill its statutory role of coordinating R&D, and mitigate the risk of potential duplication of effort.

S&T, in its coordination role for DHS, uses disparate information sources to identify and track R&D project information and faces challenges to track progress and other information for ongoing R&D projects. For example, R&D project information is stored in multiple information sources leading to difficulty in integrating complete R&D project information and resulting in reporting that is not comprehensive. By developing a mechanism to address these challenges, S&T can further improve its efforts to report and analyze R&D project information, and have improved visibility on R&D efforts across DHS. GAO also identified challenges in collecting information related to R&D performance. Among other things, DHS is not well positioned to integrate the results and share lessons learned because limited R&D customer feedback information is collected and analyzed. Of the seven DHS components with R&D budget authority, two reported having formal customer feedback mechanisms. As a result, DHS is unable to more fully understand its customers' perceptions and experience which would allow DHS to better assess the performance of its R&D efforts.