114TH CONGRESS
1ST SESSION

H. R. 3578

IN THE SENATE OF THE UNITED STATES

DECEMBER 14, 2015

Received; read twice and referred to the Committee on Homeland Security and Governmental Affairs

AN ACT

To amend the Homeland Security Act of 2002 to strengthen and make improvements to the Directorate of Science and Technology of the Department of Homeland Security, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the ''DHS Science and Technology Reform and Improvement Act of 2015''.

SEC. 2. SCIENCE AND TECHNOLOGY IN SUPPORT OF HOMELAND SECURITY.

(a) IN GENERAL.—Title III of the Homeland Security Act of 2002 is amended—

(1) in section 301 (6 U.S.C. 181)—

(A) by striking ''There'' and inserting the following new subsection:

''(a) IN GENERAL.—There''; and

(B) by adding at the end the following new subsection:

''(b) MISSION.—The Directorate of Science and Technology shall be the primary research, development, testing, and evaluation arm of the Department, responsible for coordinating the research, development, testing, and evaluation of the Department to strengthen the security and resiliency of the United States. The Directorate shall—

''(1) develop and deliver knowledge, analyses, and innovative solutions that are responsive to homeland security capability gaps and threats to the homeland identified by components and offices of the Department, the first responder community, and the Homeland Security Enterprise (as such term is de-

fined in section 322) and that can be integrated into operations of the Department;

''(2) seek innovative, system-based solutions to complex homeland security problems and threats; and

''(3) build partnerships and leverage technology solutions developed by other Federal agencies and laboratories, State, local, and tribal governments, universities, and the private sector.'';

(2) in section 302 (6 U.S.C. 182)—

(A) in the matter preceding paragraph (1), by striking ''The Secretary, acting through the Under Secretary for Science and Technology, shall'' and inserting the following new subsection:

''(a) IN GENERAL.—The Secretary, acting through the Under Secretary for Science and Technology, shall carry out the mission described in subsection (b) of section 301 and shall'';

(B) in subsection (a), as so amended by subparagraph (A) of this paragraph—

(i) in paragraph (1), by inserting ''and serving as the senior scientific advisor to the Secretary'' before the semicolon at the end;

(ii) in paragraph (2)—

(I) by striking ''national'';

(II) by striking ''biological,,'' and inserting ''biological,''; and

(III) by inserting ''that may serve as a basis of a national strategy'' after ''terrorist threats'';

(iii) in paragraph (3)—

(I) by striking ''the Under Secretary for Intelligence and Analysis and the Assistant Secretary for Infrastructure Protection'' and inserting ''components and offices of the Department''; and

(II) by inserting ''terrorist'' before ''threats'';

(iv) in paragraph (4), by striking ''except that such responsibility does not extend to human health-related research and development activities'' and inserting the following: ''including coordinating with relevant components and offices of the Department appropriate to—

''(A) identify and prioritize technical capability requirements and create solutions that in-

clude researchers, the private sector, and operational end users; and

''(B) develop capabilities to address issues on research, development, testing, evaluation, technology, and standards for the first responder community,

except that such responsibility does not extend to the human health-related research and development activities;'';

(v) in paragraph (5)(A), by striking ''biological,,'' and inserting ''biological,'';

(vi) by amending paragraph (12) to read as follows:

''(12) coordinating and integrating all research, development, demonstration, testing, and evaluation activities of the Department, including through a centralized Federal clearinghouse established pursuant to paragraph (1) of section 313(b) for information relating to technologies that would further the mission of the Department, and providing advice, as necessary, regarding major acquisition programs;'';

(vii) in paragraph (13), by striking ''and'' at the end;

(viii) in paragraph (14), by striking the period at the end and inserting a semicolon; and

(ix) by adding at the end the following new paragraphs:

''(15) establishing a process that—

''(A) includes consideration by Directorate leadership, senior component leadership, first responders, and outside expertise;

''(B) is strategic, transparent, and repeatable with a goal of continuous improvement;

''(C) through which research and development projects undertaken by the Directorate are assessed on a regular basis; and

''(D) includes consideration of metrics to ensure research and development projects meet Directorate and Department goals and inform departmental budget and program planning;

''(16) developing and overseeing the administration of guidelines for periodic external review of departmental research and development programs or activities, including through—

''(A) consultation with experts, including scientists and practitioners, regarding the re-

search and development activities conducted by the Directorate of Science and Technology; and

"(B) biennial independent, external review—

"(i) initially at the division level; or

"(ii) when divisions conduct multiple programs focused on significantly different subjects, at the program level;

"(17) partnering with components and offices of the Department to develop and deliver knowledge, analyses, and innovative solutions that are responsive to identified homeland security capability gaps and threats to the homeland and raise the science-based, analytic capability and capacity of appropriate individuals throughout the Department by providing guidance on how to better identify homeland security capability gaps and threats to the homeland that may be addressed through a technological solution and by partnering with such components and offices to—

"(A) support technological assessments of major acquisition programs throughout the acquisition lifecycle;

"(B) help define appropriate technological requirements and perform feasibility analysis;

''(C) assist in evaluating new and emerging technologies against homeland security capability gaps and terrorist threats;

''(D) support evaluation of alternatives;

''(E) improve the use of technology Department-wide; and

''(F) provide technical assistance in the development of acquisition lifecycle cost for technologies;

''(18) acting as a coordinating office for technology development for the Department by helping components and offices define technological requirements, and building partnerships with appropriate entities (such as within the Department and with other Federal agencies and laboratories, State, local, and tribal governments, universities, and the private sector) to help each such component and office attain the technology solutions it needs; and

''(19) coordinating with organizations that provide venture capital to businesses, particularly small businesses, as appropriate, to assist in the commercialization of innovative homeland security technologies that are expected to be ready for commercialization in the near term and within 36 months.''; and

(C) by adding at the end the following new subsections:

''(b) REVIEW OF RESPONSIBILITIES.—Not later than 180 days after the date of the enactment of this subsection, the Under Secretary for Science and Technology shall submit to the Committee on Homeland Security and the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Homeland Security and Governmental Affairs of the Senate a report on the implementation of paragraphs (2) (including how the policy and strategic plan under such paragraph may serve as a basis for a national strategy referred to in such paragraph), (11), (12), (13), (16), and (17) of subsection (a).'';

(3) in section 303(1) (6 U.S.C. 183(1)), by striking subparagraph (F);

(4) in section 305 (6 U.S.C. 185)—

(A) by striking ''The'' and inserting the following new subsection:

''(a) ESTABLISHMENT.—The''; and

(B) by adding at the end the following new subsection:

''(b) CONFLICTS OF INTEREST.—The Secretary shall review and revise, as appropriate, the policies of the Department relating to personnel conflicts of interest to en-

sure that such policies specifically address employees of federally funded research and development centers established pursuant to subsection (a) who are in a position to make or materially influence research findings or agency decision making.'';

(5) in section 306 (6 U.S.C. 186)—

(A) in subsection (c), by adding at the end the following new sentence: ''If such regulations are issued, the Under Secretary shall report to the Committee on Homeland Security and the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Homeland Security and Governmental Affairs of the Senate prior to such issuance.''; and

(B) by amending subsection (d) to read as follows:

''(d) PERSONNEL.—In hiring personnel for the Directorate of Science and Technology, the Secretary shall have the hiring and management authorities described in section 1101 of the Strom Thurmond National Defense Authorization Act for Fiscal Year 1999 (5 U.S.C. 3104 note; Public Law 105–261). The term of appointments for employees under subsection (c)(1) of such section may not

exceed 5 years before the granting of any extension under subsection (c)(2) of such section.'';

(6) in section 308 (6 U.S.C. 188)—

(A) in subsection (b)(2)—

(i) in subparagraph (B)—

(I) in clause (iv), by striking ''and nuclear countermeasures or detection'' and inserting ''nuclear, and explosives countermeasures or detection (which may include research into remote sensing and remote imaging)''; and

(II) by adding after clause (xiv) the following new clause:

''(xv) Cybersecurity.''; and

(ii) by amending subparagraph (D) to read as follows:

''(D) ANNUAL REPORT TO CONGRESS.—Not later than 1 year after the date of the enactment of this subparagraph and annually thereafter, the Secretary shall submit to Congress a report on the implementation of this section. Each such report shall—

''(i) indicate which center or centers have been designated pursuant to this section;

''(ii) describe how such designation or designations enhance homeland security;

''(iii) provide information on any decisions to revoke or modify such designation or designations;

''(iv) describe research that has been tasked and completed by each center that has been designated during the preceding year;

''(v) describe funding provided by the Secretary for each center under clause (iv) for that year; and

''(vi) describe plans for utilization of each center or centers in the forthcoming year.''; and

(B) by adding at the end the following new subsection:

''(d) TEST, EVALUATION, AND STANDARDS DIVISION.—

''(1) ESTABLISHMENT.—There is established in the Directorate of Science and Technology a Test, Evaluation, and Standards Division.

''(2) DIRECTOR.—The Test, Evaluation, and Standards Division shall be headed by a Director of Test, Evaluation, and Standards, who shall be appointed by the Secretary and report to the Under Secretary for Science and Technology.

''(3) RESPONSIBILITIES, AUTHORITIES, AND FUNCTIONS.—The Director of Test, Evaluation, and Standards—

''(A) through the Under Secretary for Science and Technology, serve as an adviser to the Secretary and the Under Secretary of Management on all test and evaluation or standards activities in the Department; and

''(B) shall—

''(i) establish and update as necessary test and evaluation policies for the Department, including policies to ensure that operational testing is done at facilities that already have relevant and appropriate safety and material certifications to the extent such facilities are available;

''(ii) oversee and ensure that adequate test and evaluation activities are planned and conducted by or on behalf of components and offices of the Department with

respect to major acquisition programs of the Department, as designated by the Secretary, based on risk, acquisition level, novelty, complexity, and size of any such acquisition program, or as otherwise established in statute;

''(iii) review major acquisition program test reports and test data to assess the adequacy of test and evaluation activities conducted by or on behalf of components and offices of the Department, including test and evaluation activities planned or conducted pursuant to clause (ii); and

''(iv) review available test and evaluation infrastructure to determine whether the Department has adequate resources to carry out its testing and evaluation responsibilities, as established under this title.

''(4) LIMITATION.—The Test, Evaluation, and Standards Division is not required to carry out operational testing of major acquisition programs.

''(5) EVALUATION OF DEPARTMENT OF DEFENSE TECHNOLOGIES.—The Director of Test, Evaluation, and Standards may evaluate tech-

nologies currently in use or being developed by the Department of Defense to assess whether such technologies can be leveraged to address homeland security capability gaps.'';

(7) in section 309(a) (6 U.S.C. 189(a)), by adding at the end the following new paragraph:

''(3) TREATMENT OF CERTAIN FUNDS.—Notwithstanding any other provision of law, any funds provided to a Department of Energy national laboratory by the Department may not be treated as an assisted acquisition.'';

(8) in section 310 (6 U.S.C. 190), by adding at the end the following new subsection:

''(e) SUCCESSOR FACILITY.—Any successor facility to the Plum Island Animal Disease Center, including the National Bio and Agro-Defense Facility (NBAF) under construction as of the date of the enactment of this subsection, which is intended to the replace the Plum Island Animal Disease Center shall be subject to the requirements of this section in the same manner and to the same extent as the Plum Island Animal Disease Center under this section.'';

(9) in section 311 (6 U.S.C. 191)—

(A) in subsection (b)—

(i) in paragraph (1)—

(I) by striking ''20 members'' and inserting ''not fewer than 15 and not more than 30''; and

(II) by inserting ''academia, national labs, private industry, and'' after ''representatives of'';

(ii) by redesignating paragraph (2) as paragraph (3); and

(iii) by inserting after paragraph (1) the following new paragraph:

''(2) SUBCOMMITTEES.—The Advisory Committee may establish subcommittees that focus on research and development challenges, as appropriate.'';

(B) in subsection (c)—

(i) in paragraph (1), by inserting ''on a rotating basis'' before the period at the end;

(ii) by striking paragraph (2) and redesignating paragraph (3) as paragraph (2); and

(iii) in paragraph (2), as so redesignated, by striking ''be appointed'' and inserting ''serve'';

(C) in subsection (e), in the second sentence, by striking ''the call of'';

(D) in subsection (h)—

(i) in paragraph (1)—

(I) in the first sentence—

(aa) by striking ''render'' and inserting ''submit''; and

(bb) by striking ''Congress'' and inserting ''the appropriate congressional committees''; and

(II) in the second sentence, by inserting '', and incorporate the findings and recommendations of the Advisory Committee subcommittees,'' before ''during''; and

(ii) in paragraph (2)—

(I) striking ''render'' and inserting ''submit''; and

(II) by striking ''Congress'' and inserting ''the Committee on Homeland Security and the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Homeland Security and Governmental Affairs of the Senate'';

(E) in subsection (i), by inserting ", except that the Advisory Committee shall file a charter with Congress every 2 years in accordance with subsection (b)(2) of such section (14)";

(F) in subsection (j), by striking "2008" and inserting "2020";

(10) in section 313 (6 U.S.C. 193)—

(A) by redesignating subsection (c) as subsection (d); and

(B) by inserting after subsection (b) the following new subsection:

"(c) APPLICATION OF PROGRAM.—The Secretary, acting through the Under Secretary for Science and Technology, shall use the program established under subsection (a) to—

"(1) enhance the cooperation between components and offices of the Department on projects that have similar goals, timelines, or outcomes;

"(2) ensure the coordination of technologies to eliminate unnecessary duplication of research and development;

"(3) ensure technologies are accessible for component and office use on a Department website; and

"(4) carry out any additional purpose the Secretary determines necessary."; and

(11) by adding after section 317 (6 U.S.C. 195c) the following new sections:

"SEC. 318. IDENTIFICATION AND PRIORITIZATION OF RESEARCH AND DEVELOPMENT.

"(a) IN GENERAL.—Not later than 180 days after the date of the enactment of this section, the Under Secretary for Science and Technology shall establish a process to define, identify, prioritize, fund, and task the basic and applied homeland security research and development activities of the Directorate of Science and Technology to meet the needs of the components and offices of the Department, the first responder community, and the Homeland Security Enterprise (as such term is defined in section 322).

"(b) PROCESS.—The process established under subsection (a) shall—

"(1) be responsive to near-, mid-, and long-term needs, including unanticipated needs to address emerging terrorist threats;

"(2) utilize gap analysis and risk assessment tools where available and applicable;

"(3) include protocols to assess—

"(A) off-the-shelf technology to determine if an identified homeland security capability gap or threat to the homeland can be addressed

through the acquisition process instead of commencing research and development of technology to address such capability gap or threat; and

''(B) communication and collaboration for research and development activities pursued by other executive agencies, to determine if technology can be leveraged to identify and address homeland security capability gaps or threats to the homeland and avoid unnecessary duplication of efforts;

''(4) provide for documented and validated research and development requirements;

''(5) strengthen first responder participation to identify and prioritize homeland security technological gaps, including by—

''(A) soliciting feedback from appropriate national associations and advisory groups representing the first responder community and first responders within the components and offices of the Department; and

''(B) establishing and promoting a publicly accessible portal to allow the first responder community to help the Directorate of Science

and Technology develop homeland security research and development goals;

''(6) institute a mechanism to publicize the Department's homeland security technology priorities for the purpose of informing Federal, State, and local governments, first responders, and the private sector;

''(7) establish considerations to be used by the Directorate in selecting appropriate research entities, including the national laboratories, federally funded research and development centers, university-based centers, and the private sector, to carry out research and development requirements;

''(8) incorporate feedback derived as a result of the mechanism established in section 323, ensuring the Directorate is utilizing regular communication with components and offices of the Department; and

''(9) include any other criteria or measures the Under Secretary for Science and Technology considers necessary for the identification and prioritization of research requirements.

''SEC. 319. DEVELOPMENT OF DIRECTORATE STRATEGY AND RESEARCH AND DEVELOPMENT PLAN.

''(a) STRATEGY.—

''(1) IN GENERAL.—Not later than 1 year after the date of the enactment of this section, the Under Secretary for Science and Technology shall develop and submit to the Committee on Homeland Security and the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Homeland Security and Governmental Affairs of the Senate a strategy to guide the activities of the Directorate of Science and Technology. Such strategy shall be updated at least once every 5 years and shall identify priorities and objectives for the development of science and technology solutions and capabilities addressing homeland security operational needs. Such strategy shall include the coordination of such priorities and activities within the Department. Such strategy shall take into account the priorities and needs of stakeholders in the Homeland Security Enterprise (as such term is defined in section 322). In developing such strategy, efforts shall be made to support collaboration and avoid unnecessary duplication across the Federal Government. Such strategy shall be risk-based and aligned with other strategic guidance provided by—

''(A) the National Strategy for Homeland Security;

''(B) the Quadrennial Homeland Security Review; and

''(C) any other relevant strategic planning documents, as determined by the Under Secretary.

''(2) CONTENTS.—The strategy required under paragraph (1) shall be prepared in accordance with applicable Federal requirements and guidelines, and shall include the following:

''(A) An identification of the long-term strategic goals, objectives, and metrics of the Directorate, including those to address terrorist threats.

''(B) A technology transition strategy for the programs of the Directorate.

''(C) Short- and long-term strategic goals, and objectives for increasing the number of designations and certificates issued under subtitle G of title VIII, including cybersecurity technologies that could significantly reduce, or mitigate the effects of, cybersecurity risks (as such term is defined in subsection (a)(1) of the second section 226, relating to the national cybersecurity and communications integration center), without compromising the quality of the

evaluation of applications for such designations and certificates.

''(b) FIVE-YEAR RESEARCH AND DEVELOPMENT PLAN.—

''(1) IN GENERAL.—The Under Secretary for Science and Technology shall develop, and update at least once every 5 years, a 5-year research and development plan for the activities of the Directorate of Science and Technology. The Under Secretary shall develop the first such plan by the date that is not later than 1 year after the date of the enactment of this section.

''(2) CONTENTS.—Each 5-year research and development plan developed and revised under subsection (a) shall—

''(A) define the Directorate of Science and Technology's research, development, testing, and evaluation activities, priorities, performance metrics, and key milestones and deliverables for, as the case may be, the 5-fiscal-year period from 2016 through 2020, and for each 5-fiscal-year period thereafter;

''(B) describe, for the activities of the strategy developed under subsection (a), the planned annual funding levels for the period

covered by each such 5-year research and development plan;

''(C) indicate joint investments with other Federal partners where applicable, and enhanced coordination, as appropriate, with organizations as specified in paragraph (19) of section 302;

''(D) analyze how the research programs of the Directorate support achievement of the strategic goals and objectives identified in the strategy required under subsection (a);

''(E) describe how the activities and programs of the Directorate meet the requirements or homeland security capability gaps or threats to the homeland identified by customers within and outside of the Department, including the first responder community; and

''(F) describe the policies of the Directorate regarding the management, organization, and personnel of the Directorate.

''(3) SCOPE.—The Under Secretary for Science and Technology shall ensure that each 5-year research and development plan developed and revised under subsection (a)—

''(A) reflects input from a wide range of stakeholders; and

''(B) takes into account how research and development by other Federal, State, private sector, and nonprofit institutions contributes to the achievement of the priorities identified in each plan, and avoids unnecessary duplication with such efforts.

''(4) REPORTS.—The Under Secretary for Science and Technology shall submit to the Committee on Homeland Security and the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Homeland Security and Governmental Affairs of the Senate an annual report for 7 years beginning not later than 1 year after the date of the development of the initial 5-year research and development plan under paragraph (1) on the status and results to date of the implementation of such plan and the updates to such plan, including—

''(A) a summary of the research and development activities for the previous fiscal year in each mission area, including such activities to address homeland security risks, including threats, vulnerabilities, and consequences, and a

summary of the coordination activities undertaken by the Directorate of Science and Technology for components and offices of the Department, together with the results of the process specified in paragraph (15) of section 302;

''(B) clear links between the Directorate's budget and each mission area or program, including those mission areas or programs to address homeland security risks, including threats, vulnerabilities, and consequences, specifying which mission areas or programs fall under which budget lines, and clear links between Directorate coordination work and priorities and annual expenditures for such work and priorities, including joint investments with other Federal partners, where applicable;

''(C) an assessment of progress of the research and development activities based on the performance metrics and milestones set forth in such plan; and

''(D) any changes to such plan.

''SEC. 320. MONITORING OF PROGRESS.

''(a) IN GENERAL.—The Under Secretary for Science and Technology shall establish and utilize a system to track the progress of the research, development, testing,

and evaluation activities undertaken by the Directorate of Science and Technology, and shall provide to the Committee on Homeland Security and the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Homeland Security and Governmental Affairs of the Senate and customers of such activities, at a minimum on a biannual basis, regular updates on such progress.

''(b) REQUIREMENTS.—In order to provide the progress updates required under subsection (a), the Under Secretary for Science and Technology shall develop a system that—

''(1) monitors progress toward project milestones identified by the Under Secretary;

''(2) maps progress toward deliverables identified in each 5-year research and development plan required under section 319(b);

''(3) generates up-to-date reports to customers that transparently disclose the status and progress of research, development, testing, and evaluation efforts of the Directorate of Science and Technology; and

''(4) allows the Under Secretary to report the number of products and services developed by the Directorate that have been transitioned into acquisi-

tion programs and resulted in successfully fielded technologies.

''(c) EVALUATION METHODS.—

''(1) EXTERNAL INPUT, CONSULTATION, AND REVIEW.—The Under Secretary for Science and Technology shall implement procedures to engage outside experts to assist in the evaluation of the progress of research, development, testing, and evaluation activities of the Directorate of Science and Technology, including through—

''(A) consultation with experts, including scientists and practitioners, to gather independent expert peer opinion and advice on a project or on specific issues or analyses conducted by the Directorate; and

''(B) periodic, independent, external review to assess the quality and relevance of the Directorate's programs and projects.

''(2) COMPONENT FEEDBACK.—The Under Secretary for Science and Technology shall establish a formal process to collect feedback from customers of the Directorate of Science and Technology on the performance of the Directorate that includes—

''(A) appropriate methodologies through which the Directorate can assess the quality

and usefulness of technology and services delivered by the Directorate;

''(B) development of metrics for measuring the usefulness of any technology or service provided by the Directorate; and

''(C) standards for high-quality customer service.

''SEC. 321. HOMELAND SECURITY SCIENCE AND TECHNOLOGY FELLOWS PROGRAM.

''(a) ESTABLISHMENT.—The Secretary, acting through the Under Secretary for Science and Technology and the Under Secretary for Management, shall establish a fellows program, to be known as the Homeland Security Science and Technology Fellows Program (in this section referred to as the 'Program'), under which the Under Secretary for Science and Technology, in coordination with the Office of University Programs of the Department, shall facilitate the placement of fellows in relevant scientific or technological fields for up to 2 years in components and offices of the Department with a need for scientific and technological expertise.

''(b) UTILIZATION OF FELLOWS.—

''(1) IN GENERAL.—Under the Program, the Department may employ fellows—

''(A) for the use of the Directorate of Science and Technology; or

''(B) for the use of a component or office of the Department outside the Directorate, under a memorandum of agreement with the head of such a component or office under which such component or office will reimburse the Directorate for the costs of such employment.

''(2) RESPONSIBILITIES.—Under an agreement referred to in subparagraph (B) of paragraph (1)—

''(A) the Under Secretary for Science and Technology and the Under Secretary for Management shall—

''(i) solicit and accept applications from individuals who are currently enrolled in or who are graduates of postgraduate programs in scientific and engineering fields related to the promotion of securing the homeland or critical infrastructure sectors;

''(ii) screen applicants and interview them as appropriate to ensure that such applicants possess the appropriate level of scientific and engineering expertise and qualifications;

''(iii) provide a list of qualified applicants to the heads of components and offices of the Department seeking to utilize qualified fellows;

''(iv) subject to the availability of appropriations, pay financial compensation to such fellows;

''(v) coordinate with the Chief Security Officer to facilitate and expedite provision of security and suitability clearances to such fellows, as appropriate; and

''(vi) otherwise administer all aspects of the employment of such fellows with the Department; and

''(B) the head of the component or office of the Department utilizing a fellow shall—

''(i) select such fellow from the list of qualified applicants provided by the Under Secretary;

''(ii) reimburse the Under Secretary for the costs of employing such fellow, including administrative costs; and

''(iii) be responsible for the day-to-day management of such fellow.

''(c) APPLICATIONS FROM NONPROFIT ORGANIZATIONS.—The Under Secretary for Science and Technology may accept an application under subsection (b)(2)(A) that is submitted by a nonprofit organization on behalf of individuals whom such nonprofit organization has determined may be qualified applicants under the Program.

"SEC. 322. CYBERSECURITY RESEARCH AND DEVELOPMENT.

''(a) IN GENERAL.—The Under Secretary for Science and Technology shall support research, development, testing, evaluation, and transition of cybersecurity technology, including fundamental research to improve the sharing of information, analytics, and methodologies related to cybersecurity risks and incidents, consistent with current law.

''(b) ACTIVITIES.—The research and development supported under subsection (a) shall serve the components of the Department and shall—

''(1) advance the development and accelerate the deployment of more secure information systems;

''(2) improve and create technologies for detecting attacks or intrusions, including real-time continuous diagnostics and real-time analytic technologies;

''(3) improve and create mitigation and recovery methodologies, including techniques and policies

for real-time containment of attacks, and development of resilient networks and information systems;

''(4) support, in coordination with the private sector, the review of source code that underpins critical infrastructure information systems;

''(5) develop and support infrastructure and tools to support cybersecurity research and development efforts, including modeling, testbeds, and data sets for assessment of new cybersecurity technologies;

''(6) assist the development and support of technologies to reduce vulnerabilities in industrial control systems; and

''(7) develop and support cyber forensics and attack attribution.

''(c) COORDINATION.—In carrying out this section, the Under Secretary for Science and Technology shall coordinate activities with—

''(1) the Under Secretary appointed pursuant to section 103(a)(1)(H);

''(2) the heads of other relevant Federal departments and agencies, including the National Science Foundation, the Defense Advanced Research Projects Agency, the Information Assurance Directorate of the National Security Agency, the National

Institute of Standards and Technology, the Department of Commerce, the Networking and Information Technology Research and Development Program Office, Sector Specific Agencies for critical infrastructure, and other appropriate working groups established by the President to identify unmet needs and cooperatively support activities, as appropriate; and

''(3) industry and academia.

''(d) TRANSITION TO PRACTICE.—The Under Secretary for Science and Technology shall support projects through the full life cycle of such projects, including research, development, testing, evaluation, pilots, and transitions. The Under Secretary shall identify mature technologies that address existing or imminent cybersecurity gaps in public or private information systems and networks of information systems, identify and support necessary improvements identified during pilot programs and testing and evaluation activities, and introduce new cybersecurity technologies throughout the Homeland Security Enterprise through partnerships and commercialization. The Under Secretary shall target federally funded cybersecurity research that demonstrates a high probability of successful transition to the commercial market within 2 years and that is expected to have notable impact on the

cybersecurity of the information systems or networks of information systems of the United States.

''(e) DEFINITIONS.—In this section:

''(1) CYBERSECURITY RISK.—The term 'cybersecurity risk' has the meaning given such term in the second section 226, relating to the national cybersecurity and communications integration center.

''(2) HOMELAND SECURITY ENTERPRISE.—The term 'Homeland Security Enterprise' means relevant governmental and nongovernmental entities involved in homeland security, including Federal, State, local, and tribal government officials, private sector representatives, academics, and other policy experts.

''(3) INCIDENT.—The term 'incident' has the meaning given such term in the second section 226, relating to the national cybersecurity and communications integration center.

''(4) INFORMATION SYSTEM.—The term 'information system' has the meaning given that term in section 3502(8) of title 44, United States Code.

''SEC. 323. INTEGRATED PRODUCT TEAMS.

''(a) IN GENERAL.—The Secretary shall establish integrated product teams to serve as a central mechanism for the Department to identify, coordinate, and align research and development efforts with departmental mis-

sions. Each team shall be managed by the Under Secretary for Science and Technology and the relevant senior leadership of operational components, and shall be responsible for the following:

''(1) Identifying and prioritizing homeland security capability gaps or threats to the homeland within a specific mission area and technological solutions to address such gaps.

''(2) Identifying ongoing departmental research and development activities and component acquisitions of technologies that are outside of departmental research and development activities to address a specific mission area.

''(3) Assessing the appropriateness of a technology to address a specific mission area.

''(4) Identifying unnecessary redundancy in departmental research and development activities within a specific mission area.

''(5) Informing the Secretary and the annual budget process regarding whether certain technological solutions are able to address homeland security capability gaps or threats to the homeland within a specific mission area.

''(b) CONGRESSIONAL OVERSIGHT.—Not later than 2 years after the date of enactment of this section, the Sec-

retary shall provide to the Committee on Homeland Security and the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Homeland Security and Governmental Affairs of the Senate information on the impact and effectiveness of the mechanism described in subsection (a) on research and development efforts, component relationships, and how the process has informed the research and development budget and enhanced decision making, including acquisition decision making, at the Department. The Secretary shall seek feedback from the Under Secretary for Science and Technology, Under Secretary for Management, and the senior leadership of operational components regarding the impact and effectiveness of such mechanism and include such feedback in the information provided under this subsection.

"SEC. 324. HOMELAND SECURITY-STEM SUMMER INTERNSHIP PROGRAM.

''(a) IN GENERAL.—The Under Secretary for Science and Technology shall establish a Homeland Security-STEM internship program (in this section referred to as the 'program') to carry out the objectives of this subtitle.

''(b) PROGRAM.—The program shall provide students with exposure to Department mission-relevant research areas, including threats to the homeland, to encourage

such students to pursue STEM careers in homeland security related fields. Internships offered under the program shall be for up to 10 weeks during the summer.

''(c) ELIGIBILITY.—The Under Secretary for Science and Technology shall develop criteria for participation in the program, including the following:

''(1) At the time of application, an intern shall—

''(A) have successfully completed not less than 1 academic year of study at an institution of higher education in a STEM field;

''(B) be enrolled in a course of study in a STEM field at an institution of higher education; and

''(C) plan to continue such course of study or pursue an additional course of study in a STEM field at an institution of higher education in the academic year following the internship.

''(2) An intern shall be pursuing career goals aligned with the Department's mission, goals, and objectives.

''(3) Any other criteria the Under Secretary determines appropriate.

''(d) COOPERATION.—The program shall be administered in cooperation with the university-based centers for homeland security under section 308. Interns in the program shall be provided hands-on research experience and enrichment activities focused on Department research areas.

''(e) ACADEMIC REQUIREMENTS; OPERATION.—The Under Secretary for Science and Technology shall determine the academic requirements, other selection criteria, and standards for successful completion of each internship period in the program. The Under Secretary shall be responsible for the design, implementation, and operation of the program.

''(f) RESEARCH MENTORS.—The Under Secretary for Science and Technology shall ensure that each intern in the program is assigned a research mentor to act as counselor and advisor and provide career-focused advice.

''(g) OUTREACH TO CERTAIN UNDER-REPRESENTED STUDENTS.—The Under Secretary for Science and Technology shall conduct outreach to students who are members of groups under-represented in STEM careers to encourage their participation in the program.

''(h) INSTITUTION OF HIGHER EDUCATION DEFINED.—In this section, the term 'institution of higher education' has the meaning given the term in section 102

of the Higher Education Act of 1965 (20 U.S.C. 1002), except that the term does not include institutions described in subparagraph (C) of such section 102(a)(1).''.

(b) EFFECTIVE DATE.—The amendments made by subsection (a) shall take effect on the date that is 30 days after the date of the enactment of this section.

(c) CLERICAL AMENDMENT.—The table of contents in section 1(b) of the Homeland Security Act of 2002 is amended by inserting after the item relating to section 317 the following new items:

''Sec. 318. Identification and prioritization of research and development.
''Sec. 319. Development of Directorate strategy and research and development plan.
''Sec. 320. Monitoring of progress.
''Sec. 321. Homeland Security Science and Technology Fellows Program.
''Sec. 322. Cybersecurity research and development.
''Sec. 323. Integrated product teams.
''Sec. 324. Homeland Security-STEM summer internship program.''.

(d) RESEARCH AND DEVELOPMENT PROJECTS.—Section 831 of the Homeland Security Act of 2002 (6 U.S.C. 391) is amended—

(1) in subsection (a)—

(A) in the matter preceding paragraph (1), by striking ''2015'' and inserting ''2020'';

(B) in paragraph (1), by striking the last sentence; and

(C) by adding at the end the following new paragraph:

''(3) PRIOR APPROVAL.—In any case in which a component or office of the Department seeks to utilize the authority under this section, such office or component shall first receive prior approval from the Secretary by providing to the Secretary a proposal that includes the rationale for the use of such authority, the funds to be spent on the use of such authority, and the expected outcome for each project that is the subject of the use of such authority. In such a case, the authority for evaluating the proposal may not be delegated by the Secretary to anyone other than the Under Secretary for Management.'';

(2) in subsection (c)—

(A) in paragraph (1), in the matter preceding subparagraph (A), by striking ''2015'' and inserting ''2020''; and

(B) by amending paragraph (2) to read as follows:

''(2) REPORT.—The Secretary shall annually submit to the Committee on Homeland Security and the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Homeland Security and Governmental Affairs of the Senate a report detailing the projects for which the

authority granted by subsection (a) was used, the rationale for such use, the funds spent using such authority, the extent of cost-sharing for such projects among Federal and non-Federal sources, the extent to which use of such authority has addressed a homeland security capability gap or threat to the homeland identified by the Department, the total amount of payments, if any, that were received by the Federal Government as a result of the use of such authority during the period covered by each such report, the outcome of each project for which such authority was used, and the results of any audits of such projects.''; and

(3) by adding at the end the following new subsections:

''(e) TRAINING.—The Secretary shall develop a training program for acquisitions staff in the use of other transaction authority to help ensure the appropriate use of such authority.

''(f) OTHER TRANSACTION AUTHORITY DEFINED.—In this section, the term 'other transaction authority' means authority under subsection (a).''.

(e) AMENDMENT TO DEFINITION.—Paragraph (2) of subsection (a) of the second section 226 of the Homeland Security Act of 2002 (6 U.S.C. 148; relating to the na-

tional cybersecurity and communications integration center) is amended to read as follows:

''(2) INCIDENT.—The term 'incident' means an occurrence that actually or imminently jeopardizes, without lawful authority, the integrity, confidentiality, or availability of information on an information system, or actually or imminently jeopardizes, without lawful authority, an information system.''.

(f) GAO STUDY OF UNIVERSITY-BASED CENTERS.—

(1) IN GENERAL.—Not later than 120 days after the date of the enactment of this Act, the Comptroller General of the United States shall initiate a study to assess the university-based centers for homeland security program authorized by section 308(b)(2) of the Homeland Security Act of 2002 (6 U.S.C. 188(b)(2)), and provide recommendations to the Committee on Homeland Security and the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Homeland Security and Governmental Affairs of the Senate for appropriate improvements.

(2) SUBJECT MATTERS.—The study required under subsection (a) shall include the following:

(A) A review of the Department of Homeland Security's efforts to identify key areas of

study needed to support the homeland security mission, and criteria that the Department utilized to determine those key areas for which the Department should maintain, establish, or eliminate university-based centers.

(B) A review of the method by which university-based centers, federally funded research and development centers, and Department of Energy national laboratories receive tasking from the Department of Homeland Security, including a review of how university-based research is identified, prioritized, and funded.

(C) A review of selection criteria for designating university-based centers and a weighting of such criteria.

(D) An examination of best practices from other agencies' efforts to organize and use university-based research to support their missions.

(E) A review of the Department of Homeland Security's criteria and metrics to measure demonstrable progress achieved by university-based centers in fulfilling Department taskings, and mechanisms for delivering and disseminating the research results of designated uni-

versity-based centers within the Department and to other Federal, State, and local agencies.

(F) An examination of the means by which academic institutions that are not designated or associated with the designated university-based centers can optimally contribute to the research mission of the Directorate of Science and Technology of the Department of Homeland Security.

(G) An assessment of the interrelationship between the different university-based centers and the degree to which outreach and collaboration among a diverse array of academic institutions is encouraged by the Department of Homeland Security, particularly with historically Black colleges and universities and minority-serving institutions.

(H) A review of any other essential elements of the programs determined in the conduct of the study.

(g) PRIZE AUTHORITY.—The Under Secretary for Science and Technology of the Department of Homeland Security shall utilize, as appropriate, prize authority granted pursuant to current law.

(h) PROHIBITION ON NEW FUNDING.—No funds are authorized to be appropriated to carry out this section and the amendments made by this section. Such section and amendments shall be carried out using amounts otherwise appropriated or made available for such purposes.

Passed the House of Representatives December 10, 2015.

Attest: KAREN L. HAAS,

Clerk.