

117TH CONGRESS
2D SESSION

H. R. 9534

To promote space safety and provide for policy, planning, and agency roles and responsibilities for the transition to a civil space situational awareness capability of certain space situational awareness activities, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

DECEMBER 14, 2022

Mr. BEYER (for himself and Mr. NORCROSS) introduced the following bill; which was referred to the Committee on Science, Space, and Technology, and in addition to the Committee on Armed Services, for a period to be subsequently determined by the Speaker, in each case for consideration of such provisions as fall within the jurisdiction of the committee concerned

A BILL

To promote space safety and provide for policy, planning, and agency roles and responsibilities for the transition to a civil space situational awareness capability of certain space situational awareness activities, 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,*

1 SECTION 1. SHORT TITLE; TABLE OF CONTENTS.

2 (a) SHORT TITLE.—This Act may be cited as the
 3 “Space Safety and Situational Awareness Transition Act
 4 of 2022” or the “Space SSA Transition Act of 2022”.
 5 (b) TABLE OF CONTENTS.—The table of contents for
 6 this Act is as follows:

See. 1. Short title; table of contents.
 See. 2. Definitions.

TITLE I—AUTHORIZATION OF APPROPRIATIONS

See. 101. Authorization of appropriations for fiscal year 2024.

TITLE II—POLICY

See. 201. Findings.
 See. 202. Sense of Congress on United States Government responsibility.
 See. 203. United States policy.

TITLE III—TRANSITION TO CIVIL SPACE SITUATIONAL AWARENESS CAPABILITY

See. 301. Sense of Congress on need for transition.
 See. 302. Interagency Transition Team.

TITLE IV—AGENCY ROLES AND RESPONSIBILITIES FOR IMPLEMENTATION OF CIVIL SPACE SITUATIONAL AWARENESS TRANSITION

See. 401. Space situational awareness services and information.
 See. 402. Organizational management structure for space situational awareness services and information.

TITLE V—RESEARCH AND DEVELOPMENT

See. 501. Informing and improving space situational awareness.
 See. 502. Research strategy.

TITLE VI—OTHER CONSIDERATIONS

See. 601. Cybersecurity plan.
 See. 602. Study on international cooperation in space situational awareness.
 See. 603. Report on international data sharing agreements.

TITLE VII—GAO REVIEW

See. 701. GAO review.

7 SEC. 2. DEFINITIONS.

8 In this Act:

1 (1) ADMINISTRATION.—The term “Administration”
2 has the meaning given such term in section
3 10101 of title 51, United States Code.

4 (2) ADMINISTRATOR.—The term “Administrator”
5 has the meaning given such term in section
6 10101 of title 51, United States Code.

7 (3) APPROPRIATE COMMITTEES OF CON-
8 GRESS.—The term “appropriate committees of Congress” means the Committee on Science, Space, and
9 Technology and the Committee on Armed Services of
10 the House of Representatives and the Committee on
11 Commerce, Science, and Transportation and the
12 Committee on Armed Services of the Senate.

14 (4) DoD.—The term “DoD” means the Department of Defense.

16 (5) NASA.—The term “NASA” means the National Aeronautics and Space Administration.

18 (6) NOAA.—The term “NOAA” means the National Oceanic and Atmospheric Administration of
19 the Department of Commerce.

21 (7) SECRETARY.—The term “Secretary” means
22 the Secretary of Commerce.

23 (8) SPACE OBJECT.—The term “space object”
24 means any artificial object or system, including com-

1 ponents or pieces thereof, orbiting or passing
2 through outer space.

3 (9) SPACE OPERATOR.—The term “space operator” means the person or entity that has responsibility for commanding operations of a space object in outer space.

7 (10) SPACE SITUATIONAL AWARENESS.—The term “space situational awareness” means the knowledge and characterization of space objects and their operational environment to facilitate decisions that support safe, stable, and sustainable space activities.

13 (11) SPACE TRAFFIC COORDINATION.—The term “space traffic coordination” means the planning, assessment, and on-orbit coordination of activities to enhance the safety, stability, and sustainability of operations in the space environment.

18 **TITLE I—AUTHORIZATION OF APPROPRIATIONS**

20 **SEC. 101. AUTHORIZATION OF APPROPRIATIONS FOR FISCAL YEAR 2024.**

22 To carry out this Act, there is authorized to be appropriated for fiscal year 2024—

24 (1) to the Department of Commerce, \$95,000,000; and

(2) to NASA, \$50,000,000.

TITLE II—POLICY

3 SEC. 201. FINDINGS.

4 Congress finds the following:

5 (1) Commercial activity in space is accelerating
6 to meet the global demand for a growing commercial
7 space market.

8 (2) Space is becoming more congested, partic-
9 larly in some orbital regimes, with the number of ac-
10 tive satellites increasing significantly over the past
11 ten years and continuing to grow.

(4) Space situational awareness provides the foundation for understanding—

18 (A) where objects, both active and inactive,
19 are located and for predicting where satellites
20 or debris will be in the future; and

(B) the distribution of orbital debris and the risk they pose to operational satellites and crewed spacecraft.

24 (5) United States leadership in coordinating
25 international efforts on space situational awareness

1 is essential for the safety and sustainability of the
2 space environment, including human activities in
3 outer space.

15 SEC. 202. SENSE OF CONGRESS ON UNITED STATES GOV-

16 ERNMENT RESPONSIBILITY.

17 It is the sense of Congress that the United States
18 Government, in coordination with other countries and the
19 private sector, has a responsibility to be a good steward
20 of the space environment. It is the further sense of Con-
21 gress that the United States Government should—

22 (1) lead in practices and policies to maintain a
23 safe, sustainable space environment for civil, na-
24 tional security, and commercial use;

1 (2) provide validated space situational awareness
2 services and information as public goods for the
3 purposes of promoting on-orbit operational safety;

4 (3) develop a coordinated and integrated ap-
5 proach to improving and delivering space situational
6 awareness services and information;

7 (4) leverage, to the maximum extent prac-
8 ticable, commercial innovation and capabilities rel-
9 evant to space situational awareness;

10 (5) lead collaborations with international and
11 non-governmental entities, including satellite opera-
12 tors and space situational awareness services and in-
13 formation providers, as appropriate, on space situa-
14 tional awareness and on best practices regarding
15 space traffic coordination that—

16 (A) support the growth of commerce in
17 space and foster a competitive United States
18 commercial space industry; and

19 (B) promote innovation in technology and
20 operations while improving safety;

21 (6) lead the international community in collabora-
22 tions on practices and approaches that advance a
23 sustainable and accessible space environment; and

24 (7) transition to the Department of Commerce
25 certain space situational awareness services and in-

1 formation, including public conjunction notifications,
2 from the Department of Defense.

3 **SEC. 203. UNITED STATES POLICY.**

4 It is the policy of the United States to—

5 (1) make publicly and continually available, free
6 of direct user fees, validated space situational aware-
7 ness services and information, including conjunction
8 data messages;

9 (2) continue to enhance and improve the accu-
10 racy and precision of the services and information
11 referred to in paragraph (1);

12 (3) make available to governmental and non-
13 governmental space operators space safety and sus-
14 tainability tools, private sector-led voluntary con-
15 sensus standards, and risk mitigation information
16 and practices;

17 (4) support interdisciplinary research and devel-
18 opment to promote space safety and improve space
19 situational awareness;

20 (5) support mechanisms for transitioning into
21 operational activities the research and development
22 described in paragraph (4);

23 (6) support the use, where validated and prac-
24 ticable, of commercial technologies, data, systems,
25 and services that can supplement and enhance

United States Government-provided space situational awareness services and information;

(9) lead international collaborations to the widest extent possible on a framework for internationally harmonized space situational awareness and best practices for space traffic coordination.

**14 TITLE III—TRANSITION TO CIVIL
15 SPACE SITUATIONAL AWARE-
16 NESS CAPABILITY**

17 SEC. 301. SENSE OF CONGRESS ON NEED FOR TRANSITION.

18 It is the sense of Congress that the DoD continues
19 to make essential contributions to the safety of the space
20 environment by providing space operators with services
21 and information for managing the safe operations of
22 United States Government, commercial, and non-United
23 States space operations, in accordance with section 2274
24 of title 10, United States Code. It is the further sense
25 of Congress that the growing number of space objects has

1 created an increasing demand for improved accuracy and
2 precision of space situational awareness services and infor-
3 mation for space operators, which requires personnel and
4 resources that are not related to the DoD's primary mis-
5 sion. Therefore, it is the sense of Congress that the Presi-
6 dent should provide all necessary support to plan for an
7 effective transition to the Department of Commerce from
8 the Department of Defense of certain space situational
9 awareness services and information.

10 **SEC. 302. INTERAGENCY TRANSITION TEAM.**

11 (a) IN GENERAL.—Not later than 60 days after the
12 date of the enactment of this Act, the Secretary and the
13 Secretary of Defense, in coordination with the Adminis-
14 trator, shall establish an Interagency Transition Team for
15 Space Situational Awareness (in this Act referred to as
16 the “Interagency Transition Team”) to lead the planning,
17 assessment, and transition of certain activities carried out
18 under section 2274 of title 10, United States Code, as ap-
19 propriate, from the existing DoD-based space situational
20 awareness operations to a civil space situational awareness
21 capability under the Secretary.

22 (b) LEADERSHIP AND COMPOSITION.—The Inter-
23 agency Transition Team established pursuant to sub-
24 section (a) shall—

25 (1) be led by—

1 (A) a Senior Executive Service-level official
2 (in this Act referred to as the “Team Chair”)
3 appointed by the Secretary; and

4 (B) a Senior Executive Service or Flag Of-
5 ficer level official (in this Act referred to as the
6 “Team Vice Chair”) appointed by the Secretary
7 of Defense; and

8 (2) include—

9 (A) a dedicated team of Federal Govern-
10 ment employees from relevant Federal agencies,
11 including the DoD and NASA, with experience
12 and expertise in space situational awareness ac-
13 tivities, including tracking, data processing,
14 conjunction assessment, and space operations;

15 (B) the Director of the Office of Space
16 Commerce;

17 (C) the Deputy Commander of United
18 States Space Command; and

19 (D) the Commander of United States
20 Space Force Space Operations Command.

21 (c) RESPONSIBILITIES.—

22 (1) IN GENERAL.—The Interagency Transition
23 Team shall—

24 (A) develop and support a Transition Plan
25 (as described in subsection (d)) for the plan-

1 ning, assessment, and transition of certain ac-
2 tivities, including the issuance of conjunction
3 data messages, carried out under section 2274
4 of title 10, United States Code, to a civil space
5 situational awareness capability under the Sec-
6 retary;

7 (B) in consultation with the National Insti-
8 tute of Standards and Technology, standards
9 organizations, and private industry, promote
10 and facilitate the development and encourage
11 the adoption of private sector-led voluntary con-
12 sensus standards and best practices for space
13 situational awareness;

14 (C) establish definitions for an initial oper-
15 ational capability and a full operational capa-
16 bility for a civil space situational awareness ca-
17 pability; and

18 (D) carry out an assessment of—

19 (i) Federal Government and non-gov-
20 ernment space situational awareness capa-
21 bilities and needs for an initial operational
22 capability and a full operational capability;
23 and

(ii) Federal Government and non-government best practices regarding risk mitigation and collision avoidance.

(A) the demonstration of an initial operational capability by not later than September 30, 2024; and

(B) the establishment of a full operational capability by not later than December 31, 2025.

1 (d) TRANSITION PLAN.—

2 (1) IN GENERAL.—Not later than six months
3 after the date of the enactment of this Act, the Sec-
4 retary and the Secretary of Defense shall transmit
5 to the appropriate committees of Congress the Tran-
6 sition Plan developed pursuant to subsection (c)(1).

7 (2) ELEMENTS.—The Transition Plan shall in-
8 clude the following elements:

9 (A) A definition of an initial operational
10 capability and a full operational capability for a
11 civil space situational awareness capability.

12 (B) A system architecture, including re-
13 quirements for an initial operational capability,
14 and a full operational capability, including re-
15 lating to the following:

16 (i) Identification of the Federal Gov-
17 ernment and non-government data, obser-
18 vations, and analytical tools needed for
19 such initial operational capability and full
20 operational capability, and a description of
21 how such data, observations, and analytical
22 tools are to be obtained.

23 (ii) Identification of the space situa-
24 tional awareness services and information
25 to be transitioned from the Department of

1 Defense and any additional services and
2 information that may be provided in ac-
3 cordance with section 203(1) under an ini-
4 tial operational capability and a full oper-
5 ational capability.

6 (iii) Identification of criteria and
7 methods for verifying and validating non-
8 Federal Government space situational
9 awareness services and information, includ-
10 ing associated data, provided by space op-
11 erators.

12 (iv) Identification of risk assessment
13 and mitigation support services and infor-
14 mation that may be provided.

15 (v) Identification of options for an in-
16 formation platform or mechanism to enable
17 innovative research, development, testing,
18 and experimentation opportunities for com-
19 mercial, academic, or other entities to sup-
20 port and improve space situational aware-
21 ness services and information, as prac-
22 ticable.

23 (C) Performance measures for the level of
24 accuracy needed for the space situational
25 awareness services and information to be identi-

1 fied and provided in accordance with subparagraph (B)(ii).

3 (D) A description of the milestones and
4 timelines for demonstrating an initial operational capability and establishing a full operational capability by not later than the respective dates specified in subsection (c)(3).

8 (E) An estimate of the workforce, training,
9 infrastructure, including ground-based, space-based, and in-situ infrastructure, and annual budgetary resources necessary to carry out a civil space situational awareness capability for the next five years.

14 (e) CONSIDERATION.—In developing the Transition Plan required under paragraph (1) of subsection (c), the Interagency Transition Team shall take into consideration any agency agreements under paragraph (2) of such subsection.

19 (f) BIANNUAL REPORTING.—The Team Chair and Team Vice Chair shall report biannually to the appropriate committees of Congress on the progress of the transition under this section.

23 (g) BRIEFINGS.—The Team Chair and Team Vice Chair shall brief the appropriate committees of Congress

1 on the Transition Plan not later than 14 days after trans-
2 mitting the Transition Plan pursuant to subsection (d)(1).

3 (h) PRIVATE SECTOR-LED VOLUNTARY CONSENSUS
4 STANDARDS AND BEST PRACTICES.—

5 (1) DEVELOPMENT.—

6 (A) IN GENERAL.—Not later than Decem-
7 ber 31, 2023, the Interagency Transition Team
8 shall review existing private sector-led voluntary
9 consensus standards and best practices, pro-
10 mote and facilitate the development of private
11 sector-led voluntary consensus standards, as
12 needed, and make publicly available such vol-
13 untary consensus standards and best practices
14 for space situational awareness.

15 (B) CONSULTATION.—The Interagency
16 Transition Team shall promote and facilitate
17 the development of the private sector-led vol-
18 untary consensus standards and best practices
19 under subparagraph (A) in consultation with
20 private industry and standards organizations.

21 (2) UPDATES.—The Interagency Transition
22 Team shall biennially through 2028 update the pri-
23 vate sector-led voluntary consensus standards and
24 best practices developed pursuant to paragraph (1).

1 (3) ELEMENTS.—The private sector-led vol-
2 untary consensus standards and best practices devel-
3 oped and updated in accordance with this subsection
4 should include the following elements:

5 (A) Space situational awareness data inter-
6 operability and data sharing protocols.

7 (B) Criteria and methods for verification
8 and validation of the space situational aware-
9 ness services and information described in sub-
10 section (d)(2)(B)(iii).

11 (C) Content and message format for con-
12 junction data messages.

13 (D) Emergency response protocols after a
14 collision event, including communication be-
15 tween Federal Government agencies, space op-
16 erators, and other relevant entities.

17 (E) Any other matters the Interagency
18 Transition Team determines appropriate.

19 (i) SUNSET.—The Interagency Transition Team shall
20 terminate six months after the date of the establishment
21 pursuant to section 402(b) of an organizational manage-
22 ment structure for space situational awareness services
23 and information.

1 **TITLE IV—AGENCY ROLES AND**
2 **RESPONSIBILITIES FOR IM-**
3 **PLEMENTATION OF CIVIL**
4 **SPACE SITUATIONAL AWARE-**
5 **NESS TRANSITION**

6 **SEC. 401. SPACE SITUATIONAL AWARENESS SERVICES AND**
7 **INFORMATION.**

8 (a) IN GENERAL.—In carrying out section 302(c)(3)
9 (relating to the demonstration of an initial operational ca-
10 pability and establishment of a full operational capability),
11 the Interagency Transition Team shall collaborate with
12 the Secretary.

13 (b) DEMONSTRATION.—The capabilities referred to
14 in subsection (a) shall—

15 (1) follow the Transition Plan under section
16 302, as appropriate;

17 (2) make publicly available and free of direct
18 user fees space situational awareness services and
19 information, including conjunction data messages;

20 (3) include a digital space object identification
21 and characterization system to organize known char-
22 acteristics concerning space objects;

23 (4) communicate and make publicly available
24 the private sector-led voluntary consensus standards
25 and best practices under section 302(h);

- 1 (5) support openness and transparency, to the
2 greatest extent practicable, in space situational
3 awareness services and information, including con-
4 junction data messages;
- 5 (6) carry out testing to—
- 6 (A) demonstrate the interoperability of
7 data and observations under section
8 302(d)(2)(B);
- 9 (B) verify and validate such data and ob-
10 servations, as appropriate and practicable; and
- 11 (C) demonstrate the issuance of—
- 12 (i) conjunction data messages; and
- 13 (ii) conjunction assessments; and
- 14 (7) issue conjunction data messages.

15 **SEC. 402. ORGANIZATIONAL MANAGEMENT STRUCTURE**
16 **FOR SPACE SITUATIONAL AWARENESS SERV-**
17 **ICES AND INFORMATION.**

- 18 (a) PROPOSAL.—Not later than six months after the
19 establishment of full operational capability, the Secretary,
20 in consultation with the Secretary of Defense and the Ad-
21 ministrator, shall submit to the appropriate committees of
22 Congress a proposal for—
- 23 (1) an organizational management structure
24 within the Department of Commerce for managing
25 the activities under this title;

9 (b) ORGANIZATIONAL MANAGEMENT.—Not later
10 than six months after the submission of the proposal de-
11 scribed in subsection (a), the Secretary, in accordance
12 with such proposal, shall establish the organizational man-
13 agement structure referred to in paragraph (1) of such
14 subsection, and shall appoint a Director of such organiza-
15 tional management structure, who shall be a member of
16 the Senior Executive Service. The Director shall establish
17 a schedule and budgetary requirements for such organiza-
18 tional management structure.

19 **TITLE V—RESEARCH AND**
20 **DEVELOPMENT**

21 SEC. 501. INFORMING AND IMPROVING SPACE SITU-
22 TIONAL AWARENESS.

23 (a) IN GENERAL.—The Administrator, in coordina-
24 tion with the heads of other relevant Federal agencies,
25 shall—

1 (1) carry out United States Government civil
2 research and development to inform and improve
3 space situational awareness; and

4 (2) support the transition into the full oper-
5 ational capability of such research and development,
6 as practicable.

7 (b) PROGRAM ESTABLISHMENT.—To carry out sub-
8 section (a), the Administrator, as necessary, shall estab-
9 lish research and development programs to address areas
10 of relevant basic and applied research and development,
11 including research and development that will support, en-
12 able, and facilitate the transition under section 302. Areas
13 of research and development may include the following:

14 (1) Analytics.

15 (2) Space object identification.

16 (3) Modeling, analysis, and predictions.

17 (4) Space environmental conditions and im-
18 pacts.

19 (5) Risk assessment.

20 (6) Post-mission disposal.

21 (7) Orbital debris mitigation, including research
22 and development on active debris removal.

23 (8) Any other areas the Administrator deter-
24 mines appropriate, including areas to be prioritized

1 in accordance with the research strategy under sec-
2 tion 502.

3 (c) CONSIDERATION.—The Administrator shall use
4 competitively selected grants, contracts, and agreements,
5 as appropriate and practicable, in addition to other com-
6 petitive research and development arrangements, in car-
7 rying out this section.

8 **SEC. 502. RESEARCH STRATEGY.**

9 (a) STRATEGY.—Not later than three months after
10 the transmittal of the Transition Plan pursuant to section
11 302(d), the Administrator shall enter into an arrangement
12 with the National Academies of Sciences, Engineering,
13 and Medicine to develop a research strategy to inform and
14 improve space situational awareness. Such strategy shall
15 provide prioritized recommendations on research and the
16 transition of research into operations and practice, and
17 shall include measures to monitor progress on such rec-
18 ommendations, as well as any other appropriate rec-
19 ommendations.

20 (b) TRANSMITTAL.—Not later than two years after
21 the date of the enactment of this Act, the Administrator
22 shall transmit to the Committee on Science, Space, and
23 Technology and the Committee on Commerce, Science,
24 and Transportation of the Senate a copy of the research

- 1 strategy under subsection (a) and a plan for implementing
- 2 any recommendations included in such strategy.

TITLE VI—OTHER CONSIDERATIONS

5 SEC. 601. CYBERSECURITY PLAN.

6 (a) IN GENERAL.—The Secretary, in collaboration
7 with the Director of the National Institute of Standards
8 and Technology, and in consultation with the Secretary
9 of Defense, the Administrator, and the heads of other rel-
10 evant Federal agencies, shall develop a cybersecurity plan
11 for reducing cybersecurity-related threats to the Depart-
12 ment of Commerce’s provision of space situational aware-
13 ness services and information.

14 (b) INCLUSION.—In developing the cybersecurity plan
15 under subsection (a), the Secretary should—

16 (1) identify cybersecurity risks to the provision
17 of space situational awareness services and informa-
18 tion, and proposed actions to prevent and mitigate
19 such risks;

(2) identify supply chain risks and proposed actions to prevent and mitigate such risks;

1 (4) seek input from stakeholders, including
2 other relevant Federal Government agencies and pri-
3 vate industry; and

4 (5) include a classified appendix, if necessary.

5 (c) TRANSMITTAL AND BRIEFING.—Not later than
6 one year after the date of the enactment of this Act, the
7 Secretary shall transmit to the appropriate committees of
8 Congress a copy of the cybersecurity plan under sub-
9 section (a) and, not later than 21 days after such trans-
10 mittal, provide to such committees an unclassified briefing
11 on such plan.

12 **SEC. 602. STUDY ON INTERNATIONAL COOPERATION IN**
13 **SPACE SITUATIONAL AWARENESS.**

14 (a) STUDY.—The Secretary, in consultation with the
15 Administrator and the heads of other relevant Federal
16 agencies, shall carry out a study on international coopera-
17 tion in space situational awareness. Such study shall—

18 (1) examine the extent to which the United
19 States is involved in and leading international co-
20 operation in space situational awareness;

21 (2) consider how other countries are approach-
22 ing space situational awareness, including the provi-
23 sion of space situational awareness services and in-
24 formation;

1 (3) identify the formal and informal agreements
2 that are in place to support international coopera-
3 tion in space situational awareness;

4 (4) identify how United States international re-
5 lations in space situational awareness can be
6 strengthened and cooperation improved; and

7 (5) identify the barriers, including technical and
8 policy issues, to improving such cooperation and
9 what steps can be taken to overcome such barriers.

10 (b) TRANSMITTAL.—Not later than 270 days after
11 the date of the enactment of this Act, the Secretary shall
12 transmit to the Committee on Science, Space, and Tech-
13 nology and the Committee on Commerce, Science, and
14 Transportation of the Senate a copy of the study described
15 in subsection (a), together with a Plan for implementing
16 any recommended actions contained in such study and for
17 coordinating with international partners and entities on
18 standards and sharing of space situational awareness serv-
19 ices and information, including associated data.

20 **SEC. 603. REPORT ON INTERNATIONAL DATA SHARING**
21 **AGREEMENTS.**

22 Not later than 270 days after the date of the enact-
23 ment of this Act, the Secretary of Defense shall submit
24 to the appropriate committees of Congress a report on the
25 status and plans for international data sharing agree-

1 ments relating to the transition of certain space situa-
2 tional services and information in accordance with this
3 Act.

4 **TITLE VII—GAO REVIEW**

5 **SEC. 701. GAO REVIEW.**

6 Not later than three years after the date of the enact-
7 ment of this Act, the Comptroller General of the United
8 States shall submit to the Committee on Science, Space,
9 and Technology and the Committee on Commerce,
10 Science, and Transportation of the Senate a review of the
11 status, performance, and progress of activities carried out
12 under titles III and IV.

