

118TH CONGRESS
1ST SESSION

H. R. 220

To establish the Office of Advanced Aviation within the Administration of the Federal Aviation Administration, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

JANUARY 9, 2023

Mr. VAN DREW introduced the following bill; which was referred to the Committee on Transportation and Infrastructure, and in addition to the Committee on Science, Space, and Technology, 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 establish the Office of Advanced Aviation within the Administration of the Federal Aviation Administration, 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 “Advanced Aviation
5 Act”.

1 **SEC. 2. OFFICE OF ADVANCED AVIATION; ASSOCIATE AD-**
2 **MINISTRATOR FOR ADVANCED AVIATION.**

3 (a) ESTABLISHMENT.—Not later than 1 year after
4 the date of enactment of this Act, the Secretary shall re-
5 designate the Office of NextGen as the Office of Advanced
6 Aviation.

7 (b) APPOINTMENT.—Not later than 1 year after the
8 date of enactment of this Act, the Secretary shall appoint
9 an Associate Administrator for Advanced Aviation to head
10 the Office of Advanced Aviation designated under sub-
11 section (a).

12 (c) RESPONSIBILITIES.—The responsibilities of the
13 Associate Administrator for Advanced Aviation shall in-
14 clude the following:

15 (1) Coordinate rulemaking and approval proc-
16 esses on matters relating to the standardization and
17 certification of advanced aviation systems for use in
18 the national airspace system.

19 (2) Coordinate rulemaking and approval proc-
20 esses on matters relating to the safe operation and
21 integration of advanced aviation systems in the na-
22 tional airspace system.

23 (3) Coordinate activities and establish policies
24 related to the integration of aeronautical radio fre-
25 quency spectrum designated by the National Tele-
26 communications and Information Administration of

1 the Department of Commerce for use in the national
2 airspace system.

3 (4) Coordinate workforce planning across rel-
4 evant offices of the Administration to—

5 (A) hire and recruit personnel to—

6 (i) research, develop, test, and evalu-
7 ate advanced aviation systems; and

8 (ii) process applications related to ad-
9 vanced aviation systems in a timely man-
10 ner;

11 (B) develop and submit a quarterly report
12 to the Secretary and the Administrator, includ-
13 ing—

14 (i) core workforce requirements re-
15 lated to the research, development, testing
16 and evaluation of advanced aviation sys-
17 tems by the Administration;

18 (ii) core workforce requirements re-
19 lated to the safety, certification, and oper-
20 ational approval of advanced aviation sys-
21 tems by the Administration; and

22 (iii) recommendations on staffing and
23 budgetary resources needed to address
24 areas of concern.

1 (5) Coordinate rulemaking related to the inter-
2 national standardization and environmental effects
3 of advanced aviation systems.

4 (6) Advise the Administrator during internal
5 and interagency coordination and rulemaking on
6 counter-UAS systems and other matters related to
7 advanced aviation systems.

8 (7) Advise the Chief Technology Officer of the
9 Administration on the development of enterprise ar-
10 chitecture.

11 (8) Validate supporting system requirements
12 proposed by the Chief Technology Officer.

13 (9) Consult with the Director of the William J.
14 Hughes Technical Center for Advanced Aviation, as
15 redesignated under section 5, to—

16 (A) evaluate technologies related to ad-
17 vanced aviation systems;

18 (B) inform processes and rulemaking re-
19 lated to advanced aviation systems;

20 (C) identify new technologies that qualify
21 as viable advanced aviation systems; and

22 (D) coordinate referral of all technologies
23 to the relevant office of the Administration.

24 (10) Lead aviation rulemaking committees rel-
25 evant to advanced aviation systems.

1 (11) Consult with and assign tasks to the Ad-
2 vanced Aviation Advisory Committee.

3 (12) Develop and implement a secure password-
4 protected online portal that allows stakeholders with
5 a new or pending certification or approval applica-
6 tion to review the status of such application, receive
7 notice of deadlines and major certification mile-
8 stones, and identify the Administration office review-
9 ing such application.

10 (13) Implement pilot programs in partnership
11 with advanced aviation stakeholders to provide data
12 to support rulemaking and approval processes.

13 (14) Serve as a representative of the Adminis-
14 tration during interagency coordination of policies
15 related to advanced aviation systems.

16 (15) Promote the safe and responsible integra-
17 tion of advanced aviation systems into the national
18 airspace system.

19 (d) NOTICE OF OBJECTION.—

20 (1) IN GENERAL.—In carrying out the respon-
21 sibilities described in subsection (c), the Associate
22 Administrator for Advanced Aviation may submit to
23 the Administrator a notice of objection with respect
24 to—

1 (A) a final rule of the Administration re-
2 lated to advanced aviation systems;

3 (B) a determination by the Chief Tech-
4 nology Officer related to the establishment of
5 enterprise architecture or supporting system re-
6 quirements;

7 (C) an airworthiness or type certification
8 determination that relates to an advanced avia-
9 tion system issued in accordance with section
10 44701 or 44704 of title 49, United States
11 Code, or a modification or reversal of such de-
12 termination; and

13 (D) an waiver determination that relates to
14 the operation of an advanced aviation system in
15 the national airspace system issued in accord-
16 ance with section 44701 or 44807 of title 49,
17 United States Code, or a modification or rever-
18 sal of such determination.

19 (2) CONTENTS OF NOTICE.—In each notice of
20 objection submitted under this subsection, the Asso-
21 ciate Administrator shall include an explanation for
22 the basis of each such objection.

23 (3) DETERMINATION BY ADMINISTRATOR.—Not
24 later than 30 days after receiving a notice of objec-
25 tion under this subsection, the Administrator shall—

1 (A) determine whether to agree with or
2 overrule such objection; and

3 (B) if the Administrator determines that
4 such objection should be overruled, submit to
5 the Secretary a report explaining the reasons
6 for overruling such objection.

7 (4) DETERMINATION BY SECRETARY.—Not
8 later than 30 days after receiving a report submitted
9 under paragraph (3)(B), the Secretary may deter-
10 mine whether to allow the rule, determination, modi-
11 fication, or reversal to which the report relates to
12 proceed. If the Secretary fails to make a determina-
13 tion under this paragraph, the determination made
14 by the Administrator under paragraph (3) shall pro-
15 ceed.

16 (5) IMPLEMENTATION OF RULE.—Any rule or
17 determination that is the subject of a notice of ob-
18 jection submitted under this subsection shall not
19 take effect during the period beginning on the date
20 on which such notice is submitted and ending on the
21 last day of the 30-day period described in paragraph
22 (4).

23 (6) SUBMISSION TO CONGRESS.—The Secretary
24 shall—

1 (A) submit to Congress each notice of ob-
2 jection submitted under paragraph (1);

3 (B) notify Congress of each determination
4 of the Administrator under paragraph (3), and
5 submit to Congress the report required under
6 subparagraph (B) of such paragraph, if applica-
7 ble; and

8 (C) notify Congress of any determination
9 made by the Secretary pursuant to paragraph
10 (4).

11 **SEC. 3. OFFICE OF ADVANCED INTEGRATION.**

12 (a) ESTABLISHMENT.—The Associate Administrator
13 for Advanced Aviation shall establish an Office of Ad-
14 vanced Integration within the Office of Advanced Aviation.

15 (b) DESIGNATION.—Not later than 1 year after the
16 date of enactment of this Act, the Associate Adminis-
17 trator, in consultation with the Administrator and Sec-
18 retary, shall appoint a Director of Advanced Integration
19 to head the Office of Advanced Integration.

20 (c) RESPONSIBILITIES.—The Associate Adminis-
21 trator shall delegate to the Director of Advanced Integra-
22 tion the responsibilities described in paragraphs (1)
23 through (5) of section 2(c).

24 (d) COLLABORATION.—The Director of Advanced In-
25 tegration shall collaborate with—

1 (1) the Executive Director of the Aircraft Cer-
2 tification Service of the Administration and the Ex-
3 ecutive Director of the Flight Standards Service of
4 the Administration to carry out the responsibilities
5 described in section 2(c)(1);

6 (2) the Director for Air Traffic Services Oper-
7 ations Planning and Integration of the Administra-
8 tion to carry out the responsibilities described in sec-
9 tion 2(c)(2);

10 (3) the Vice President of Technical Operations
11 of the Air Traffic Organization to carry out the re-
12 sponsibilities described in section 2(c)(3);

13 (4) the Assistant Administrator for Finance
14 and Management of the Administration to carry out
15 the responsibilities described in section 2(c)(4); and

16 (5) the Director of the Office of International
17 Affairs of the Administration and the Director of the
18 Office of Environment and Energy of the Adminis-
19 tration to carry out the responsibilities described in
20 section 2(c)(5).

21 **SEC. 4. ADVANCED AVIATION COORDINATION UNIT.**

22 (a) ESTABLISHMENT.—The Secretary shall establish
23 a coordination unit within the Administration to carry out
24 the responsibilities described in subsection (d), to be
25 known as the Advanced Aviation Coordination Unit.

1 (b) MEMBERSHIP.—The Advanced Aviation Coordi-
2 nation Unit shall consist of the head of each relevant office
3 of the Administration, or an employee representing such
4 office, including—

5 (1) the Office of Advanced Integration estab-
6 lished under section 3;

7 (2) the William J. Hughes Technical Center for
8 Advanced Aviation, as redesignated under section 5;

9 (3) the Office of Aviation Safety;

10 (4) the Aircraft Certification Service;

11 (5) the Flight Standards Service;

12 (6) Air Traffic Organization;

13 (7) the Program Management Organization;

14 (8) Technical Operations Services for the Air
15 Traffic Organization;

16 (9) the Office of Airports;

17 (10) the Office of the Chief Counsel;

18 (11) the Office of Commercial Space Transpor-
19 tation;

20 (12) the Office of Environment and Energy;

21 (13) the office headed by the Chief Technology
22 Officer; and

23 (14) the Office of Finance and Management.

24 (c) CHAIR.—

1 (1) IN GENERAL.—The Director of Advanced
2 Integration shall serve as the Chair of the Advanced
3 Aviation Coordination Unit, at the discretion of the
4 Associate Administrator for Advanced Aviation.

5 (2) AUTHORITY.—The Chair may—

6 (A) schedule meetings of the members of
7 the Advanced Aviation Coordination Unit;

8 (B) identify items for the members of the
9 Advanced Aviation Coordination Unit to act on
10 in fulfillment of the responsibilities described in
11 subsection (d); and

12 (C) submit to the Administrator, the Sec-
13 retary, and Congress a notice of noncompliance
14 indicating that a member of the Advanced Avia-
15 tion Coordination Unit failed to participate in
16 the Coordination Unit to the extent necessary
17 to fulfill such responsibilities.

18 (3) CONSULTATION.—The Chair shall consult
19 with the Director of the William J. Hughes Tech-
20 nical Center for Advanced Aviation to identify new
21 aviation-related technologies through the aviation in-
22 novation program established under section 5(e).

23 (d) RESPONSIBILITIES.—The members of the Ad-
24 vanced Aviation Coordination Unit shall collaborate to—

1 (1) promote the safe and responsible integration
2 of advanced aviation systems into the national air-
3 space system;

4 (2) establish or improve processes related to
5 such integration;

6 (3) establish or improve processes related to the
7 certification of advanced aviation systems;

8 (4) develop clear and consistent standards re-
9 lated to advanced aviation systems;

10 (5) ensure that determinations of the Adminis-
11 tration related to advanced aviation systems are
12 made in a timely manner;

13 (6) proactively identify, discuss, and act on
14 challenges related to the application and impact of
15 radio frequency spectrum use in the national air-
16 space system; and

17 (7) identify innovative aviation technologies
18 that may be integrated into the national airspace
19 system.

20 (e) INTERAGENCY COORDINATION.—The Secretary
21 may facilitate coordination between interagency partners
22 and the members of the Advanced Aviation Coordination
23 Unit to fulfill the responsibilities described in subsection
24 (d).

1 **SEC. 5. WILLIAM J. HUGHES TECHNICAL CENTER FOR AD-**
2 **VANCED AVIATION.**

3 (a) ESTABLISHMENT.—

4 (1) IN GENERAL.—Not later than 1 year after
5 date of enactment of this Act, the Secretary shall re-
6 designate the William J. Hughes Technical Center
7 as the William J. Hughes Technical Center for Ad-
8 vanced Aviation.

9 (2) DIRECTOR.—The Director of the William J.
10 Hughes Technical Center shall be known as Director
11 of the William J. Hughes Technical Center for Ad-
12 vanced Aviation.

13 (b) RESPONSIBILITIES.—The Director of the William
14 J. Hughes Technical Center for Advanced Aviation shall
15 be responsible for—

16 (1) assuming all roles and responsibilities pre-
17 viously held by the Director of William J. Hughes
18 Technical Center, including—

19 (A) managing the research and develop-
20 ment portfolio of the Administration and the
21 Research and Development Advisory Com-
22 mittee;

23 (B) preparing congressional reports rel-
24 evant to such research, including the National
25 Aviation Research Plan and Annual Review;

1 (C) developing formal research partner-
2 ships with industry, academia, and other gov-
3 ernment agencies, and promoting the dissemi-
4 nation of federally funded research;

5 (D) managing research grants and Centers
6 of Excellence;

7 (E) conducting aviation research, develop-
8 ment, testing, evaluation activities, and
9 sustainment activities, including field support,
10 for new and existing national airspace system
11 applications and technologies related to—

12 (i) aerospace performance and plan-
13 ning, including reducing aviation hazards
14 and aircraft safety assurance;

15 (ii) airports;

16 (iii) digital systems and technologies,
17 including spectrum management and evol-
18 ving aerospace operations;

19 (iv) safety and health;

20 (v) aircraft, weather, or human fac-
21 tors;

22 (vi) pre-implementation air traffic
23 management, including NextGen;

1 (vii) testing during the development of
2 air traffic control systems to verify per-
3 formance; and

4 (viii) flight testing;

5 (F) maintaining and upholding test meth-
6 ods, standards, and policies of the Administra-
7 tion and providing independent test and evalua-
8 tion to confirm products are operationally suit-
9 able and effective for use in the national air-
10 space system;

11 (G) developing performance-based stand-
12 ards with industry and domestic or inter-
13 national partners for advanced aviation systems
14 and other global aviation harmonization activi-
15 ties; and

16 (H) facilitating interagency engagement
17 through the research team process;

18 (2) assisting the Associate Administrator for
19 Advanced Aviation in fulfilling the responsibilities
20 described in paragraphs (7) and (8) of section 2(c);

21 (3) managing the campus of the William J.
22 Hughes Technical Center for Advanced Aviation, in-
23 cluding—

24 (A) conducting operations and mainte-
25 nance, engineering design and construction, and

1 operational support services for campus facili-
2 ties owned by the Administration and Adminis-
3 tration personnel residing on properties that are
4 owned by the Administration and located on the
5 campus;

6 (B) operating, maintaining, and enhancing
7 the support infrastructure of the campus, in-
8 cluding buildings, roads, utilities, and land;

9 (C) ensuring compliance with environ-
10 mental laws, policies, directives, and initiatives;

11 (D) managing lease agreements and land
12 permits that support the missions of all Fed-
13 eral, State, and local agencies on the campus;

14 (E) managing, modernizing, and enhancing
15 the activities of the national airspace system
16 laboratories and supporting the physical and
17 virtual laboratories through configuration man-
18 agement, test bed maintenance and enhance-
19 ment, laboratory scheduling, computer oper-
20 ations, documentation library services, and sys-
21 tems engineering; and

22 (F) providing technical and engineering
23 services for customers of such laboratories in
24 support of research and development system in-
25 stallations and proof-of-concept testing;

1 (4) overseeing all research, development, test-
2 ing, evaluation, and sustainment activities related to
3 advanced aviation systems; and

4 (5) hosting domestic and international
5 symposia, conferences, or technical interchange
6 meetings with industry, academia, and other govern-
7 ment agencies.

8 (c) AVIATION INNOVATION PROGRAM.—

9 (1) ESTABLISHMENT.—The Director of the
10 William J. Hughes Technical Center for Advanced
11 Aviation shall establish and manage a program to
12 evaluate new aviation-related technologies proposed
13 to be used in the national airspace system and facili-
14 tate the integration of such technologies into the na-
15 tional airspace system.

16 (2) COMPONENTS.—

17 (A) IN GENERAL.—In carrying out the
18 program established under paragraph (1), the
19 Director shall—

20 (i) encourage aviation industry stake-
21 holders, innovators, and entrepreneurs to
22 present to the Director aviation-related
23 technologies for proposed use in the na-
24 tional airspace system;

1 (ii) examine the effects of each such
2 technology proposed under the program on
3 the national airspace system and the po-
4 tential benefits and risks of such tech-
5 nology, including the potential safety, so-
6 cial, economic, and workforce effects, and
7 methods to safely integrate such tech-
8 nology into the national airspace system;
9 and

10 (iii) determine whether such tech-
11 nology could feasibly be integrated into the
12 national airspace system.

13 (B) RECOMMENDATIONS.—After exam-
14 ining a technology and making the determina-
15 tion required under subparagraph (A), the Di-
16 rector shall submit to the Associate Adminis-
17 trator for Advanced Aviation recommendations
18 on—

19 (i) whether such technology could fea-
20 sibly and safely be integrated into the na-
21 tional airspace system;

22 (ii) which office or offices should be
23 responsible for designing and implementing
24 policies, processes, and procedures related
25 to such technology; and

1 (iii) whether such technology may be
2 considered an advanced aviation system.

3 (C) REFERRAL.—Upon receipt of a rec-
4 ommendation related to an aviation-related
5 technology under subparagraph (B), the Asso-
6 ciate Administrator for Advanced Aviation
7 shall—

8 (i) submit a summary of such rec-
9 ommendation to the Administrator and the
10 Secretary;

11 (ii) refer such technology to the rel-
12 evant office of the Administration; and

13 (iii) in the case of a recommendation
14 by the Director that a technology be con-
15 sidered an advanced aviation system, refer
16 such technology to the Advanced Aviation
17 Coordination Unit established under sec-
18 tion 4.

19 (3) COLLABORATION.—In examining each tech-
20 nology proposed under the program established
21 under this subsection, the Director shall collaborate
22 with subject matter experts from relevant offices of
23 the Administration in an expeditious and thorough
24 manner to provide an effective pathway for the de-

1 velopment, demonstration, and adoption of such
2 technology.

3 (4) PARTNERSHIPS.—The Director may enter
4 into partnerships with stakeholders to participate in
5 the program established under this subsection.

6 (d) AUTHORITY.—The Director may establish cooper-
7 ative research and development agreements and make
8 grants to carry out this section.

9 (e) PRESERVATION.—The redesignation of the Wil-
10 liam J. Hughes Technical Center under this section shall
11 not affect any agreement between the William J. Hughes
12 Technical Center and another entity that was in effect on
13 the day before such redesignation occurs.

14 (f) CONFORMING AMENDMENT.—Section 44507 of
15 title 49, United States Code, is amended—

16 (1) by striking “(a) CIVIL AEROMEDICAL INSTI-
17 TUTE” and all that follows through “The Civil
18 Aeromedical Institute established” and inserting
19 “‘The Civil Aeromedical Institute established’”; and

20 (2) by striking subsection (b).

21 **SEC. 6. DEFINITIONS.**

22 In this Act:

23 (1) ADMINISTRATOR.—The term “Adminis-
24 trator” means the Administrator of the Federal
25 Aviation Administration.

1 (2) ADMINISTRATION.—The term “Administra-
2 tion” means the Federal Aviation Administration.

3 (3) ADVANCED AVIATION SYSTEM.—The term
4 “advanced aviation system” means—

5 (A) an unmanned aircraft system;

6 (B) a counter-UAS system;

7 (C) a powered lift aircraft;

8 (D) a technology related to—

9 (i) advanced air mobility;

10 (ii) the ability of an aircraft to detect
11 surroundings and avoid impacts;

12 (iii) autonomous functioning of air-
13 craft;

14 (iv) supersonic aircraft capabilities;

15 (v) electric or hydrogen based aircraft
16 propulsion; or

17 (vi) evolving aerospace operations in-
18 cluding new aircraft, airport, weather, or
19 digital systems;

20 (E) a technology that—

21 (i) relates to the telecommunication
22 capabilities of aircraft; or

23 (ii) functions in the 5G band, 6G
24 band, or other high-frequency spectrum
25 bands as designated by the National Tele-

1 communications and Information Adminis-
2 tration for use as aeronautical radio fre-
3 quency spectrum; or

4 (F) any other aviation-related technology
5 that the Associate Administrator for Advanced
6 Aviation determines qualifies as an advanced
7 aviation system that could feasibly be inte-
8 grated into the national airspace system.

9 (4) COUNTER-UAS SYSTEM; UNMANNED AIR-
10 CRAFT SYSTEM.—The terms “counter-UAS system”
11 and “unmanned aircraft system” have the meanings
12 given such terms in section 44801 of title 49, United
13 States Code.

14 (5) SECRETARY.—The term “Secretary” means
15 the Secretary of Transportation.

○