

Calendar No. 678118TH CONGRESS
2^D SESSION**S. 4062****[Report No. 118–275]**

To establish a pilot program to assess the use of technology to speed up and enhance the cargo inspection process at land ports of entry along the border.

IN THE SENATE OF THE UNITED STATES

MARCH 22, 2024

Mr. CORNYN (for himself and Ms. HASSAN) introduced the following bill; which was read twice and referred to the Committee on Homeland Security and Governmental Affairs

DECEMBER 9, 2024

Reported by Mr. PETERS, with an amendment

[Strike out all after the enacting clause and insert the part printed in *italic*]

A BILL

To establish a pilot program to assess the use of technology to speed up and enhance the cargo inspection process at land ports of entry along the border.

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

1 **SECTION 1. SHORT TITLES.**

2 This Act may be cited as the “Contraband Awareness
3 Technology Catches Harmful Fentanyl Act” or the
4 “CATCH Fentanyl Act”.

5 **SEC. 2. DEFINITIONS.**

6 In this Act:

7 (1) **APPROPRIATE CONGRESSIONAL COMMITTEES.**—The term “appropriate congressional com-
8 mittees” means—
9

10 (A) the Committee on Homeland Security
11 and Governmental Affairs of the Senate; and

12 (B) the Committee on Homeland Security
13 of the House of Representatives.

14 (2) **ARTIFICIAL INTELLIGENCE; AI.**—The terms
15 “artificial intelligence” and “AI” have the meaning
16 given the term “artificial intelligence” in section
17 238(g) of the John S. McCain National Defense Au-
18 thorization Act for Fiscal Year 2019 (Public Law
19 115–232; 10 U.S.C. 4061 note).

20 (3) **CBP INNOVATION TEAM.**—The term “CBP
21 Innovation Team” means the U.S. Customs and
22 Border Protection Innovation Team within the Of-
23 fice of the Commissioner.

24 (4) **NONINTRUSIVE INSPECTION TECHNOLOGY;
25 NI TECHNOLOGY.**—The terms “nonintrusive inspec-
26 tion technology” and “NI technology” means tech-

1 nical equipment and machines, such as X-ray or
 2 gamma-ray imaging equipment, that allow cargo in-
 3 spections without the need to open the means of
 4 transport and unload the cargo.

5 (5) PILOT PROJECTS.—The term “pilot
 6 projects” means the projects required under section
 7 3(a) for testing and assessing the use of technologies
 8 to improve the inspection process at land ports of
 9 entry.

10 **SEC. 3. PILOT PROJECTS ALLOWING ADDITIONAL TECH-**
 11 **NOLOGY PROVIDERS TO PARTICIPATE IN IN-**
 12 **SPECTING CARS, TRUCKS, AND CARGO CON-**
 13 **TAINERS AT CERTAIN PORTS OF ENTRY.**

14 (a) ESTABLISHMENT.—

15 (1) IN GENERAL.—Not later than 1 year after
 16 the date of the enactment of this Act, the Secretary
 17 of Homeland Security, acting through CBP Innova-
 18 tion Team, and in coordination with the Office of
 19 Field Operations, shall begin the implementation of
 20 pilot projects for testing and assessing the use of
 21 technologies or technology enhancements to improve
 22 the process for inspecting, including by increasing
 23 efficiencies of such inspections, any conveyance or
 24 mode of transportation at land ports of entry along
 25 the borders of the United States. The technologies

1 or technology enhancements tested and assessed
2 under the pilot projects shall be for the purpose of
3 assisting U.S. Customs and Border Protection per-
4 sonnel to detect contraband, illegal drugs, illegal
5 weapons, and threats on inbound and outbound traf-
6 fic, in conjunction with the use of imaging equip-
7 ment, radiation portal monitors, and chemical detec-
8 tors.

9 (2) REQUIREMENTS.—

10 (A) IN GENERAL.—In implementing the
11 pilot projects at ports of entry, the CBP Inno-
12 vation Team shall test and collect data regard-
13 ing not fewer than 5 types of nonintrusive in-
14 spection technology enhancements that can be
15 deployed at land ports of entry. The CBP Inno-
16 vation Team shall test technology enhancements
17 from not fewer than 1 of the following cat-
18 egories:

19 (i) Artificial intelligence.

20 (ii) Machine learning.

21 (iii) High-performance computing.

22 (iv) Quantum information sciences, in-
23 cluding quantum sensing.

24 (v) Other emerging technology.

1 (B) IDENTIFICATION OF EFFECTIVE EN-
2 HANCEMENTS.—The pilot projects shall identify
3 the most effective types of technology enhance-
4 ments to improve the capabilities of nonintru-
5 sive inspection systems and other inspection
6 systems used at land ports of entry based on—

7 (i) the technology enhancement’s abil-
8 ity to assist U.S. Customs and Border
9 Protection accurately detect contraband, il-
10 legal drugs, illegal weapons, or threats in
11 inbound and outbound traffic;

12 (ii) the technology enhancement’s abil-
13 ity to increase efficiencies of inspections to
14 assist U.S. Customs and Border Protection
15 address long wait times;

16 (iii) the technology enhancement’s
17 ability to improve capabilities of aging de-
18 tection equipment and infrastructure at
19 land ports of entry;

20 (iv) the technology enhancement’s
21 safety relative to As Low As Reasonably
22 Achievable (ALARA) standard practices;

23 (v) the expected cost of implementing
24 the new technology;

1 (vi) the ability to integrate the new
2 technology into the existing workflow and
3 infrastructure;

4 (vii) the technology enhancement's
5 ability to incorporate automatic threat rec-
6 ognition technology using standard formats
7 and open architecture;

8 (viii) the mobility of technology en-
9 hancements; and

10 (ix) other performance measures iden-
11 tified by the CBP Innovation Team.

12 (C) PRIVATE SECTOR INVOLVEMENT.—The
13 CBP Innovation Team may solicit input from
14 representatives of the private sector regarding
15 commercially viable technologies.

16 (3) NONINTRUSIVE INSPECTION SYSTEMS PRO-
17 GRAM.—The CBP Innovation Team shall work with
18 existing nonintrusive inspection systems programs
19 within U.S. Customs and Border Protection when
20 planning and developing the pilot projects required
21 under paragraph (1).

22 (b) TERMINATION.—The pilot projects shall termi-
23 nate on the date that is 5 years after the date of the enact-
24 ment of this Act.

1 (c) REPORTS REQUIRED.—Not later than 3 years
 2 after the date of the enactment of this Act, and 180 days
 3 after the termination of the pilot projects pursuant to sub-
 4 section (b), the Secretary of Homeland Security shall sub-
 5 mit a report to the appropriate congressional committees
 6 that contains—

7 (1) an analysis of the effectiveness of tech-
 8 nology enhancements tested based on the require-
 9 ments described in subsection (a)(2);

10 (2) any recommendations from the testing and
 11 analysis concerning the ability to utilize such tech-
 12 nologies at all land ports of entry;

13 (3) a plan to utilize new technologies that meet
 14 the performance goals of the pilot projects across all
 15 U.S. Customs and Border Protection land ports of
 16 entry at the border, including total costs and a
 17 breakdown of the costs of such plan, including any
 18 infrastructure improvements that may be required to
 19 accommodate recommended technology enhance-
 20 ments; and

21 (4) the analysis described in subsection (d).

22 (d) AREAS OF ANALYSIS.—The report required under
 23 subsection (c) shall include an analysis containing—

24 (1) quantitative measurements of performance
 25 based on the requirements described in subsection

1 (a)(2) of each technology tested compared with the
2 status quo to reveal a broad picture of the perform-
3 ance of technologies and technology enhancements,
4 such as—

5 (A) the probability of detection, false alarm
6 rate, and throughput; and

7 (B) an analysis determining whether such
8 observed performance represents a significant
9 increase, decrease, or no change compared with
10 current systems;

11 (2) an assessment of the relative merits of each
12 such technology;

13 (3) any descriptive trends and patterns ob-
14 served; and

15 (4) performance measures for—

16 (A) the technology enhancement's ability to
17 assist with the detection of contraband on in-
18 bound and outbound traffic through automated
19 (primary) inspection by measuring and report-
20 ing the probability of detection and false alarm
21 rate for each NH system under operational con-
22 ditions;

23 (B) the throughput of cargo through each
24 NH system with a technology enhancement, in-

1 eluding a breakdown of the time needed for
 2 U.S. Customs and Border Protection—

3 (i) to complete the image review pro-
 4 cess and clear low-risk shipments; and

5 (ii) to complete additional inspections
 6 of high-risk items;

7 (C) changes in U.S. Customs and Border
 8 Protection officer time commitments and per-
 9 sonnel needs to sustain high volume NH scan-
 10 ning operations when technology enhancements
 11 are utilized; and

12 (D) operational costs, including—

13 (i) estimated implementation costs for
 14 each NH system with technology enhance-
 15 ments; and

16 (ii) estimated cost savings due to im-
 17 proved efficiency due to technology en-
 18 hancements, if applicable.

19 **SECTION 1. SHORT TITLES.**

20 *This Act may be cited as the “Contraband Awareness*
 21 *Technology Catches Harmful Fentanyl Act” or the*
 22 *“CATCH Fentanyl Act”.*

23 **SEC. 2. DEFINITIONS.**

24 *In this Act:*

1 (1) *APPROPRIATE CONGRESSIONAL COMMIT-*
2 *TEES.*—*The term “appropriate congressional commit-*
3 *tees” means—*

4 (A) *the Committee on Homeland Security*
5 *and Governmental Affairs of the Senate; and*

6 (B) *the Committee on Homeland Security of*
7 *the House of Representatives.*

8 (2) *ARTIFICIAL INTELLIGENCE; AI.*—*The terms*
9 *“artificial intelligence” and “AI” have the meaning*
10 *given the term “artificial intelligence” in section*
11 *238(g) of the John S. McCain National Defense Au-*
12 *thorization Act for Fiscal Year 2019 (Public Law*
13 *115–232; 10 U.S.C. 4061 note).*

14 (3) *CBP INNOVATION TEAM.*—*The term “CBP*
15 *Innovation Team” means the U.S. Customs and Bor-*
16 *der Protection Innovation Team within the Office of*
17 *the Commissioner.*

18 (4) *NONINTRUSIVE INSPECTION TECHNOLOGY; NII*
19 *TECHNOLOGY.*—*The terms “nonintrusive inspection*
20 *technology” and “NII technology” means technical*
21 *equipment and machines, such as X-ray or gamma-*
22 *ray imaging equipment, that allow cargo inspections*
23 *without the need to open the means of transport and*
24 *unload the cargo.*

1 (5) *PILOT PROJECTS.*—*The term “pilot projects”*
2 *means the projects required under section 3(a) for*
3 *testing and assessing the use of technologies to im-*
4 *prove the inspection process at land ports of entry.*

5 **SEC. 3. PILOT PROJECTS ALLOWING ADDITIONAL TECH-**
6 **NOLOGY PROVIDERS TO PARTICIPATE IN IN-**
7 **SPECTING CARS, TRUCKS, AND CARGO CON-**
8 **TAINERS AT CERTAIN PORTS OF ENTRY.**

9 (a) *ESTABLISHMENT.*—

10 (1) *IN GENERAL.*—*Not later than 1 year after*
11 *the date of the enactment of this Act, the Secretary of*
12 *Homeland Security, acting through CBP Innovation*
13 *Team, and in coordination with the Office of Field*
14 *Operations and the Department of Homeland Secu-*
15 *rity Science and Technology Directorate, shall begin*
16 *the implementation of pilot projects for testing and*
17 *assessing the use of technologies or technology en-*
18 *hancements to improve the process for inspecting, in-*
19 *cluding by increasing efficiencies of such inspections,*
20 *any conveyance or mode of transportation at land*
21 *ports of entry along the borders of the United States.*
22 *The technologies or technology enhancements tested*
23 *and assessed under the pilot projects shall be for the*
24 *purpose of assisting U.S. Customs and Border Protec-*
25 *tion personnel to detect contraband, illegal drugs, ille-*

1 *gal weapons, human smuggling, and threats on in-*
2 *bound and outbound traffic, in conjunction with the*
3 *use of imaging equipment, radiation portal monitors,*
4 *and chemical detectors.*

5 (2) *REQUIREMENTS.*—

6 (A) *IN GENERAL.*—*In implementing the*
7 *pilot projects at ports of entry, the CBP Innova-*
8 *tion Team, in coordination with the Department*
9 *of Homeland Security Science and Technology*
10 *Directorate, shall test and collect data regarding*
11 *not fewer than 5 types of nonintrusive inspection*
12 *technology enhancements that can be deployed at*
13 *land ports of entry. The CBP Innovation Team*
14 *shall test technology enhancements from not*
15 *fewer than 1 of the following categories:*

16 (i) *Artificial intelligence.*

17 (ii) *Machine learning.*

18 (iii) *High-performance computing.*

19 (iv) *Quantum information sciences, in-*
20 *cluding quantum sensing.*

21 (v) *Other emerging technologies.*

22 (B) *IDENTIFICATION OF EFFECTIVE EN-*
23 *HANCEMENTS.*—*The pilot projects shall identify*
24 *the most effective types of technology enhance-*
25 *ments to improve the capabilities of nonintrusive*

1 *inspection systems and other inspection systems*
2 *used at land ports of entry based on—*

3 *(i) the technology enhancement’s abil-*
4 *ity to assist U.S. Customs and Border Pro-*
5 *tection accurately detect contraband, illegal*
6 *drugs, illegal weapons, human smuggling,*
7 *or threats in inbound and outbound traffic;*

8 *(ii) the technology enhancement’s abil-*
9 *ity to increase efficiencies of inspections to*
10 *assist U.S. Customs and Border Protection*
11 *address long wait times;*

12 *(iii) the technology enhancement’s abil-*
13 *ity to improve capabilities of aging detec-*
14 *tion equipment and infrastructure at land*
15 *ports of entry;*

16 *(iv) the technology enhancement’s safe-*
17 *ty relative to As Low As Reasonably*
18 *Achievable (ALARA) standard practices;*

19 *(v) the ability to integrate the new*
20 *technology into the existing workflow and*
21 *infrastructure;*

22 *(vi) the technology enhancement’s abil-*
23 *ity to incorporate automatic threat recogni-*
24 *tion technology using standard formats and*
25 *open architecture;*

1 (vii) *the mobility of technology en-*
2 *hancements; and*

3 (viii) *other performance measures*
4 *identified by the CBP Innovation Team.*

5 (C) *PRIVATE SECTOR INVOLVEMENT.—The*
6 *CBP Innovation Team may solicit input from*
7 *representatives of the private sector regarding*
8 *commercially viable technologies.*

9 (D) *COST EFFECTIVENESS REQUIREMENT.—*
10 *In identifying the most effective types of tech-*
11 *nology enhancements under subparagraph (B),*
12 *the pilot projects shall prioritize solutions that*
13 *demonstrate the highest cost-effectiveness in*
14 *achievement the objectives described in clauses (i)*
15 *through (ix) of subparagraph (B). Cost effective-*
16 *ness shall account for improved detection capa-*
17 *bilities, increased inspection efficiencies, reduced*
18 *wait times, and total cost of implementation (in-*
19 *cluding infrastructure upgrades and mainte-*
20 *nance expenses).*

21 (3) *NONINTRUSIVE INSPECTION SYSTEMS PRO-*
22 *GRAM.—The CBP Innovation Team shall work with*
23 *existing nonintrusive inspection systems programs*
24 *within U.S. Customs and Border Protection when*

1 *planning and developing the pilot projects required*
2 *under paragraph (1).⁸*

3 (4) *SCIENCE AND TECHNOLOGY DIRECTORATE.*—
4 *The CBP Innovation Team shall work with the De-*
5 *partment of Homeland Security Science and Tech-*
6 *nology Directorate to align existing nonintrusive in-*
7 *spection research and development efforts within the*
8 *Science and Technology Directorate when planning*
9 *and developing pilot projects required under para-*
10 *graph (1).*

11 (b) *TERMINATION.*—*The pilot projects shall terminate*
12 *on the date that is 5 years after the date of the enactment*
13 *of this Act.*

14 (c) *REPORTS REQUIRED.*—*Not later than 3 years after*
15 *the date of the enactment of this Act, and 180 days after*
16 *the termination of the pilot projects pursuant to subsection*
17 *(b), the Secretary of Homeland Security shall submit a re-*
18 *port to the appropriate congressional committees that con-*
19 *tains—*

20 (1) *an analysis of the effectiveness of technology*
21 *enhancements tested based on the requirements de-*
22 *scribed in subsection (a)(2);*

23 (2) *any recommendations from the testing and*
24 *analysis concerning the ability to utilize such tech-*
25 *nologies at all land ports of entry;*

1 (3) a plan to utilize new technologies that meet
2 the performance goals of the pilot projects across all
3 U.S. Customs and Border Protection land ports of
4 entry at the border, including total costs and a break-
5 down of the costs of such plan, including any infra-
6 structure improvements that may be required to ac-
7 commodate recommended technology enhancements;

8 (4) a comprehensive list of existing technologies
9 owned and utilized by U.S. Customs and Border pro-
10 tection for cargo and vehicle inspection, including—

11 (A) details on the implementation status of
12 such technologies, such as whether the tech-
13 nologies have been fully installed and utilized, or
14 whether there are challenges with the installation
15 and utilization of the technology;

16 (B) an evaluation of the compatibility,
17 interoperability, and scalability of existing cargo
18 and vehicle inspection technologies within U.S.
19 Customs and Border Protection's physical and
20 information technology infrastructure; and

21 (C) identification of any obstacles to the ef-
22 fective deployment and integration of such tech-
23 nologies; and

24 (5) the analysis described in subsection (d).

1 (d) *AREAS OF ANALYSIS.*—*The report required under*
2 *subsection (c) shall include an analysis containing—*

3 (1) *quantitative measurements of performance*
4 *based on the requirements described in subsection*
5 *(a)(2) of each technology tested compared with the*
6 *status quo to reveal a broad picture of the perform-*
7 *ance of technologies and technology enhancements,*
8 *such as—*

9 (A) *the probability of detection, false alarm*
10 *rate, and throughput; and*

11 (B) *an analysis determining whether such*
12 *observed performance represents a significant in-*
13 *crease, decrease, or no change compared with*
14 *current systems;*

15 (2) *an assessment of the relative merits of each*
16 *such technology;*

17 (3) *any descriptive trends and patterns observed;*
18 *and*

19 (4) *performance measures for—*

20 (A) *the technology enhancement's ability to*
21 *assist with the detection of contraband on in-*
22 *bound and outbound traffic through automated*
23 *(primary) inspection by measuring and report-*
24 *ing the probability of detection and false alarm*

1 *rate for each NII system under operational con-*
2 *ditions;*

3 *(B) the throughput of cargo through each*
4 *NII system with a technology enhancement, in-*
5 *cluding a breakdown of the time needed for U.S.*
6 *Customs and Border Protection—*

7 *(i) to complete the image review proc-*
8 *ess and clear low-risk shipments; and*

9 *(ii) to complete additional inspections*
10 *of high-risk items;*

11 *(C) changes in U.S. Customs and Border*
12 *Protection officer time commitments and per-*
13 *sonnel needs to sustain high volume NII scan-*
14 *ning operations when technology enhancements*
15 *are utilized; and*

16 *(D) operational costs, including—*

17 *(i) estimated implementation costs for*
18 *each NII system with technology enhance-*
19 *ments; and*

20 *(ii) estimated cost savings due to im-*
21 *proved efficiency due to technology enhance-*
22 *ments, if applicable.*

23 *(e) PRIVACY AND CIVIL LIBERTIES REPORTS.—The*
24 *DHS Privacy Officer and Civil Rights and Civil Liberties*

1 *Officer, in consultation with the CBP Innovation Team and*
2 *other appropriate CBP offices, shall—*

3 *(1) prior to the implementation of these tech-*
4 *nologies, provide—*

5 *(A) a report or reports to the appropriate*
6 *congressional committees on the potential pri-*
7 *vacancy, civil liberties, and civil rights impacts of*
8 *technologies being tested under the pilot projects*
9 *pursuant to subsection (b); and*

10 *(B) recommendations for mitigation meas-*
11 *ures to address identified impacts; and*

12 *(2) not later than 180 days after the termination*
13 *of the pilot projects pursuant to subsection (b), pro-*
14 *vide—*

15 *(A) findings on the impacts to privacy, civil*
16 *rights, and civil liberties resulting from the pilot*
17 *projects;*

18 *(B) recommendations for mitigating these*
19 *impacts in implementation of approved tech-*
20 *nologies; and*

21 *(C) any additional recommendations based*
22 *on the lessons learned from the pilot projects.*

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