

114TH CONGRESS
1ST SESSION

H. R. 3578

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.

IN THE HOUSE OF REPRESENTATIVES

SEPTEMBER 18, 2015

Mr. RATCLIFFE (for himself and Mr. RICHMOND) introduced the following bill;
which was referred to the Committee on Homeland Security

A BILL

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.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “DHS Science and
5 Technology Reform and Improvement Act of 2015”.

1 **SEC. 2. SCIENCE AND TECHNOLOGY IN SUPPORT OF HOME-**
2 **LAND SECURITY.**

3 (a) IN GENERAL.—Title III of the Homeland Secu-
4 rity Act of 2002 (6 U.S.C. 181 et seq.) is amended—

5 (1) in section 301—

6 (A) by striking “There” and inserting the
7 following new subsection:

8 “(a) IN GENERAL.—There”; and

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

11 “(b) MISSION.—The Directorate of Science and
12 Technology shall be the primary research, development,
13 testing, and evaluation arm of the Department, respon-
14 sible for coordinating the research, development, testing,
15 and evaluation of the Department to strengthen the secu-
16 rity and resiliency of the United States. The Directorate
17 shall—

18 “(1) develop and deliver knowledge, analyses,
19 and innovative solutions that are responsive to
20 homeland security capability gaps identified by com-
21 ponents and offices of the Department, the first re-
22 sponder community, and the Homeland Security En-
23 terprise (as such term is defined in section 322) and
24 that can be integrated into operations of the Depart-
25 ment;

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

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

7 (2) in section 302—

8 (A) in the matter preceding paragraph (1),
9 by striking “The Secretary” and inserting the
10 following new subsection:

11 “(a) IN GENERAL.—The Secretary”;

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

14 (i) in paragraph (1), by inserting
15 “and serving as the senior scientific advi-
16 sor to the Secretary” before the semicolon
17 at the end;

18 (ii) in paragraph (2)—

19 (I) by striking “national”;

20 (II) by striking “biological,,” and
21 inserting “biological,”; and

22 (III) by inserting “that may
23 serve as a basis of a national strat-
24 egy” after “terrorist threats”;

1 (iii) in paragraph (3), by striking “the
2 Under Secretary for Intelligence and Anal-
3 ysis and the Assistant Secretary for Infra-
4 structure Protection” and inserting “com-
5 ponents and offices of the Department”;

6 (iv) in paragraph (4), by striking “ex-
7 cept that such responsibility does not ex-
8 tend to human health-related research and
9 development activities” and inserting the
10 following: “including coordinating with rel-
11 evant components and offices of the De-
12 partment appropriate to—

13 “(A) identify and prioritize technical capa-
14 bility requirements and create solutions that in-
15 clude researchers and operational end users,
16 and

17 “(B) develop capabilities to address issues
18 on research, development, testing, evaluation,
19 technology, and standards for the first re-
20 sponder community,

21 except that such responsibility does not extend to
22 the human health-related research and development
23 activities;”;

24 (v) in paragraph (5)(A), by striking
25 “biological,” and inserting “biological,”;

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

3 “(12) coordinating and integrating all research,
4 development, demonstration, testing, and evaluation
5 activities of the Department, including through a
6 centralized Federal clearinghouse established pursu-
7 ant to paragraph (1) of section 313(b), and pro-
8 viding advice, as necessary, regarding major acquisi-
9 tion programs;”;

10 (vii) in paragraph (13), by striking
11 “and” at the end;

12 (viii) in paragraph (14), by striking
13 the period at the end and inserting a semi-
14 colon; and

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

17 “(15) establishing a process that—

18 “(A) includes consideration by Directorate
19 leadership, senior component leadership, first
20 responders, and outside expertise;

21 “(B) is strategic, transparent, and repeat-
22 able with a goal of continuous improvement;

23 “(C) through which research and develop-
24 ment projects undertaken by the Directorate
25 are assessed on a regular basis; and

1 “(D) includes consideration of metrics to
2 ensure research and development projects meet
3 Directorate and Department goals and inform
4 departmental budget and program planning;

5 “(16) developing and overseeing the administra-
6 tion of guidelines for periodic external review of de-
7 partmental research and development programs or
8 activities, including through—

9 “(A) consultation with experts, including
10 scientists and practitioners, regarding the re-
11 search and development activities conducted by
12 the Directorate of Science and Technology; and

13 “(B) biennial independent, external re-
14 view—

15 “(i) initially at the division level; or

16 “(ii) when divisions conduct multiple
17 programs focused on significantly different
18 subjects, at the program level;

19 “(17) partnering with components and offices
20 of the Department to develop and deliver knowledge,
21 analyses, and innovative solutions that are respon-
22 sive to identified homeland security capability gaps
23 and raise the science-based, analytic capability and
24 capacity of appropriate individuals throughout the
25 Department by providing guidance on how to better

1 identify homeland security capability gaps that may
2 be addressed through a technological solution and by
3 partnering with such components and offices to—

4 “(A) support technological assessments of
5 major acquisition programs throughout the ac-
6 quisition lifecycle;

7 “(B) help define appropriate technological
8 requirements and perform feasibility analysis;

9 “(C) assist in evaluating new and emerging
10 technologies against capability gaps;

11 “(D) support evaluation of alternatives;

12 “(E) improve the use of technology De-
13 partment-wide; and

14 “(F) provide technical assistance in the de-
15 velopment of acquisition lifecycle cost for tech-
16 nologies; and

17 “(18) identifying technologies that address an
18 existing or imminent homeland security capability
19 gap within the Department, identifying and sup-
20 porting incremental improvements, and increasing
21 the utilization of such technologies through partner-
22 ships and development efforts.”; and

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

1 “(b) REVIEW OF RESPONSIBILITIES.—Not later than
2 180 days after the date of the enactment of this sub-
3 section, the Under Secretary for Science and Technology
4 shall submit to the appropriate congressional committees
5 a report on the implementation of paragraphs (2) (includ-
6 ing how the policy and strategic plan under such para-
7 graph may serve as a basis for a national strategy referred
8 to in such paragraph), (11), (12), (13), (16), and (17)
9 of subsection (a).”;

10 (3) in section 303(1), by striking subparagraph
11 (F);

12 (4) in section 305—

13 (A) by striking “The” and inserting the
14 following new subsection:

15 “(a) ESTABLISHMENT.—The”; and

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

18 “(b) CONFLICTS OF INTEREST.—The Secretary shall
19 review and revise, as appropriate, the policies of the De-
20 partment relating to personnel conflicts of interest to en-
21 sure that such policies specifically address employees of
22 federally funded research and development centers estab-
23 lished pursuant to subsection (a) who are in a position
24 to make or materially influence research findings or agen-
25 cy decision making.”;

1 (5) in section 306(c), by adding at the end the
2 following new sentence: “If such regulations are
3 issued, the Under Secretary shall report to the ap-
4 propriate congressional committees prior to such
5 issuance.”;

6 (6) in section 308—

7 (A) in subsection (b)(2)(B)—

8 (i) in clause (iv), by striking “and nu-
9 clear countermeasures or detection” and
10 inserting “nuclear, and explosives counter-
11 measures or detection”; and

12 (ii) by adding after clause (xiv) the
13 following new clause:

14 “(xv) Cybersecurity.”; and

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

17 “(d) TEST, EVALUATION, AND STANDARDS DIVI-
18 SION.—

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

22 “(2) DIRECTOR.—The Test, Evaluation, and
23 Standards Division shall be headed by a Director of
24 Test, Evaluation, and Standards, who shall be ap-

1 pointed by the Secretary and report to the Under
2 Secretary for Science and Technology.

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

6 “(A) through the Under Secretary for
7 Science and Technology, serve as an adviser to
8 the Secretary and the Under Secretary of Man-
9 agement on all test and evaluation or standards
10 activities in the Department; and

11 “(B) shall—

12 “(i) establish and update as necessary
13 test and evaluation policies for the Depart-
14 ment, including policies to ensure that
15 operational testing is done at facilities that
16 already have relevant and appropriate safe-
17 ty and material certifications to the extent
18 such facilities are available;

19 “(ii) oversee and ensure that adequate
20 test and evaluation activities are planned
21 and conducted by or on behalf of compo-
22 nents and offices of the Department with
23 respect to major acquisition programs of
24 the Department, as designated by the Sec-
25 retary, based on risk, acquisition level, nov-

1 elty, complexity, and size of any such ac-
2 quisition program, or as otherwise estab-
3 lished in statute;

4 “(iii) review major acquisition pro-
5 gram test reports and test data to assess
6 the adequacy of test and evaluation activi-
7 ties conducted by or on behalf of compo-
8 nents and offices of the Department, in-
9 cluding test and evaluation activities
10 planned or conducted pursuant to clause
11 (ii); and

12 “(iv) review available test and evalua-
13 tion infrastructure to determine whether
14 the Department has adequate resources to
15 carry out its testing and evaluation respon-
16 sibilities, as established under this title.

17 “(4) LIMITATION.—The Test, Evaluation, and
18 Standards Division is not required to carry out oper-
19 ational testing of major acquisition programs.

20 “(5) EVALUATION OF DEPARTMENT OF DE-
21 FENSE TECHNOLOGIES.—The Director of Test,
22 Evaluation, and Standards may evaluate tech-
23 nologies currently in use or being developed by the
24 Department of Defense to assess whether such tech-

1 nologies can be leveraged to address homeland secu-
2 rity capability gaps.”;

3 (7) in section 310, by adding at the end the fol-
4 lowing new subsection:

5 “(e) SUCCESSOR FACILITY.—Any successor facility
6 to the Plum Island Animal Disease Center, including the
7 National Bio and Agro-Defense Facility (NBAF) under
8 construction as of the date of the enactment of this sub-
9 section, which is intended to the replace the Plum Island
10 Animal Disease Center shall be subject to the require-
11 ments of this section in the same manner and to the same
12 extent as the Plum Island Animal Disease Center under
13 this section.”;

14 (8) in section 311—

15 (A) in subsection (b)—

16 (i) in paragraph (1)—

17 (I) by striking “20 members”
18 and inserting “not fewer than 15 and
19 not more than 30”; and

20 (II) by inserting “academia, na-
21 tional labs, private industry, and”
22 after “representatives of”;

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

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

3 “(2) SUBCOMMITTEES.—The Advisory Com-
4 mittee may establish subcommittees that focus on
5 research and development challenges, as appro-
6 priate.”;

7 (B) in subsection (c)—

8 (i) in paragraph (1), by inserting “on
9 a rotating basis” before the period at the
10 end;

11 (ii) by striking paragraph (2) and re-
12 designating paragraph (3) as paragraph
13 (2); and

14 (iii) in paragraph (2), as so redesign-
15 ated, by striking “be appointed” and in-
16 serting “serve”;

17 (C) in subsection (e), in the second sen-
18 tence, by striking “the call of”;

19 (D) in subsection (h)—

20 (i) in paragraph (1)—

21 (I) in the first sentence—

22 (aa) by striking “render”
23 and inserting “submit”; and

1 (bb) by striking “Congress”
2 and inserting “the appropriate
3 congressional committees”; and

4 (II) in the second sentence, by
5 inserting “, and incorporate the find-
6 ings and recommendations of the Ad-
7 visory Committee subcommittees,” be-
8 fore “during”; and

9 (ii) in paragraph (2)—

10 (I) striking “render” and insert-
11 ing “submit”; and

12 (II) by striking “Congress” and
13 inserting “the appropriate congress-
14 sional committees”;

15 (E) in subsection (i), by inserting “, except
16 that the Advisory Committee shall file a charter
17 with Congress every two years in accordance
18 with subsection (b)(2) of such section (14)”;
19 and

20 (F) in subsection (j), by striking “2008”
21 and inserting “2020”; and

22 (9) by adding after section 317 the following
23 new sections:

1 **“SEC. 318. IDENTIFICATION AND PRIORITIZATION OF RE-**
2 **SEARCH AND DEVELOPMENT.**

3 “(a) IN GENERAL.—Not later than 180 days after
4 the date of the enactment of this section, the Under Sec-
5 retary for Science and Technology shall establish a process
6 to define, identify, prioritize, fund, and task the basic and
7 applied homeland security research and development ac-
8 tivities of the Directorate of Science and Technology.

9 “(b) PROCESS.—The process established under sub-
10 section (a) shall—

11 “(1) be responsive to near-, mid-, and long-term
12 needs, including unanticipated needs to address
13 emerging threats;

14 “(2) utilize gap analysis and risk assessment
15 tools where available and applicable;

16 “(3) include protocols to assess—

17 “(A) off-the-shelf technology to determine
18 if an identified homeland security capability gap
19 can be addressed through the acquisition proc-
20 ess instead of commencing research and devel-
21 opment of technology to address such capability
22 gap; and

23 “(B) communication and collaboration for
24 research and development activities pursued by
25 other executive agencies, to determine if tech-
26 nology can be leveraged to identify and address

1 homeland security capability gaps and avoid un-
2 necessary duplication of efforts;

3 “(4) provide for documented and validated re-
4 search and development requirements;

5 “(5) strengthen first responder participation to
6 identify and prioritize homeland security techno-
7 logical gaps, including by—

8 “(A) soliciting feedback from appropriate
9 national associations and advisory groups rep-
10 resenting the first responder community and
11 first responders within the components of the
12 Department; and

13 “(B) establishing and promoting a publicly
14 accessible portal to allow the first responder
15 community to help the Directorate of Science
16 and Technology develop homeland security re-
17 search and development goals;

18 “(6) institute a mechanism to publicize the De-
19 partment’s homeland security technology priorities
20 for the purpose of informing Federal, State, and
21 local governments, first responders, and the private
22 sector;

23 “(7) establish considerations to be used by the
24 Directorate in selecting appropriate research enti-
25 ties, including the national laboratories, federally

1 funded research and development centers, university-
2 based centers, and the private sector, to carry out
3 research and development requirements; and

4 “(8) include any other criteria or measures the
5 Under Secretary for Science and Technology con-
6 sidered necessary for the identification and
7 prioritization of research requirements.

8 **“SEC. 319. REPORTING REQUIREMENTS.**

9 “(a) STRATEGY.—

10 “(1) IN GENERAL.—Not later than one year
11 after the date of the enactment of this section, the
12 Under Secretary for Science and Technology shall
13 develop and submit to the appropriate congressional
14 committees a strategy to guide the activities of the
15 Directorate of Science and Technology. Such strat-
16 egy shall be updated at least once every five years
17 and shall identify priorities and objectives for the de-
18 velopment of science and technology solutions and
19 capabilities addressing homeland security operational
20 needs. Such strategy shall take into account the pri-
21 orities and needs of stakeholders in the Homeland
22 Security Enterprise (as such term is defined in sec-
23 tion 322). In developing such strategy, efforts shall
24 be made to support collaboration and avoid unneces-
25 sary duplication across the Federal Government.

1 Such strategy shall be risk-based and aligned with
2 other strategic guidance provided by—

3 “(A) the National Strategy for Homeland
4 Security;

5 “(B) the Quadrennial Homeland Security
6 Review; and

7 “(C) any other relevant strategic planning
8 documents, as determined by the Under Sec-
9 retary.

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

14 “(A) An identification of the long-term
15 strategic goals, objectives, and metrics of the
16 Directorate.

17 “(B) The role of risk analysis activities
18 and programs of the Directorate.

19 “(C) A technology transition strategy for
20 the programs of the Directorate.

21 “(D) Short- and long-term strategic goals,
22 and objectives for increasing the number of des-
23 ignations and certificates issued under subtitle
24 G of title VIII, including cybersecurity tech-
25 nologies that could significantly reduce, or miti-

1 gate the effects of, cybersecurity risks (as such
2 term is defined in subsection (a)(1) of the sec-
3 ond section 226, relating to the national cyber-
4 security and communications integration cen-
5 ter), without compromising the quality of the
6 evaluation of applications for such designations
7 and certificates.

8 “(b) FIVE-YEAR RESEARCH AND DEVELOPMENT
9 PLAN.—

10 “(1) IN GENERAL.—The Under Secretary for
11 Science and Technology shall develop, and update at
12 least once every five years, a five-year research and
13 development plan for the activities of the Directorate
14 of Science and Technology. The Under Secretary
15 shall develop the first such plan by the date that is
16 not later than one year after the date of the enact-
17 ment of this section.

18 “(2) CONTENTS.—Each five-year research and
19 development plan developed and revised under sub-
20 section (a) shall—

21 “(A) define the Directorate’s research, de-
22 velopment, testing, and evaluation activities,
23 priorities, performance metrics, and key mile-
24 stones and deliverables for, as the case may be,
25 the five-fiscal-year period from 2016 through

1 2020, and for each five-fiscal-year period there-
2 after;

3 “(B) describe, for the activities of the
4 strategy developed under subsection (a), the
5 planned annual funding levels for the period
6 covered by each such five-year research and de-
7 velopment plan;

8 “(C) indicate joint investments with other
9 Federal partners where applicable;

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

14 “(E) describe how the activities and pro-
15 grams of the Directorate meet the requirements
16 or homeland security capability gaps identified
17 by customers within and outside of the Depart-
18 ment, including the first responder community;
19 and

20 “(F) describe the policies of the Direc-
21 torate regarding the management, organization,
22 and personnel of the Directorate.

23 “(3) SCOPE.—The Under Secretary for Science
24 and Technology shall ensure that each five-year re-

1 search and development plan developed and revised
2 under subsection (a)—

3 “(A) reflects input from a wide range of
4 stakeholders; and

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

11 “(4) REPORTS.—At the time the President sub-
12 mits each annual budget request under section
13 1105(a) of title 31, United States Code, the Under
14 Secretary for Science and Technology shall submit
15 to the appropriate congressional committees a report
16 on the status and results to date of implementation
17 of the current five-year research and development
18 plan, including—

19 “(A) a summary of the research and devel-
20 opment activities for the previous fiscal year in
21 each topic area, together with the results of the
22 process specified in paragraph (15) of section
23 302;

24 “(B) the annual expenditures in each topic
25 area;

1 “(C) an assessment of progress of the re-
2 search and development activities based on the
3 performance metrics and milestones set forth in
4 such plan; and

5 “(D) any changes to such plan.

6 **“SEC. 320. MONITORING OF PROGRESS.**

7 “(a) IN GENERAL.—The Under Secretary for Science
8 and Technology shall establish and utilize a system to
9 track the progress of the research, development, testing,
10 and evaluation activities undertaken by the Directorate of
11 Science and Technology, and shall provide to the appro-
12 priate congressional committees and customers of such ac-
13 tivities, at a minimum on a biannual basis, regular up-
14 dates on such progress.

15 “(b) REQUIREMENTS.—In order to provide the
16 progress updates required under subsection (a), the Under
17 Secretary for Science and Technology shall develop a sys-
18 tem that—

19 “(1) monitors progress toward project mile-
20 stones identified by the Under Secretary;

21 “(2) maps progress toward deliverables identi-
22 fied in each five-year research and development plan
23 required under section 319(b);

24 “(3) generates up-to-date reports to customers
25 that transparently disclose the status and progress

1 of research, development, testing, and evaluation ef-
2 forts of the Directorate of Science and Technology;
3 and

4 “(4) allows the Under Secretary to report the
5 number of products and services developed by the
6 Directorate that have been transitioned into acquisi-
7 tion programs and resulted in successfully fielded
8 technologies.

9 “(c) EVALUATION METHODS.—

10 “(1) EXTERNAL INPUT, CONSULTATION, AND
11 REVIEW.—The Under Secretary for Science and
12 Technology shall implement procedures to engage
13 outside experts to assist in the evaluation of the
14 progress of research, development, testing, and eval-
15 uation activities of the Directorate of Science and
16 Technology, including through—

17 “(A) consultation with experts, including
18 scientists and practitioners, to gather inde-
19 pendent expert peer opinion and advice on a
20 project or on specific issues or analyses con-
21 ducted by the Directorate; and

22 “(B) periodic, independent, external review
23 to assess the quality and relevance of the Direc-
24 torate’s programs and projects.

1 “(2) COMPONENT FEEDBACK.—The Under Sec-
2 retary for Science and Technology shall establish a
3 formal process to collect feedback from customers of
4 the Directorate of Science and Technology on the
5 performance of the Directorate that includes—

6 “(A) appropriate methodologies through
7 which the Directorate can assess the quality
8 and usefulness of technology and services deliv-
9 ered by the Directorate;

10 “(B) development of metrics for measuring
11 the usefulness of any technology or service pro-
12 vided by the Directorate; and

13 “(C) standards for high-quality customer
14 service.

15 **“SEC. 321. HOMELAND SECURITY SCIENCE AND TECH-**
16 **NOLOGY FELLOWS PROGRAM.**

17 “(a) ESTABLISHMENT.—The Secretary, acting
18 through the Under Secretary for Science and Technology
19 and the Under Secretary for Management, shall establish
20 a fellows program, to be known as the Homeland Security
21 Science and Technology Fellows Program (in this section
22 referred to as the ‘Program’), under which the Under Sec-
23 retary for Science and Technology, in coordination with
24 the Office of University Programs of the Department,
25 shall facilitate the placement of fellows in relevant sci-

1 entific or technological fields for up to two years in compo-
2 nents and offices of the Department with a need for sci-
3 entific and technological expertise.

4 “(b) UTILIZATION OF FELLOWS.—

5 “(1) IN GENERAL.—Under the Program, the
6 Department may employ fellows—

7 “(A) for the use of the Directorate of
8 Science and Technology; or

9 “(B) for the use of a component or office
10 of the Department outside the Directorate,
11 under a memorandum of agreement with the
12 head of such a component or office under which
13 such component or office will reimburse the Di-
14 rectorate for the costs of such employment.

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

17 “(A) the Under Secretary for Science and
18 Technology and the Under Secretary for Man-
19 agement shall—

20 “(i) solicit and accept applications
21 from individuals who are currently enrolled
22 in or who are graduates of postgraduate
23 programs in scientific and engineering
24 fields related to the promotion of securing
25 the homeland;

1 “(ii) screen applicants and interview
2 them as appropriate to ensure that such
3 applicants possess the appropriate level of
4 scientific and engineering expertise and
5 qualifications;

6 “(iii) provide a list of qualified appli-
7 cants to the heads of components and of-
8 fices of the Department seeking to utilize
9 qualified fellows;

10 “(iv) subject to the availability of ap-
11 propriations, pay financial compensation to
12 such fellows;

13 “(v) coordinate with the Chief Secu-
14 rity Officer to facilitate and expedite provi-
15 sion of security and suitability clearances
16 to such fellows, as appropriate; and

17 “(vi) otherwise administer all aspects
18 of the employment of such fellows with the
19 Department; and

20 “(B) the head of the component or office
21 of the Department utilizing a fellow shall—

22 “(i) select such fellow from the list of
23 qualified applicants provided by the Under
24 Secretary;

1 “(ii) reimburse the Under Secretary
2 for the costs of employing such fellow, in-
3 cluding administrative costs; and

4 “(iii) be responsible for the day-to-day
5 management of such fellow.

6 “(c) APPLICATIONS FROM NONPROFIT ORGANIZA-
7 TIONS.—The Under Secretary for Science and Technology
8 may accept an application under subsection (b)(2)(A) that
9 is submitted by a nonprofit organization on behalf of indi-
10 viduals whom such nonprofit organization has determined
11 may be qualified applicants under the Program.

12 **“SEC. 322. CYBERSECURITY RESEARCH AND DEVELOP-**
13 **MENT.**

14 “(a) IN GENERAL.—The Under Secretary for Science
15 and Technology shall support research, development, test-
16 ing, evaluation, and transition of cybersecurity technology,
17 including fundamental, long-term research to improve the
18 sharing of information related to cybersecurity risks and
19 incidents, consistent with current law.

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

23 “(1) advance the development and accelerate
24 the deployment of more secure information systems;

1 “(2) improve and create technologies for detect-
2 ing attacks or intrusions, including real-time contin-
3 uous diagnostics and real-time analytic technologies;

4 “(3) improve and create mitigation and recov-
5 ery methodologies, including techniques and policies
6 for real-time containment of attacks, and develop-
7 ment of resilient networks and information systems;

8 “(4) develop and support infrastructure and
9 tools to support cybersecurity research and develop-
10 ment efforts, including modeling, testbeds, and data
11 sets for assessment of new cybersecurity tech-
12 nologies;

13 “(5) assist the development and support of
14 technologies to reduce vulnerabilities in industrial
15 control systems; and

16 “(6) develop and support cyber forensics and
17 attack attribution.

18 “(c) COORDINATION.—In carrying out this section,
19 the Under Secretary for Science and Technology shall co-
20 ordinate activities with—

21 “(1) the Under Secretary appointed pursuant to
22 section 103(a)(1)(H); and

23 “(2) the heads of other relevant Federal depart-
24 ments and agencies, including the National Science
25 Foundation, the Defense Advanced Research

1 Projects Agency, the Information Assurance Direc-
2 torate of the National Security Agency, the National
3 Institute of Standards and Technology, the Depart-
4 ment of Commerce, the Networking and Information
5 Technology Research and Development Program Of-
6 fice, and other appropriate working groups estab-
7 lished by the President to identify unmet needs and
8 cooperatively support activities, as appropriate.

9 “(d) DEFINITIONS.—In this section:

10 “(1) CYBERSECURITY RISK.—The term ‘cyber-
11 security risk’ has the meaning given such term in
12 the second section 226, relating to the national cy-
13 bersecurity and communications integration center.

14 “(2) HOMELAND SECURITY ENTERPRISE.—The
15 term ‘Homeland Security Enterprise’ means relevant
16 governmental and nongovernmental entities involved
17 in homeland security, including Federal, State, local,
18 and tribal government officials, private sector rep-
19 resentatives, academics, and other policy experts.

20 “(3) INCIDENT.—The term ‘incident’ has the
21 meaning given such term in the second section 226,
22 relating to the national cybersecurity and commu-
23 nications integration center.

1 “(4) INFORMATION SYSTEM.—The term ‘infor-
2 mation system’ has the meaning given that term in
3 section 3502(8) of title 44, United States Code.

4 **“SEC. 323. INTEGRATED PRODUCT TEAMS.**

5 “(a) IN GENERAL.—The Secretary shall establish in-
6 tegrated product teams to serve as a central mechanism
7 for the Department to identify, coordinate, and align re-
8 search and development efforts with departmental mis-
9 sions. Each team shall be managed by the Under Sec-
10 retary for Science and Technology and the relevant senior
11 leadership of operational components, and shall be respon-
12 sible for the following:

13 “(1) Identifying and prioritizing homeland secu-
14 rity capability gaps within a specific mission area
15 and technological solutions to address such gaps.

16 “(2) Identifying ongoing departmental research
17 and development activities and component acquisi-
18 tions of technologies that are outside of depart-
19 mental research and development activities to ad-
20 dress a specific mission area.

21 “(3) Assessing the appropriateness of a tech-
22 nology to address a specific mission area.

23 “(4) Identifying unnecessary redundancy in de-
24 partmental research and development activities with-
25 in a specific mission area.

1 “(5) Informing the Secretary and the annual
2 budget process regarding whether certain techno-
3 logical solutions are able to address homeland secu-
4 rity capability gaps within a specific mission area.

5 “(b) CONGRESSIONAL OVERSIGHT.—Not later than
6 two years after the date of enactment of this section, the
7 Secretary shall provide to the appropriate congressional
8 committees information on the impact and effectiveness
9 of the mechanism described in subsection (a) on research
10 and development efforts, component relationships, and
11 how the process has informed the research and develop-
12 ment budget and enhanced decision making, including ac-
13 quisition decision making, at the Department. The Sec-
14 retary shall seek feedback from the Under Secretary for
15 Science and Technology, Under Secretary for Manage-
16 ment, and the senior leadership of operational components
17 regarding the impact and effectiveness of such mechanism
18 and include such feedback in the information provided
19 under this subsection.”.

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

23 (c) CLERICAL AMENDMENT.—The table of contents
24 in section 1(b) of the Homeland Security Act of 2002 is

1 amended by inserting after the item relating to section
2 317 the following new items:

“Sec. 318. Identification and prioritization of research and development.

“Sec. 319. Reporting requirements.

“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.”.

3 (d) RESEARCH AND DEVELOPMENT PROJECTS.—

4 Section 831 of the Homeland Security Act of 2002 (6
5 U.S.C. 391) is amended—

6 (1) in subsection (a)—

7 (A) in the matter preceding paragraph (1),
8 by striking “2015” and inserting “2020”;

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

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

13 “(3) PRIOR APPROVAL.—In any case in which
14 a component or office of the Department seeks to
15 utilize the authority under this section, such office
16 or component shall first receive prior approval from
17 the Secretary by providing to the Secretary a pro-
18 posal that includes the rationale for the use of such
19 authority, the funds to be spent on the use of such
20 authority, and the expected outcome for each project
21 that is the subject of the use of such authority. In
22 such a case, the authority for evaluating the pro-

1 posal may not be delegated by the Secretary to any-
2 one other than the Under Secretary for Manage-
3 ment.”;

4 (2) in subsection (c)—

5 (A) in paragraph (1), in the matter pre-
6 ceding subparagraph (A), by striking “2015”
7 and inserting “2020”; and

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

10 “(2) REPORT.—The Secretary shall annually
11 submit to the appropriate congressional committees
12 a report detailing the projects for which the author-
13 ity granted by subsection (a) was used, the rationale
14 for such use, the funds spent using such authority,
15 the extent of cost-sharing for such projects among
16 Federal and non-Federal sources, the extent to
17 which use of such authority has addressed a home-
18 land security capability gap identified by the Depart-
19 ment, the total amount of payments, if any, that
20 were received by the Federal Government as a result
21 of the use of such authority during the period cov-
22 ered by each such report, the outcome of each
23 project for which such authority was used, and the
24 results of any audits of such projects.”; and

1 (3) by adding at the end the following new sub-
2 sections:

3 “(e) TRAINING.—The Secretary shall develop a train-
4 ing program for acquisitions staff in the use of other
5 transaction authority to help ensure the appropriate use
6 of such authority.

7 “(f) OTHER TRANSACTION AUTHORITY DEFINED.—
8 In this section, the term ‘other transaction authority’
9 means authority under subsection (a).”.

10 (e) AMENDMENT TO DEFINITION.—Paragraph (2) of
11 subsection (a) of the second section 226 of the Homeland
12 Security Act of 2002 (6 U.S.C. 148; relating to the na-
13 tional cybersecurity and communications integration cen-
14 ter) is amended to read as follows:

15 “(2) INCIDENT.—The term ‘incident’ means an
16 occurrence that actually or imminently jeopardizes,
17 without lawful authority, the integrity, confiden-
18 tiality, or availability of information on an informa-
19 tion system, or actually or imminently jeopardizes,
20 without lawful authority, an information system.”.

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

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

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