



Space-Based Data Providers in the EU and U.S.

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Abstract

Can the EU Space Act streamline European space licensing without imposing broad new compliance burdens on firms outside Europe? This paper examines the March 2026 Compromise Text and its legal context to answer this question. In this version of the Act, the term “space-based data provider” maps onto no established EU legal category and has a circular definition. The result may not be a full-fledged data regime so much as regulatory uncertainty for foreign firms with respect to proportionality, anticircumvention, and the third-country equivalence provisions applied to regimes such as that of the United States. Uncertainty itself can be a compliance burden and may undercut the streamlining the legislation is meant to deliver. Because the U.S. has no single space regulator capable of granting the reciprocal recognition that the statute demands, a sector-specific agreement may be the only realistic pathway to fulfill this goal. The paper also addresses changes made between the June 2025 draft proposal which treated the cyber provisions as *lex specialis*, a sector-specific override of the NIS2 Directive, while the March 2026 Compromise Text reversed course and yields without prejudice to the NIS2 regime.

JEL Codes: O38, K23, K33

Keywords: *EU Space Act, space-based data, space-origin data, space licensing, space law, space policy, NIS2, third-country equivalence, data governance, cybersecurity*

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I. The EU Space Act and “Space-Based Data Providers”

This article explores the regulatory context of the current compromise text of the EU Space Act,¹ the earlier proposed EU Space Act,² and the rationale for a single market in space licensing in Europe. Understanding the EU Space Act requires knowledge of the TFEU,³ the European Commission’s competitiveness initiatives following the Draghi Report,⁴ and the mechanics of EU equivalence.

A core question of the EU Space Act is the meaning of “space-based data provider” and how the term “data provider” should be interpreted. In EU data law, terms such as “controller,” “processor,” “data subject,” “recipient,” “data holder,” “data user,” and “data recipient” take prominence, while the clearest statutory definition of “data provider” appears in a Digital Services Act delegated regulation for researcher access to data.⁵ How “data provider” is meant to be used in the space context is explored further in this article.

Other critical legal questions include the authority to harmonize space laws under Article 114 with the backdrop of Article 189 in the TFEU as discussed in the Opinion of the Legal Service report.⁶ The equivalence sections in the EU Space Act also raise questions about how the EU plans to recognize third-party regulatory regimes when regimes such as the United States are themselves fragmented in space regulation. While 13 Member States themselves have their own laws to regulate space operations, the EU has a goal to grow their space economy as outlined in the Draghi Report, and it has been recognized that fragmented licensing and regulations can slow

¹ Council of the European Union, Presidency Compromise Text, Proposal for a Regulation of the European Parliament and of the Council on the Safety, Resilience and Sustainability of Space Activities in the Union (EU Space Act), art. 5, Doc. ST 7806/26 (clean text) (Mar. 30, 2026) (track-changes version at Doc. ST 7805/26), <https://data.consilium.europa.eu/doc/document/ST-7806-2026-INIT/en/pdf> [hereinafter *EU Space Act, Compromise Text*, ST 7806/26].

² Proposal for a Regulation of the European Parliament and of the Council on the Safety, Resilience and Sustainability of Space Activities in the Union, COM (2025) 335 final, Council Doc. ST 10935/25 (June 25, 2025), <https://data.consilium.europa.eu/doc/document/ST-10935-2025-INIT/en/pdf> [hereinafter *Draft EU Space Act*, COM (2025) 335, ST 10935/25].

³ Consolidated Version of the Treaty on the Functioning of the European Union, 2012 O.J. (C 326) 13, <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:12012E/TXT> [hereinafter *TFEU 2012*].

⁴ Mario Draghi, The Future of European Competitiveness: Part B, In-Depth Analysis and Recommendations, at 184 (Sept. 9, 2024), https://commission.europa.eu/document/download/ec1409c1-d4b4-4882-8bdd-3519f86bbb92_en?filename=The%20future%20of%20European%20competitiveness_%20In-depth%20analysis%20and%20recommendations_0.pdf [hereinafter *Draghi Report 2024*].

⁵ See GDPR 2016, *infra* note 46; Data Governance Act 2022, *infra* note 94; Data Act 2023, *infra* note 95; Digital Services Act, Delegated Regulation 2025, *infra* note 98.

⁶ Council of the European Union, Opinion of the Legal Service, Proposal for a Regulation on the Safety, Resilience and Sustainability of Space Activities in the Union: Legal Basis, Doc. ST 5893/26 (Jan. 30, 2026), <https://data.consilium.europa.eu/doc/document/ST-5893-2026-INIT/en/pdf> [hereinafter *Opinion of the Legal Service*, ST 5893/26].

down progress. Whether a single market law such as the EU Space Act is able to achieve these competitiveness goals is very much an open question.

A. Background of the EU Space Act

The proposed EU Space Act is best understood as an internal-market instrument for space operations, not as a traditional space law statute. The Commission's stated objective is to create a harmonized framework for safety, resilience, and sustainability in space activities and thereby reduce fragmentation across Member State regimes.⁷ The Commission proposal was issued in June 2025, and the legislative file has since moved through Council working-party review and European Parliament committee work.⁸

The Act sits at the intersection of five legal systems. First, EU internal-market law supplies the proposed legal basis under Article 114. Second, EU space policy supplies the strategic context but contains a textual limitation on harmonization. Third, Member State national space laws remain essential because states bear international responsibility and liability for space activities. Fourth, the UN space treaties provide the international-law baseline. Fifth, EU data, cybersecurity, product, and equivalence doctrines provide examples for how third-country operators and space-based data providers might be treated.

The EU Space Act is not simply about launch licenses, it is also about services, space-based data, third-country market access, cybersecurity, sustainability, and industrial policy.

1. Origins of the EU Space Act

The EU Space Act is a competitiveness instrument with origins in the Draghi Report of 2024. In September 2024, the Mario Draghi report on the Future of European Competitiveness proposed to “establish a functioning single market for space, through a common EU legislative framework.”⁹ That recommendation was rapidly converted into an institutional mandate.

⁷ European Commission, “EU Space Act,” June 25, 2025, https://defence-industry-space.ec.europa.eu/eu-space-act_en.

⁸ Council of the European Union, Progress Report, Proposal for a Regulation on the Safety, Resilience and Sustainability of Space Activities in the Union, Doc. ST 8861/26 (May 8, 2026), <https://data.consilium.europa.eu/doc/document/ST-8861-2026-INIT/en/pdf> [hereinafter *Council Progress Report, ST 8861/26 (Cyprus Presidency)*]; European Parliamentary Research Service, EU Space Act, Briefing: EU Legislation in Progress, Clement Evroux, PE 775.922 (Sept. 22, 2025), [https://www.europarl.europa.eu/Reg-Data/etudes/BRIE/2025/775922/EPRS_BRI\(2025\)775922_EN.pdf](https://www.europarl.europa.eu/Reg-Data/etudes/BRIE/2025/775922/EPRS_BRI(2025)775922_EN.pdf) [hereinafter *EPRS Report 2025*].

⁹ *Draghi Report 2024*, *supra* note 4; *id.* at 172-186 (Chapter 8 establishes the state of the European space market with 10 space sector proposals, the third of which is to “establish a functioning Single Market for space, through a common EU legislative framework.” *Id.* at 183.).

Commission President Ursula von der Leyen in September 2024 tasked Commissioner-designate Andrius Kubilius with preparing an EU space law within his defense and space portfolio.¹⁰ At his confirmation hearing in November 2024, Kubilius confirmed that the Commission was considering a proposal for a regulation establishing an EU single market for space, and that the initiative would focus on safety, security, and sustainability.¹¹ In January 2025, the Commission formally embedded the preparation of the EU Space Act among its economic priorities for regaining EU competitiveness in the “Competitiveness Compass” Report.¹²

On June 25, 2025, the Commission released the EU Space Act proposal text and the accompanying Impact Assessment Report which framed the decision around four policy options—option 1, option 2, option 2+, and option 2++—based on input from an administrative process.¹³ Following this release, the EU sought public comment in a regulatory docket¹⁴ and the United States also collected comments through the Commerce Department on the proposed EU Space Act.¹⁵

The Opinion of the Legal Service was released on January 30, 2026 by the Council Legal Service office to answer legislator questions on the legal basis of the EU Space Act.¹⁶ This document is an essential read because the opinion discusses the constitutionality of the Act, particularly around the Article 114 basis. Article 114 is the internal-market harmonization power, and is broader than sector-specific policy which is found in Article 189 TFEU, the EU space-policy provision. Article 189 specifically excludes harmonization of Member State laws in space policy. The Opinion of the Legal Service therefore addresses the central legal question surrounding the legislation on whether the measure can improve internal-market conditions, or whether it tries to regulate space activities more generally under the cover of internal-market law.

¹⁰ *EPRS Report 2025*, *supra* note 8 at 1–3 (recounting the September 2024 mission letter to Commissioner-designate Kubilius and his November 2024 confirmation hearing).

¹¹ *Id.* (recounting the September 2024 mission letter to Commissioner-designate Kubilius and his November 2024 confirmation hearing).

¹² Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions, A Competitiveness Compass for the EU, COM(2025) 30 final (Jan. 29, 2025) [hereinafter *Competitiveness Compass*, COM(2025) 30]; see also *EPRS Report 2025*, *supra* note 8.

¹³ Commission Staff Working Document, Impact Assessment Report Accompanying the Proposal for a Regulation on the Safety, Resilience and Sustainability of Space Activities in the Union, SWD(2025) 335 final (June 25, 2025) (assessing policy options 1, 2, 2+, and 2++) [hereinafter *Impact Assessment Report 2025*]; see also *EPRS Report 2025*, *supra* note 8.

¹⁴ EU Public Consultation, EU Space Act, Feedback Period (July 15, 2025 – Nov. 7, 2025), https://ec.europa.eu/info/law/better-regulation/have-your-say/initiatives/13971-EU-Space-Act-new-rules-for-safe-resilient-and-sustainable-space-activities_en.

¹⁵ Office of Space Commerce, “OSC Seeks Stakeholder Feedback on the EU Space Act,” July 13, 2025, <https://space.commerce.gov/osc-seeks-stakeholder-feedback-on-the-eu-space-act/>.

¹⁶ *Opinion of the Legal Service*, ST 5893/26, *supra* note 6.

The Parliament’s ITRE Committee released a report with views on the draft EU Space Act on March 3, 2026, favoring NIS2 cybersecurity rules for supply chain provisions and mandatory threat testing, rather than the initial draft’s approach of *lex specialis*, a sector-specific override. The draft proposal implied that the new statute would override the NIS2 Directive, which the ITRE committee report cautions against.¹⁷ This approach would be changed in the proceeding compromise text, as discussed next, where the NIS2 is treated without prejudice.

On March 30, 2026, the Compromise Text of the EU Space Act was then released with notable changes to the structure of the proposal.¹⁸ The original proposal used the term “primary providers of space-based data.” The text instead uses “space-based data provider” and adds a more explicit provision on when space-based data may be provided in the Union.¹⁹

The Council’s Progress Report (Cyprus Presidency) released on May 8, 2026 added further explanation and context for understanding the Compromise Text of the EU Space Act. The report shows that the negotiations are ongoing and Member States have raised issues about scope, proportionality, legal basis, governance, security, national competence, third-country access, and liability.²⁰ This Council Progress Report—the Presidency’s own record of the state of play and of the outstanding legal issues it clarified²¹—was prepared for the Competitiveness Council, a meeting for policy debate among members.²²

¹⁷ European Parliament, Committee on Industry, Research and Energy (ITRE), Draft Report on the Proposal for a Regulation of the European Parliament and of the Council on the Safety, Resilience and Sustainability of Space Activities in the Union (COM(2025)0335 – C10-0128/2025 – 2025/0335(COD)), PE 784.432 (Rapporteur: Elena Donazzan), Mar. 3, 2026, https://www.europarl.europa.eu/doceo/document/ITRE-PR-784432_EN.pdf [hereinafter *ITRE Report*, PE 784.432].

¹⁸ *EU Space Act, Compromise Text 2026*, ST 7806/26, *supra* note 1. Two parallel versions were released as the Council Document ST 7805/26 (a track-changes version showing edits) and ST 7806/26 (the clean text).

¹⁹ *Draft EU Space Act*, COM (2025) 335, *supra* note 2 at art. 5, recital (22); *EU Space Act, Compromise Text 2026*, ST 7806/26, *supra* note 1, at art. 5, art. 23a.

²⁰ *Council Progress Report*, ST 8861/26 (Cyprus Presidency), *supra* note 8; *see generally* the prior report of the Danish Presidency at Council of the European Union, Progress Report, Doc. ST 16018/25 (Nov. 28, 2025), <https://data.consilium.europa.eu/doc/document/ST-16018-2025-INIT/en/pdf> [hereinafter *Council Progress Report*, ST 16018/25 (Danish Presidency)].

²¹ The Presidency is not the European version of U.S. presidential administrations. The Member State holding the Presidency does not govern the Union or set policy unilaterally. Instead, it chairs and steers the Council’s meetings and its preparatory working parties, sets the agenda, and brokers compromise texts among the Member States and in negotiations with the European Parliament and the Commission.

²² *TFEU 2012*, *supra* note 3; the order of Presidencies is fixed by Council decision, *see* Council Decision (EU) 2016/1316 of July 26, 2016, amending Decision 2009/908/EU, 2016 O.J. (L 208) 42. The “Presidency” of the Council of the European Union is not an administration or a government in the U.S. sense; it is a rotating chairmanship of the Council of the EU—the institution composed of Member State ministers—which passes among the Member States every six months in a fixed order, with States working in pre-arranged groups of three known as “trios.” The Presidency of the Council of the EU, Council of the European Union, <https://www.consilium.europa.eu/en/council-eu/presidency-council-eu/>; *see Future Council Presidencies up to 2030*, <https://www.consilium.europa.eu/en/council-eu/presidency-council-eu/list-of-presidencies-of-the-council-of-the-european-union/> (the next trio is Ireland-Lithuania-Greece from July 2026 to December 2027). Cyprus holds the Presidency (“Cyprus Presidency”) from January 1 to June 30, 2026, taking over from Denmark (“Danish Presidency”) and closing the Poland–Denmark–Cyprus trio.

Specifically the Council Progress Report explained: “The term ‘space services’ was replaced with ‘space operation services’ to clearly separate them from ‘space-based data.’”²³ A proportionality-based narrowing of the scope of space-based data providers is also a new feature of the Compromise Text. The Article 23a definition of the scope of space-based data providers depends on the level of activity of the data provision of the entity: “Regulation should be limited to those cases where the space-based data is the sole service or a decisive part of the service provided by the space-based data provider.”²⁴ The Council Progress Report also explores the exclusion of research and educational uses in Article 5 recitals (43h) and (43i).²⁵ The Council Progress Report does not elaborate further on the definition of “sole” or “decisive” or the scope of “space-based” or “space-based data” or “space-based data provision.”

The following timeline shows legislative activity regarding the EU Space Act.

Table 1 — Timeline of EU Space Act Legislative Activity

Date	Milestone	Document
Sept. 9, 2024	Draghi Report recommends a functioning “single market for space” via a common EU legislative framework	Draghi Report
Jan. 29, 2025	Competitiveness Compass embeds the EU Space Act among EU competitiveness priorities	COM(2025) 30 final
June 17, 2025	European Parliamentary Research Service briefing on “European space act” (Clement Evroux and Annastiina Papunen)	PE 772.914
June 25, 2025	EU Space Act proposal and Impact Assessment (policy options 1, 2, 2+, 2++), 2025/0335(COD) adopted by the Commission	COM(2025) 335 final SWD(2025) 335 final
July 25, 2025	Horizon Europe proposal, the Framework Programme for Research and Innovation for the period 2028-2034, adopted by Commission	COM(2025) 543 final
Sept. 18, 2025	European Parliamentary Research Service briefing on “Safe, Resilient, and Sustainable Space Activities” (Dieter Frizberg)	PE 774.678
Sept. 22, 2025	European Parliamentary Research Service briefing on “EU Space Act” (Clement Evroux)	PE 775.922
Nov. 7, 2025	EU Public Consultation period closes for responses to the proposed EU Space Act	Public Consultation
Nov. 28, 2025	Progress Report on the EU Space Act (Danish Presidency)	ST 16018/25

Cyprus Presidency of the Council of the European Union (Jan. 1 – June 30, 2026), <https://cyprus-presidency.consilium.europa.eu/>; see also European Parliamentary Research Service, *Priority Dossiers Under the Cyprus EU Council Presidency*, PE 782.590 (2026), [https://www.europarl.europa.eu/Reg-DATA/etudes/BRIE/2026/782590/EPRS_BRI\(2026\)782590_EN.pdf](https://www.europarl.europa.eu/Reg-DATA/etudes/BRIE/2026/782590/EPRS_BRI(2026)782590_EN.pdf).

²³ European Parliamentary Research Service, *Priority Dossiers Under the Cyprus EU Council Presidency*, PE 782.590 (2026), [https://www.europarl.europa.eu/Reg-DATA/etudes/BRIE/2026/782590/EPRS_BRI\(2026\)782590_EN.pdf](https://www.europarl.europa.eu/Reg-DATA/etudes/BRIE/2026/782590/EPRS_BRI(2026)782590_EN.pdf) at 6.

²⁴ *Id.*

²⁵ Council Progress Report, ST 8861/26 (Cyprus Presidency), *supra* note 8 at ¶¶ 3, 19 (clarifying the replacement of “space services” with “space operation services” and the proportionality-based limitation of the Article 23a space-based-data scope and presented to the Competitiveness Council (Research and Space) on May 29, 2026).

Date	Milestone	Document
Dec. 9, 2025	Competitiveness Council (Research and Space) policy meeting on EU Space Act COM(2025) 335 and Horizon Europe COM(2025) 543	COMPET Council
Dec. 11, 2025	Committee of the Regions releases its Opinion ²⁶ (at the request of the Danish Presidency)	CoR Opinion CDR 3963/2025
Jan. 1, 2026	Cyprus assumes the rotating Council Presidency (through June 30, 2026)	Cyprus Presidency
Jan. 30, 2026	Opinion of the Legal Service of the Council of the European Union on the legal basis of the EU Space Act	ST 5893/26
Mar. 3, 2026	European Parliament's ITRE March 2026 Draft Report (Elena Donazzan) ²⁷	PE 784.432 2025/0335(COD)
Mar. 30, 2026	Compromise Text of the EU Space Act released by the Cyprus Presidency	ST 7805/26 (track changes) ST 7806/26 (clean)
May 8, 2026	Progress Report on the EU Space Act (Cyprus Presidency)	ST 8861/26
May 29, 2026	Progress Report sent to the Competitiveness Council (Research and Space) ²⁸	COMPET Council
July 1, 2026	Ireland assumes the rotating Council Presidency (through December 31, 2026)	Irish Presidency
H2 2026	Continued Council working-party negotiations toward a Council general approach, then interinstitutional trilogues with the European Parliament (lead committee is the Committee on Industry, Research and Energy (ITRE))	—

As of July 2026, the Compromise Text remains on the Council’s agenda. Following the May 29, 2026 meeting of the Competitiveness Council,²⁹ the next steps are continued negotiations in the Council’s preparatory bodies toward a Council general approach, after which the file would proceed to interinstitutional trilogues with the European Parliament (lead committee is the Committee on Industry, Research and Energy (ITRE)).³⁰ Trilogue negotiations, as the legislation advances, will determine the EU Space Act’s interaction with the NIS2 Directive and will

²⁶ European Committee of the Regions (CoR), Opinion: EU Space Act, CDR 3963/2025 (adopted Dec. 11, 2025), <https://www.cor.europa.eu/en/our-work/opinions/cdr-3963-2025> (adopted at the Danish Presidency’s request) [hereinafter *CoR Opinion, CDR 3963/2025*] (providing comments on the legislative draft and noting that “13 Member States have already enacted legislations regulating the space activities while several others carry out preparations to enact similar legislations.”).

²⁷ *ITRE Report, PE 784.432*, *supra* note 17; Axel Hard af Segerstad, Hannes Snellman, “Beyond NIS2: The EU Space Act and the Coming of Age of Space Cybersecurity,” Apr. 16, 2026, <https://www.hannessnellman.com/news-and-views/blog/the-eu-space-act-and-the-cybersecurity-relationship-with-nis2/>.

²⁸ Competitiveness Council (Research and Space), May 29, 2026, <https://www.consilium.europa.eu/en/meetings/compet/2026/05/29/> [hereinafter *Competitiveness Council*] (policy debate on the Horizon Europe package including the legislative measures linked to the 10th framework programme for research and innovation 2028-2034).

²⁹ *Id.*

³⁰ European Parliament, Committee on Industry, Research and Energy (ITRE), <https://www.europarl.europa.eu/committees/en/itre/home/highlights>.

incorporate considerations from the January proposal to amend the EU's Cybersecurity Act in a potential CSA2.³¹

2. Treaty Basis and the Internal-Market Question

The legal-basis question may determine whether the EU Space Act survives politically and legally in its intended form. Article 114 of the Treaty (TFEU) authorizes internal-market harmonization where divergent national rules impede, or are likely to impede, free movement or distort competition.³² But Article 189 of the TFEU is a sector-specific EU space policy section, which explicitly says that space measures shall not be used to harmonize the laws and regulations of the Member States.³³

The Commission's strategy is therefore to frame the EU Space Act as an internal-market measure and not as a space law in order to enact it under Article 114 and not Article 189. The argument is that 13 Member States have adopted national space legislation and that the resulting patchwork creates obstacles for operators seeking to provide space services and space-based data across the Union.³⁴ On that theory, the EU Space Act is not harmonizing space law for its own sake but it is removing internal-market barriers to space services and space-based data.

The strongest reading of the Compromise Text is that it does not create a single, universal EU space license but that it is closer to a harmonized layer of requirements and recognition. Space operators still face national authorization, national-security review, insurance obligations, liability allocation, and registration requirements. The possible single-market effect comes from common EU requirements for covered categories, registration or certification mechanisms, and limits on duplicative barriers once an operator or provider is within the EU framework.³⁵

Member States shall not restrict the provision of space operation services or space-based data for activities covered by the Act, while still allowing stricter national requirements in certain circumstances.³⁶ This structure makes it similar to other EU internal-market regimes that harmonize some issues, preserve national control over others, and then determine how much mutual recognition follows from compliance.

³¹ European Commission, Proposal for a Regulation for the EU Cybersecurity Act, Jan. 20, 2026, <https://digital-strategy.ec.europa.eu/en/library/proposal-regulation-eu-cybersecurity-act> [hereinafter *CSA2 Proposal 2026*].

³² TFEU 2012, *supra* note 3.

³³ *Id.* at 47.

³⁴ *Draft EU Space Act, COM (2025) 335, supra* note 2.

³⁵ *EU Space Act, Compromise Text 2026, ST 7806/26, supra* note 1 at arts. 2-5, 8-15, 23a, 106-106a.

³⁶ *Id.* at art. 3.

a) United Nations Treaty Basis

The UN system remains the background architecture for space operations since there is no global space operator license. Instead, the UN system allocates responsibility to states. Under the Outer Space Treaty (1967),³⁷ states bear international responsibility for national activities in outer space, including activities by nongovernmental entities, and must authorize and continuously supervise those activities. The Liability Convention (1972) gives this structure substance where launching states can bear international liability for damage caused by space objects.³⁸ The Registration Convention (1975) reinforces state responsibility by requiring launching states to maintain registries and provide information to the United Nations.³⁹

These UN treaties explain why EU Member States are sensitive to any system that appears to displace national authorization or supervision. A Member State may remain internationally responsible even if an EU-level body performs some certification or registration function.

The UN's policies and guidelines managed by the UN's Office of Outer Space Affairs⁴⁰ include the COPUOS Long-Term Sustainability Guidelines,⁴¹ IADC debris-mitigation guidelines,⁴² and ITU Radio Regulations which all shape the regulatory landscape.⁴³ They do not replace national authorization, but they do govern global space operations. The EU Space Act's safety, sustainability, and resilience provisions should be read against this backdrop.

³⁷ Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies, art. VI, Jan. 27, 1967, 610 U.N.T.S. 205, <https://www.unoosa.org/oosa/en/ourwork/spacelaw/treaties/outerspacetreaty.html> [hereinafter *Outer Space Treaty 1967*]; see also Agreement Governing the Activities of States on the Moon and Other Celestial Bodies, Dec. 5, 1979, 1363 U.N.T.S. 3 [hereinafter *Moon Treaty 1979*]; see also Agreement Relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea of Dec. 10, 1982, July 28, 1994, preamble, 33 I.L.M. 1309, 1836 U.N.T.S. 3 [hereinafter *UNCLOS 1994*] (establishing the International Seabed Authority and Third UN Conference on the Law of the Sea); see generally Barbara E. Heim, *Exploring the Last Frontiers for Mineral Resources: A Comparison of International Law Regarding the Deep Seabed, Outer Space, and Antarctica*, 23 VANDERBILT L. REV. 819 (2021), <https://scholarship.law.vanderbilt.edu/vjtl/vol23/iss4/3>.

³⁸ Convention on International Liability for Damage Caused by Space Objects, Mar. 29, 1972, 961 U.N.T.S. 187, <https://www.unoosa.org/oosa/en/ourwork/spacelaw/treaties/liability-convention.html> [hereinafter *Liability Convention 1972*].

³⁹ Convention on Registration of Objects Launched into Outer Space, Jan. 14, 1975, 1023 U.N.T.S. 15, <https://www.unoosa.org/oosa/en/ourwork/spacelaw/treaties/registration-convention.html> [hereinafter *Registration Convention 1975*].

⁴⁰ U.N. Office for Outer Space Affairs, "Long-Term Sustainability of Outer Space Activities," <https://www.unoosa.org/oosa/en/ourwork/topics/long-term-sustainability-of-outer-space-activities.html>; International Telecommunication Union, *Radio Regulations*, <https://www.itu.int/pub/R-REG-RR>.

⁴¹ *United Nations Guidelines for the Long-term Sustainability of Outer Space Activities of the Committee on the Peaceful Uses of Outer Space*, Vienna, 2021, https://www.unoosa.org/documents/pdf/PromotingSpaceSustainability/Publication_Final_English_June2021.pdf.

⁴² IADC Space Debris Mitigation Guidelines, Committee on the Peaceful Use of Outer Space, IADC-02-01 Rev. 4, Feb. 3, 2025, https://www.unoosa.org/res/oosadoc/data/documents/2025/aac_105c_12025crp/aac_105c_12025crp_9_0_html/AC105_C1_2025_CRP09E.pdf.

⁴³ International Telecommunication Union (ITU) Radio Regulations, <https://www.itu.int/pub/r-reg-rr/>.

The U.S. system also comes into play to the extent that the EU Space Act seeks to incorporate equivalence. The relevant U.S. regime for space licensing would include assessment of FAA launch and reentry licensing, FCC satellite communications and spectrum licensing, NOAA commercial remote-sensing licensing, export controls under International Traffic in Arms Regulations (ITAR) and Export Administration Regulations (EAR),⁴⁴ Commerce Department space situational awareness procedures, and NIST cybersecurity standards.⁴⁵ The United States does not have one consolidated space operator license, but rather has activity-specific and agency-specific rules. That fragmentation matters as the EU Space Act would create a need to evaluate whether U.S. supervision is equivalent to its own for any given category of space operation or space-based data service.

b) Equivalence, Adequacy, and Mutual Recognition

Because the EU Space Act puts forth an equivalence provision in Article 105, it's important to explore what it means practically to consider third-party regulations as “equivalent.” EU law does not use a single universal doctrine called “equivalence.” Instead, it uses several related tools. Data protection uses “adequacy.” Product and manufacturing regimes may use “mutual recognition,” conformity assessment, or inspection-recognition arrangements. Financial regulation often uses “equivalence.” In each case, the legal question is whether a third-country system provides a sufficiently comparable level of protection, supervision, and enforcement.

The GDPR “adequacy” model is a prominent example. Under that model, the Commission may determine that a third country ensures an adequate level of protection for personal data transfers. The EU-U.S. Data Privacy Framework is the current U.S.-specific example.⁴⁶ The manufacturing example is different: the EU-U.S. mutual-recognition arrangement in

⁴⁴ See generally Am. Inst. of Aeronautics & Astronautics, “Position Paper: Mission Authorization,” May 2025, https://aiaa.org/wp-content/uploads/2025/06/PositionPaper_May_2025_v2.pdf [hereinafter *AIAA Position Paper 2025*] (describing National Defense Authorization Act of 1999, moving all satellite products from EAR to ITAR auspices, with ITAR managed by the U.S. State Department with the U.S. Munitions List and EAR managed by the U.S. Commerce Department with the Commerce Control List, and proposals for National Space Council to start potentially moving technologies back from ITAR to EAR); see *EAR Commerce Control List*, *infra* note 87.

⁴⁵ See, e.g., Federal Aviation Administration, “Commercial Space Transportation,” <https://www.faa.gov/space>; Federal Communications Commission, Space Bureau, <https://www.fcc.gov/space>; NOAA, “Commercial Remote Sensing Regulatory Affairs,” <https://www.nesdis.noaa.gov/commercial-space/regulatory-affairs>.

⁴⁶ Regulation (EU) 2016/679, art. 45, 2016 O.J. (L 119) 1, <https://eur-lex.europa.eu/eli/reg/2016/679/oj/eng> [hereinafter *GDPR 2016*]; European Commission, “Adequacy Decisions,” https://commission.europa.eu/law/law-topic/data-protection/international-dimension-data-protection/adequacy-decisions_en; European Commission, “EU-U.S. Data Transfers,” https://commission.europa.eu/law/law-topic/data-protection/international-dimension-data-protection/eu-us-data-transfers_en.

pharmaceutical good manufacturing practice permits reliance on recognized inspection systems rather than duplicative inspection in every case.⁴⁷

The Compromise Text contains the beginnings of a comparable approach for space. It includes provisions on international agreements, mutual recognition, technical assessment, and third-country public entities. The structure suggests that third-country access may be handled through equivalence decisions, international agreements, or specific decisions allowing a third-country public entity or supervised operator to provide space operation services or space-based data in the Union.⁴⁸

This matters for U.S.-licensed operators who will likely argue that duplicative EU review is unnecessary since U.S. agencies already regulate launch, spectrum, remote sensing, debris mitigation, and mission authorization. The EU, by contrast, will likely want to ensure that third-country operators do not gain easier market access than EU operators and that third-country systems genuinely satisfy EU safety, resilience, and sustainability outcomes.

The most likely path is not automatic recognition. It is a structured equivalence or mutual-recognition pathway with review of third-country operational licensing systems.

c) Current Status as of July 2026

As of July 2026, the Commission proposal has been referred to the European Parliament's Committee on Industry, Research and Energy (ITRE), and the Council has been working through the presidency Compromise Text and progress reports.⁴⁹

Current sentiment is mixed. There is broad support for the objective of reducing fragmentation and strengthening Europe's space economy. But the public consultation record shows continuing reservations over legal basis, proportionality, administrative burden, governance, third-country access, defense and dual-use carveouts, liability, and the relationship between EU-level requirements and national authorization.⁵⁰ Member States may have different strategic reasons for concern, but U.S. and industry commentary has focused on extraterritoriality, duplication, cost, international standards alignment, and the importance of third-country equivalence or

⁴⁷ European Medicines Agency, "Mutual Recognition Agreements: EU-U.S. Mutual Recognition Agreement," <https://www.ema.europa.eu/en/human-regulatory-overview/research-development/compliance-research-development/good-manufacturing-practice/eu-us-mutual-recognition-agreement>.

⁴⁸ *EU Space Act, Compromise Text 2026*, ST 7806/26, *supra* note 1 at arts. 106-106a.

⁴⁹ *EPRS Report 2025*, *supra* note 8; *Council Progress Report*, ST 8861/26 (Cyprus Presidency), *supra* note 8.

⁵⁰ *Council Progress Report*, ST 8861/26 (Cyprus Presidency), *supra* note 8; *Council Progress Report*, ST 16018/25 (Danish Presidency), *supra* note 20.

mutual recognition.⁵¹ Practitioner commentary similarly highlights that non-EU operators will be subject to new compliance requirements when they provide space services or space-based data in the Union.⁵²

B. Space-Based Data and Cybersecurity Directives

“Space-based data” may include a broad range of data such as satellite imagery and Earth observation, signals and communications, weather and environmental data, positioning data, and downstream analytics. The EU currently regulates space-origin data through three overlapping, largely mandatory instruments including the NIS2 Directive, the Cyber Resilience Act, and the proposed EU Space Act.⁵³ The United States has no single counterpart. Its space-cybersecurity regime is a patchwork of one voluntary executive directive, non-binding technical guidance, and a handful of sector-specific licensing conditions administered by different agencies. The practical question for a U.S. operator is not “how do I comply with the U.S. equivalent of NIS2,”⁵⁴ because there is none, but it is “which agency, if any, regulates this particular data stream, and is the obligation mandatory or voluntary.”

1. NIS2 Directive

The NIS2 Directive is EU’s horizontal cybersecurity statute.⁵⁵ Annex I of NIS2 expressly lists “Space” as a sector of high criticality and brings within its scope “operators of ground-based

⁵¹ Office of Space Commerce, “U.S. Government Provides Feedback on Draft E.U. Space Act,” Nov. 4, 2025, <https://space.commerce.gov/u-s-government-provides-feedback-on-draft-e-u-space-act/>; Office of Space Commerce, “EU Space Act Development Updates,” May 12, 2026, <https://space.commerce.gov/eu-space-act-development-updates/>; BDLI, “German Aerospace Industries Association, German Space Industry Position on the European Space Act,” (Aug. 26, 2025), https://www.bdl.de/sites/default/files/2025-09/250826_Positionspapier_EUSA_EN.pdf [hereinafter *German Space Industry Position*] (“Particular concern is raised by the decision to base the proposal on Article 114 of the Treaty on the Functioning of the European Union (TFEU) as the legal basis.”).

⁵² Cooley, “The Proposed EU Space Act: 10 Key Implications U.S. and Non-EU Satellite Operators Should Know,” July 24, 2025, <https://www.cooley.com/news/insight/2025/2025-07-24-the-proposed-eu-space-act-10-key-implications-us-and-non-eu-satellite-operators-should-know>; Greenberg Traurig, “The EU Space Act: Scope and European Space Operator Authorization,” July 15, 2025, <https://www.gtlaw.com/en/insights/2025/7/the-eu-space-act-scope-and-european-space-operator-authorization>; White & Case, “Regulating Space: A Closer Look at the Proposed EU Space Act,” Mar. 26, 2025, <https://www.whitecase.com/insight-our-thinking/regulating-space-closer-look-proposed-eu-space-act>.

⁵³ *NIS2 Directive 2022*, *infra* note 55; *Cyber Resilience Act 2024*, *infra* note 66.

⁵⁴ See Henrik Hanssen and Johannes Schmees, Hogan Lovells Cadwalader, “The EU Space Act Proposal in the Legislative Process: Cybersecurity, Market Access, and Implications for Non-EU Space Operators,” May 15, 2026, <https://www.hlc.com/en/publications/the-eu-space-act-proposal-in-the-legislative-process-cybersecurity-market-access-and-implications>, JD Supra, <https://www.jdsupra.com/legalnews/the-eu-space-act-proposal-in-the-1320926/>.

⁵⁵ Directive (EU) 2022/2555 of the European Parliament and of the Council of Dec. 14, 2022, on Measures for a High Common Level of Cybersecurity Across the Union (NIS2 Directive), 2022 O.J. (L 333) 80, <https://eur-lex.europa.eu/eli/dir/2022/2555/oj/eng> [hereinafter *NIS2 Directive 2022*]. See also Directive (EU) 2022/2557 of the European Parliament and of the Council of Dec. 14, 2022, on the Resilience of Critical Entities and Repealing Council Directive 2008/114/EC, 2022 O.J. (L 333) 164, <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32022L2557> [hereinafter *CER Directive 2022*].

infrastructure ... that support the provision of space-based services.”⁵⁶ Terrestrial infrastructure that enables space services is also covered by NIS2, including telemetry, tracking, and command (TT&C) networks, gateway hubs, terrestrial communications links, and other facilities.⁵⁷ Terrestrial nodes that support the critical space sector are under NIS2 duties. The U.S. comparison for these security controls on ground infrastructure is the NIST IR 8401 framework on satellite ground segment.⁵⁸ Of note, however, providers of public electronic communications networks who are covered under other Annex I entries are excluded in the space-sector entry.

Under the NIS2 Directive, the operator rather than the data is regulated. That means the operators that are classified as essential entities must adopt risk-management measures in governance, supply-chain security, incident handling, encryption, and business continuity, they must report significant incidents on a 24-hour and 72-hour timeline, and accept management-body accountability for compliance.⁵⁹ Member States were required to implement the NIS2 Directive in their own national laws by October 17, 2024, so these are binding national-law obligations, enforced by national competent authorities with administrative fines.⁶⁰ The European Commission has started proceedings against infringing Member States who failed to meet the deadline.⁶¹ National implementation and draft laws have been moving through the parliamentary process in Germany, Belgium, Italy, among others.

In a reversal from the draft proposal which sought to override the NIS2 Directive, we see that Article 75 of the Compromise Text of the EU Space Act says that the regulation shall apply

⁵⁶ *NIS2 Directive 2022*, *supra* note 55, Annex I (listing "Space" as a sector of high criticality and covering "operators of ground-based infrastructure, owned, managed and operated by Member States or by private parties, that support the provision of space-based services").

⁵⁷ See ISMS Online, "NIS 2 Space Sector Key Security Controls," Oct. 18, 2025, <https://www.isms.online/nis-2/sectors/space/controls/>.

⁵⁸ Nat'l Inst. of Standards & Tech., Satellite Ground Segment: Applying the Cybersecurity Framework to Satellite Command and Control, NIST IR 8401 (2022), <https://nvlpubs.nist.gov/nistpubs/ir/2022/NIST.IR.8401.pdf> [hereinafter *NIST IR 8401 (2022)*].

⁵⁹ *NIS2 Directive 2022*, *supra* note 55 at arts. 20–21 (management-body accountability and cybersecurity risk-management measures), and art. 23 (incident-reporting obligations, including a 24-hour early warning and 72-hour notification).

⁶⁰ *Id.* at art. 41 (requiring Member States to adopt and apply transposing measures from Oct. 18, 2024). *But see* European Commission, "Commission Refers Ireland, Spain, France and the Netherlands to the Court of Justice for Failing to Transpose the Rules on Cybersecurity," July 8, 2026, <https://digital-strategy.ec.europa.eu/en/news/commission-refers-ireland-spain-france-and-netherlands-court-justice-failing-transpose-rules>.

⁶¹ Greenberg Traurig, "EU NIS 2 Directive: Expanded Cybersecurity Obligations for Key Sectors," Aug. 2025 <https://www.gtlaw.com/en/insights/2025/8/eu-nis-2-directive-expanded-cybersecurity-obligations-for-key-sectors>.

without prejudice to the NIS2 Directive, while Article 75a applies cybersecurity obligations on space operators.⁶² Article 75 states:

1. This Regulation shall be without prejudice to Directive (EU) 2022/2555 in relation to Union space operators that qualify as essential or important entities pursuant to Article 3 of that Directive with regard to space activities and space operation services covered by this Regulation. (emphasis added)

2. Where Union space operators have been identified as critical entities in accordance with Directive (EU) 2022/2557, this Regulation shall apply without prejudice to Directive (EU) 2022/2557.⁶³ (emphasis added).

While the final text of the EU Space Act still needs to be formulated in possible trilogue negotiations, the Compromise Text offered an amendment on the relationship of the EU Space Act to the NIS2 Directive and the Critical Entities Resilience Directive which raised concerns in the Parliament Report and by commentators.⁶⁴ The detailed sector-specific cybersecurity regime was removed from the draft proposal in the Compromise Text and instead the NIS2 Directive is incorporated in the text as recommended by the ITRE report.⁶⁵

2. *Cyber Resilience Act*

The Cyber Resilience Act (CRA) complements NIS2 by regulating the products rather than the operators of space-origin data.⁶⁶ It imposes essential cybersecurity requirements, vulnerability-handling duties, conformity assessment, and CE marking on "products with digital elements"—a category that captures satellite hardware, onboard and ground software, and the connected devices and user terminals in a space-data supply chain.⁶⁷ The Act entered into force on December 10, 2024 and its principal manufacturer obligations apply from December 11, 2027, with vulnerability and incident-reporting duties beginning September 11, 2026.⁶⁸

⁶² Gernot Fritz, Amina Kovacevic, E+H, "EU Space Act vs. NIS2: How the Compromise Text Reshapes the Cybersecurity Architecture," May 27, 2026, <https://www.eh.at/en/eu-space-act-vs-nis2-how-the-compromise-text-reshapes-the-cybersecurity-architecture/>.

⁶³ *EU Space Act, Compromise Text 2026*, ST 7806/26, *supra* note 1 at art. 75(1)-(2), citing *NIS2 Directive*, *supra* note 55, *CER Directive 2022*, *supra* note 55.

⁶⁴ See Greenberg Traurig Advisory, *supra* note 61; Fritz and Kovacevic, *supra* note 62.

⁶⁵ See Hanssen and Schmees, *supra* note 54.

⁶⁶ Regulation (EU) 2024/2847 of the European Parliament and of the Council of Oct. 23, 2024, on Horizontal Cybersecurity Requirements for Products with Digital Elements (Cyber Resilience Act), 2024 O.J. (L 2024/2847), <https://eur-lex.europa.eu/eli/reg/2024/2847/oj/eng> [hereinafter *Cyber Resilience Act 2024*].

⁶⁷ See *id.* at arts. 13–14, Annexes I, III–IV (essential cybersecurity requirements, vulnerability handling, conformity assessment, and CE marking for "products with digital elements").

⁶⁸ *Cyber Resilience Act 2024*, *supra* note 66, art. 71 (entry into force Dec. 10, 2024; general application Dec. 11, 2027; vulnerability- and incident-reporting obligations from Sept. 11, 2026).

Together, NIS2 (operators) and the CRA (products) cover the space-data value chain with mandatory cybersecurity duties. The proposed EU Space Act adds a sector-specific layer. Built on its safety-resilience-sustainability architecture, the Compromise Text requires space operators to manage cyber risk as part of "resilience," and it conditions the provision of space-based data in the Union on compliance by the underlying space activity.⁶⁹ The EU Space Act is drafted to dovetail with, rather than duplicate, NIS2 and the CRA, referencing the cybersecurity framework so that a compliant operator is not subjected to separate cyber regimes.⁷⁰ Where space-based data is also personal data, the GDPR's security-of-processing duties apply in parallel.⁷¹ The net effect is that an entity providing space-based data in the EU faces mandatory, enforceable cybersecurity obligations.

Another item that will likely be closely discussed during possible trilogue negotiations on the EU Space Act is a Commission proposal to update the EU Cybersecurity Act in a potential CSA2.⁷² Updates to the EU's cybersecurity architecture would implicate space operators to the extent that they have obligations for supply chain security and threat protection notifications as initially planned in the draft proposal.

3. *No NIS2 Equivalent in U.S. Law*

The United States has no mandatory cybersecurity statute for space systems or space-data providers. Three separate sources of guidance comprise the scope of cybersecurity regulation. These three sources are the NSM-22, SPD-5, and NIST Cybersecurity Framework.

The 2024 National Security Memorandum on Critical Infrastructure (NSM-22) lists 16 critical-infrastructure sectors but declined to designate space as a sector, despite repeated proposals to do so.⁷³ Because there is no space "sector" in the U.S., there is no Sector Risk Management Agency and no sector-specific regulatory hook. The Cybersecurity and Infrastructure Security Agency instead designates space as a cross-cutting enabler and convenes a voluntary Space

⁶⁹ *EU Space Act, Compromise Text 2026, ST 7806/26, supra* note 1.

⁷⁰ *Id.* (operative provisions cross-referencing the NIS2 Directive and aligning the Act's resilience requirements with the Union cybersecurity framework so that space operators are not subject to wholly duplicative regimes); *see NIS2 Directive 2022, supra* note 55, Annex I.

⁷¹ *GDPR 2016, supra* note 46 (security-of-processing obligations applicable where space-based data constitutes personal data).

⁷² *See CSA2 Proposal 2026, supra* note 31.

⁷³ Nat'l Sec. Memorandum on Critical Infrastructure Security and Resilience, NSM-22 (Apr. 30, 2024), <https://bidenwhitehouse.archives.gov/briefing-room/presidential-actions/2024/04/30/national-security-memorandum-on-critical-infrastructure-security-and-resilience/> [hereinafter *NSM-22 (2024)*] (retaining the existing sixteen critical-infrastructure sectors and declining to designate space as a separate sector); *see also Presidential Policy Directive 21, Critical Infrastructure Security and Resilience* (Feb. 12, 2013) (predecessor framework).

Systems Critical Infrastructure Working Group.⁷⁴ This is the structural opposite of the EU’s NIS2 Directive, which makes the space sector a named, regulated category.

The closest thing to a unified U.S. space-cyber policy is Space Policy Directive-5 (SPD-5): Cybersecurity Principles for Space Systems.⁷⁵ SPD-5 articulates the principles of authentication, encryption of command-and-control links, protection against jamming and spoofing, ground-station security, supply-chain risk management, but it directs agencies to develop voluntary best practices with industry. The SPD-5 does not impose binding requirements on private operators or create a cause of action.⁷⁶

The National Institute of Standards and Technology (NIST) has published space-specific applications of its Cybersecurity Framework, including NIST IR 8270 for commercial satellite operations, NIST IR 8401 for the satellite ground segment, and NIST IR 8323 for positioning, navigation, and timing.⁷⁷ This Cybersecurity Framework is referenced as a set of benchmarks and may be incorporated by contract in government procurement, however, NIST itself stresses that the Framework “is not regulatory in nature.”⁷⁸ The rules become mandatory only when a procurement contract or a regulator adopts them.

⁷⁴ See Cybersecurity & Infrastructure Sec. Agency, Space Systems, <https://www.cisa.gov/topics/critical-infrastructure-security-and-resilience/critical-infrastructure-sectors/space-systems> (describing CISA’s voluntary work, through a cross-sector Space Systems Critical Infrastructure Working Group, to address space-system dependencies; space is treated as a cross-cutting enabler rather than a designated sector).

⁷⁵ Memorandum on Space Policy Directive-5—Cybersecurity Principles for Space Systems, 85 Fed. Reg. 56,155 (Sept. 10, 2020), <https://www.govinfo.gov/content/pkg/FR-2020-09-10/pdf/2020-20150.pdf> [hereinafter *SPD-5 (2020)*].

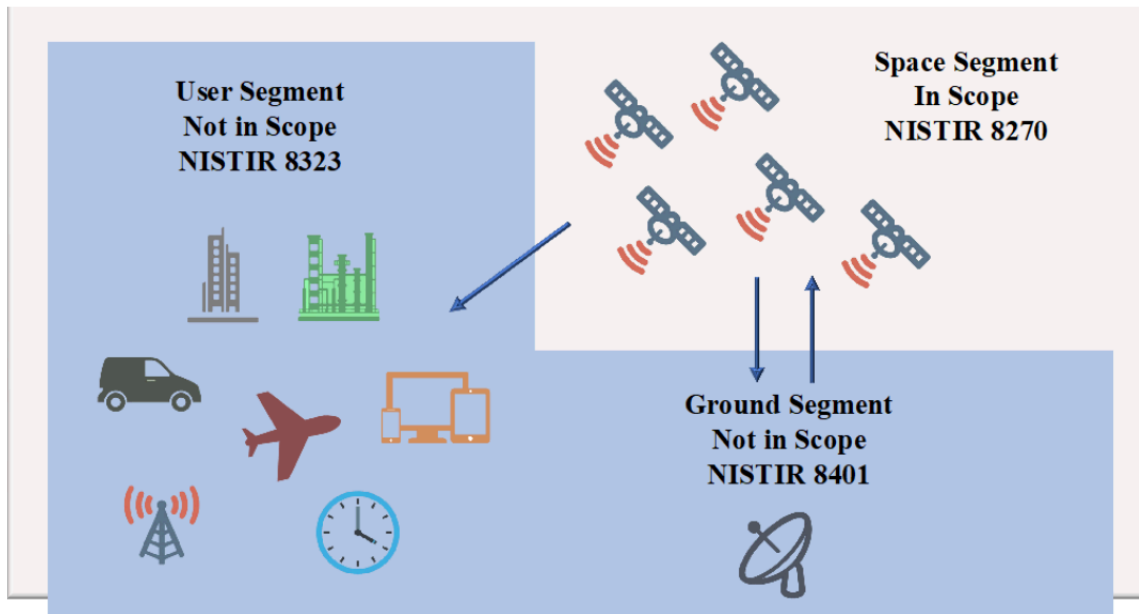
⁷⁶ *SPD-5 (2020)*, *supra* note 75, § 4 (directing agencies to work with the commercial sector to develop voluntary best practices; the directive establishes principles, not binding regulatory requirements, for private systems).

⁷⁷ Nat’l Inst. of Standards & Tech., Introduction to Cybersecurity for Commercial Satellite Operations, NIST IR 8270 (2023), <https://nvlpubs.nist.gov/nistpubs/ir/2023/NIST.IR.8270.pdf> [hereinafter *NIST IR 8270 (2023)*].

⁷⁸ *NIST IR 8401 (2022)*, *supra* note 58; Nat’l Inst. of Standards & Tech., Foundational PNT Profile: Applying the Cybersecurity Framework for the Responsible Use of Positioning, Navigation, and Timing (PNT) Services, NIST IR 8323 Rev. 1 (2023), <https://nvlpubs.nist.gov/nistpubs/ir/2023/NIST.IR.8323r1.pdf> [hereinafter *NIST IR 8323 (2023)*].

Figure 1. NIST Cybersecurity Framework for Space

(Source: NIST IR 8270)⁷⁹



a) U.S. Regulation is Activity and Agency-Specific

Because there is no omnibus regime, U.S. regulation of space-origin data is activity and agency-specific.

Through the Department of Commerce’s National Oceanic and Atmospheric Administration (NOAA)’s Commercial Remote Sensing Regulatory Affairs (CRSRA) office, the U.S. government licenses private remote-sensing systems under the Land Remote Sensing Policy Act⁸⁰ and 15 C.F.R. Part 960 for earth-observation imagery.⁸¹ This regime is the closest U.S. equivalent to a cyber mandate for space data. A license condition requires protection against unauthorized access to the system and its data, and NOAA has issued a cybersecurity-measures guidance

⁷⁹ NIST IR 8270, *supra* note 77, at 4 fig.1.

⁸⁰ Land Remote Sensing Policy Act of 1992, 51 U.S.C. §§ 60101–60162, <https://www.govinfo.gov/con-tent/pkg/USCODE-2024-title51/pdf/USCODE-2024-title51-subtitleVI-chap601-subchapI-sec60101.pdf> [hereinafter *Land Remote Sensing Policy Act of 1992*].

⁸¹ Licensing of Private Remote Sensing Space Systems, 15 C.F.R. Part 960, <https://www.govinfo.gov/con-tent/pkg/CFR-2025-title15-vol4/pdf/CFR-2025-title15-vol4-part960.pdf> [hereinafter *Part 960*] (administered by the Department of Commerce through NOAA’s Commercial Remote Sensing Regulatory Affairs office).

circular implementing it.⁸² Operating conditions turn on a Tier 1/2/3 categorization keyed to whether comparable data is already available abroad or domestically, not on cybersecurity.⁸³

For weather and environmental data, NOAA both regulates remote-sensing weather satellites under 15 C.F.R. Part 960 and procures commercial weather data under Title III of the Weather Act of 2017, through standards and purchase agreements rather than a cybersecurity rule.⁸⁴ Data-security expectations here are largely contractual in procurement terms and are not regulatory.

For satellite communications and transmission, the Federal Communications Commission (FCC) authorizes space and earth stations under the Communications Act and 47 C.F.R. Part 25.⁸⁵ The FCC is a de facto gate for transmitting space-origin data in the United States and has attached security-related conditions to authorizations, but it administers no comprehensive space-cyber mandate comparable to NIS2.

For positioning, navigation, and timing (PNT), primary activities of GPS are government-operated, while commercial PNT augmentation is addressed through NIST IR 8323⁸⁶ and executive policy rather than a binding cyber regulation.

For surveillance and intelligence data, government and intelligence-community space systems are governed by national-security authorities and classified directives, outside the civil regulatory regimes described here. There is no civil cybersecurity statute for commercial “surveillance” imagery beyond the NOAA remote-sensing license.

For downstream resale, analytics, and third-party data sales, once licensed imagery or data is delivered, its resale is essentially unregulated for cybersecurity at the federal level. Export

⁸² *Id.* at Part 960.9 (license condition requiring protection against unauthorized access to and use of a licensed system, including command, control, and data); NOAA/NESDIS, Policy Guidance: Cybersecurity Measures, Guidance Circular GC No. 960.9(a)-1 (2022), [https://www.nesdis.noaa.gov/s3/2022-08/960.9%20\(a\)-1%20Guidance%20Cybersecurity%20Measures.pdf](https://www.nesdis.noaa.gov/s3/2022-08/960.9%20(a)-1%20Guidance%20Cybersecurity%20Measures.pdf).

⁸³ *Id.* at Part 960.6 (tier categorization); NOAA/NESDIS, Tier Categorization, <https://www.nesdis.noaa.gov/commercial-space/regulatory-affairs/licensing/tier-categorization> (Tier 1/2/3 framework keyed to whether comparable unenhanced data is already available abroad or domestically).

⁸⁴ Weather Research and Forecasting Innovation Act of 2017, Pub. L. No. 115-25, tit. III, §§ 301–302, 131 Stat. 91, 99–102 (authorizing NOAA commercial weather-data purchases and hosted-payload arrangements); *see* Nat’l Env’tl. Satellite, Data & Info. Serv., Commercial Data Program, <https://www.nesdis.noaa.gov/data-research-services/commercial-data-program>.

⁸⁵ Communications Act of 1934, 47 U.S.C. §§ 301, 303, 307, 309 (as amended by the Telecommunications Act of 1996) [hereinafter *Communications Act of 1934*, *Telecommunications Act of 1996*]; Satellite Communications, 47 C.F.R. Part 25, <https://www.govinfo.gov/content/pkg/CFR-2025-title47-vol2/pdf/CFR-2025-title47-vol2-part25.pdf> [hereinafter *Part 25*] (FCC space- and earth-station authorization, the practical gate for transmitting space-origin data in the United States).

⁸⁶ NIST IR 8323 (2023), *supra* note 78.

controls (ITAR/EAR) restrict transfer of certain data and technology,⁸⁷ and the Federal Trade Commission enforces unfair and deceptive practices regulation on the data-security and data-broker sectors generally under Section 5, but no space-specific federal cybersecurity duty attaches to a downstream reseller or analytics firm.⁸⁸

Table 2 lists the EU instruments touching space-origin and space-based data. Table 3 lists the U.S. cybersecurity frameworks for space-origin data.

Table 2 — EU Cybersecurity Directives on Space-Based Data

Directive	What It Regulates	Who Is Covered	Cyber Mandate
NIS2 Directive (2022/2555)	Operator cybersecurity (risk management, incident reporting)	Operators of ground-based infrastructure supporting space-based services (essential/important entities)	Mandatory; transposition deadline of Oct. 17, 2024, incomplete compliance as of 2026
Cyber Resilience Act (2024/2847)	Security of "products with digital elements"	Manufacturers/importers of satellite/ground hardware, software, devices	Mandatory; main duties from Dec. 11, 2027 (reporting from Sept. 11, 2026)
EU Space Act (ST 7806/26, compromise)	Sector resilience incl. cyber; conditions on space-based-data provision	Space operators and space-based data providers (incl. third-country)	Mandatory if adopted; aligned with NIS2/CRA

Table 3 — U.S. Regulation of Space-Based Data

Data Stream	Primary Regulator	Authority	Cyber Mandate
Earth-observation imagery and remote sensing	NOAA (CRSRA)	51 U.S.C. ch. 601 §§ 60101–60162 15 C.F.R. Part 960	Yes; license condition (Part 960.9), guidance
Weather and environmental data	NOAA (regulation, procurement)	Weather Act 2017 15 C.F.R. Part 960	Largely contractual; no general cyber rule
Satellite communications and transmission	FCC	47 U.S.C. §§ 301, 303, 307, 309 47 C.F.R. Part 25	Conditions only; no NIS2-style mandate
PNT (positioning/timing)	NIST policy	SPD-5 NIST IR 8323	Voluntary
Space segment in scope	NIST policy	NIST IR 8270	Voluntary

⁸⁷ Arms Export Control Act, 22 U.S.C. § 2778 [hereinafter *Arms Export Control Act*]; International Traffic in Arms Regulations, 22 C.F.R. Parts 120-130 [hereinafter *International Traffic in Arms Regulations*]; Export Control Reform Act of 2018, 50 U.S.C. §§ 4801-4852 [hereinafter *Export Control Reform Act 2018*]; Export Administration Regulations, 15 C.F.R. Parts 730-774 (controlling export of space hardware, software, and technical data, including encryption) [hereinafter *Export Administration Regulations*]; Bureau of Industry and Security, Commerce Control List, 15 C.F.R. Part 774 (EAR), <https://www.ecfr.gov/current/title-15/subtitle-B/chapter-VII/subchapter-C/part-774> [hereinafter *EAR Commerce Control List*].

⁸⁸ Federal Trade Commission Act § 5, 15 U.S.C. § 45 (unfair-or-deceptive-practices authority used to police data-security and data-broker practices generally; there is no space-specific federal cybersecurity mandate for downstream data resellers or analytics firms).

Data Stream	Primary Regulator	Authority	Cyber Mandate
Ground segment not in scope	NIST policy	NIST IR 8401	Voluntary
Surveillance and intelligence imagery	DoD / Intelligence Community	National-security authorities	Classified; outside civil regime
Downstream resale and analytics	None (FTC, export controls only)	15 U.S.C. § 45 ITAR/EAR	No space-specific cyber duty

b) Equivalence Pathway for Space-Based Data in the U.S.

The defining features of NIS2—a named space sector, mandatory risk-management measures, binding incident reporting, management-level accountability, and administrative enforcement—are not bundled in this way for U.S. space systems.

The U.S. approach is (i) voluntary at the policy level (SPD-5),⁸⁹ (ii) advisory at the technical level (NIST profiles), and (iii) mandatory only in narrow, activity-specific pockets. While the EU regulates by entity and by product across the whole sector, the U.S. regulates by activity and agency.

This mismatch matters for the EU Space Act’s third-country equivalence pathway. Article 105 conditions equivalence on a comparable “legal and supervisory framework,” and for cybersecurity there is no single U.S. framework to assess.⁹⁰ An EU evaluator would have to assemble a finding from NOAA license conditions, FCC authorizations, voluntary SPD-5/NIST practice, and procurement terms. This would be an exercise that highlights, rather than resolves, the structural difference between a mandatory, sector-wide EU regime and a fragmented, largely voluntary U.S. one.

C. Data Providers in EU Law

Space-based or space-origin data providers are presumably subject to other data regulations to the extent they handle data that would fall into the jurisdiction of other data rules. While space-based data is a sector-specific type of data, it is worth reviewing the data regulations from other EU statutes.

The phrase “data provider” is not a general term of art.⁹¹ The GDPR, for instance, does not define “data provider.” It defines “personal data,” “data subject,” “controller,” “processor,”

⁸⁹ SPD-5 (2020), *supra* note 75.

⁹⁰ EU Space Act, *Compromise Text 2026, ST 7806/26*, *supra* note 1 at art. 105 (third-country equivalence keyed to a comparable “legal and supervisory framework,” which, for cybersecurity, has no single U.S. counterpart to assess).

⁹¹ GDPR 2016, *supra* note 46 at art. 4(1).

“recipient,” and “third party.”⁹² When a business, researcher, or statute informally refers to a “data provider,” GDPR analysis must still be done through those defined GDPR roles.⁹³ The term “data provider” is also not referenced in the Data Governance Act⁹⁴ or the Data Act.⁹⁵ The Data Governance Act primarily uses “data holder,” “data user,” and “data sharing.”⁹⁶ The Data Act uses “user,” “data holder,” and “data recipient.”⁹⁷ The place where EU law does refer to “data provider” is in the Digital Services Act delegated regulation, which governs researcher access to data from very large online platforms and very large online search engines.⁹⁸ Aside from the reference in the delegated regulation, the term “data provider” does not have a readily understood set of roles and responsibilities in other data regulations. The Compromise Text contains a sector-specific phrase: “space-based data provider.” That phrase appears de novo, not as a direct borrowing from the GDPR, the Data Governance Act, or the Data Act and it is defined inside the space statute itself.⁹⁹

1. **GDPR: No “Data Provider” Definition**

The GDPR’s most important definition is “personal data”:

‘personal data’ means any information relating to an identified or identifiable natural person (‘data subject’); an identifiable natural person is one who can be identified, directly or indirectly, in particular by reference to an identifier such as a name, an identification number, location data, an online identifier or to one or more factors specific to the physical, physiological, genetic, mental, economic, cultural or social identity of that natural person.¹⁰⁰

For a space-data business, this matters because space-origin data is generally not directly personal, meaning related to personally-identifiable information (PII). The space-based data that appears to be of importance in the Act is the satellite, geolocation, remote-sensing, device, or

⁹² *Id.*

⁹³ *Id.*

⁹⁴ Regulation (EU) 2022/868, art. 2(8), <https://eur-lex.europa.eu/eli/reg/2022/868/oj/eng> [hereinafter *Data Governance Act 2022*]; see also Regulation (EU) 2022/2065 of the European Parliament and of the Council of Oct. 19, 2022, on a Single Market for Digital Services (Digital Services Act), 2022 O.J. (L 277) 1, <https://eur-lex.europa.eu/eli/reg/2022/2065/oj/eng> [hereinafter *Digital Services Act 2022*], at 2(7), 2(75)–(76).

⁹⁵ Regulation (EU) 2023/2854, art. 2(13), <https://eur-lex.europa.eu/eli/reg/2023/2854/oj/eng> [hereinafter *Data Act 2023*].

⁹⁶ *Data Governance Act 2022*, *supra* note 94.

⁹⁷ *Data Act 2023*, *supra* note 95.

⁹⁸ *Data Governance Act 2022*, *supra* note 94 at art. 2(8)–(10); *Data Act 2023*, *supra* note 95 at art. 2(13)–(14); Commission Delegated Regulation (EU) 2025/2050, art. 2(5), https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=OJ:L_202502050 [hereinafter *Digital Services Act, Delegated Regulation 2025*].

⁹⁹ *EU Space Act, Compromise Text 2026*, ST 7806/26, *supra* note 1 at art. 5.

¹⁰⁰ *GDPR 2016*, *supra* note 46 at art. 4(1).

communications data generated by operators. This data may become personal data if it relates to an identified or identifiable natural person.

Of note, however, is that GDPR classification of the data itself does not turn on whether a party is a “data provider.” It turns on whether the data is personal data and what role each actor plays in determining the purposes and means of processing. The meaningful roles in the GDPR are “controller” and “processor”:

“controller” means the natural or legal person, public authority, agency or other body which, alone or jointly with others, determines the purposes and means of the processing of personal data.¹⁰¹

“processor” means a natural or legal person, public authority, agency or other body which processes personal data on behalf of the controller.¹⁰²

If a satellite-data company “provides” data, that fact alone does not answer the GDPR question. It could be a controller, a joint controller, a processor, a recipient, or a third party, depending on the facts. A company selling analytics to customers for its own commercial purposes may be a “controller” for some processing. A company merely hosting or transforming data on instructions may be a “processor.” A platform receiving data from another entity may be a recipient. A person whose location is captured is a data subject, not a data provider, even if the person generates data in an economic sense. The key drafting point is that the term “data provider” does not appear to serve as a shorthand way of referring to a GDPR controller.

To the extent that personal data becomes publicly accessible in the EU Space Act’s proposed registration system, the EU Space Act references GDPR rules with regards to public disclosure of personal data in particular:¹⁰³

(47) “...The information publicly accessible in URSA should ensure compliance with Regulation (EU) 2016/679¹⁰⁴ and with Regulation (EU)

¹⁰¹ *Id.* at art. 4(7).

¹⁰² *Id.* at art. 4(8).

¹⁰³ *EU Space Act, Compromise Text 2026, ST 7806/26, supra* note 1 at 18 n.10.

¹⁰⁴ The footnote reads, “Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation) OJ L 119, 4.5.2016. ELI: <http://data.europa.eu/eli/reg/2016/679/2016-05-04>.” *Id.* at 18 n.10.

2018/172511¹⁰⁵ as applicable and not contain any sensitive commercial data or data subject to intellectual property rights.”¹⁰⁶

2. Data Governance Act: “Data Holder,” “Data User,” “Data Sharing”

The Data Governance Act has a more extensive EU data-economy vocabulary. But even there, the main term is not “data provider.” The Data Governance Act defines “data holder” as a legal person, including public sector bodies and international organizations, or a natural person who is not a data subject with respect to the specific data, that has the right to grant access to or share certain personal or non-personal data under applicable law.¹⁰⁷

The Data Governance Act defines “data user” as a natural or legal person who has lawful access to certain personal or non-personal data and has the right to use that data, including under the GDPR where personal data are involved.¹⁰⁸ It defines “data sharing” as the provision of data by a data subject or data holder to a data user for joint or individual use, based on voluntary agreements, Union law, national law, or other mechanisms.¹⁰⁹

This vocabulary is useful for space-based data because it separates the actor who can grant access from the actor who uses data. But the Data Governance Act does not supply the EU Space Act definition. If a satellite operator holds or controls access to space-based data, it may resemble a data holder. If a downstream analytics company receives and uses that data, it may resemble a data user. But the Compromise Text asks a different question of whether a person “provides the service of providing” space-based data.¹¹⁰

3. Data Act: “Data Holder” and “Data Recipient”

The Data Act similarly avoids a general “data provider” concept.¹¹¹ It defines “data holder” as a natural or legal person that has the right or obligation, under the Data Act, applicable Union law, national law, or contract, to use and make available data, including connected-

¹⁰⁵ The footnote reads, “Regulation (EU) 2018/1725 of the European Parliament and of the Council of 23 October 2018 on the protection of natural persons with regard to the processing of personal data by the Union institutions, bodies, offices and agencies and on the free movement of such data, and repealing Regulation (EC) No 45/2001 and Decision No 1247/2002/EC OJ L 295, 21.11.2018. ELI: <http://data.europa.eu/eli/reg/2018/1725/oj>.” *Id.* at 18 n.11.

¹⁰⁶ *EU Space Act, Compromise Text 2026, ST 7806/26, supra* note 1 at 18 n.10.

¹⁰⁷ *Data Governance Act 2022, supra* note 94.

¹⁰⁸ *Id.* at art. 2(9).

¹⁰⁹ *Id.* at art. 2(10).

¹¹⁰ *EU Space Act, Compromise Text 2026, ST 7806/26, supra* note 1 at art. 5, recital (-1c).

¹¹¹ *Data Act 2023, supra* note 95 at art. 2(13).

product data or related-service data.¹¹² It defines “data recipient” as a natural or legal person, acting for business or professional purposes, other than the user of the connected product or related service, to whom the data holder makes data available.¹¹³

As applied to space operations, the Data Act shows how EU law has moved away from an ownership vocabulary and toward access, control, use, and availability. But again, it does not define the EU Space Act phrase. The Data Act is about data access and sharing in connected products and related services while the EU Space Act is about space activities, space operation services, and space-based data in a safety-resilience-sustainability framework.

4. *Digital Services Act: Data “Provider”*

The clearest statutory definition of data “provider” in current EU law appears in Delegated Regulation (EU) 2025/2050, which supplements the Digital Services Act’s researcher-access regime.¹¹⁴ That delegated regulation defines “data provider” as:

a provider of a very large online platform or of a very large online search engine designated as such in accordance with Article 33(4) of Regulation (EU) 2022/2065, to which a reasoned request might be addressed.¹¹⁵

This is a narrow definition. It is not a general EU data-law definition. It applies in the Digital Services Act context, where vetted researchers may request data from designated very large online platforms and very large online search engines.¹¹⁶ Its structure is nevertheless instructive. The term “provider” is defined by reference to a regulated service provider that receives a legally structured request. That is similar in form, though not in substance, to how the Compromise Text treats space-based data providers as regulated actors whose ability to provide data is tied to compliance by the underlying space object or activity.

The table below summarizes how each term maps to its source, how to use it, and whether it is the operative concept for the EU Space Act. The question is not who “owns” the data, it is who provides the data service, whether the underlying space object and activity is registered or recognized, and whether any third-country equivalence or mutual-recognition applies.

¹¹² *Id.*

¹¹³ *Id.* at art. 2(14).

¹¹⁴ *Digital Services Act 2022*, *supra* note 94.

¹¹⁵ *Digital Services Act, Delegated Regulation 2025*, *supra* note 98 at art. 2(5); *Digital Services Act 2022*, *supra* note 94 at art. 33(4)

¹¹⁶ *Digital Services Act 2022*, *supra* note 94 at art. 40; *Digital Services Act, Delegated Regulation 2025*, *supra* note 98.

Table 4 — Data Terms in EU Regulations

Terms	Source	Definition	Applies to EU Space Act?
controller; processor; joint controller; recipient; third party; data subject	GDPR (Regulation (EU) 2016/679, art. 4)	Applies to personal-data roles: who determines the purposes and means (controller) versus who processes on the controller’s behalf (processor).	Only where space-based data is personal data. GDPR roles run in parallel and are not displaced by the Act.
data holder; data user; data recipient; data sharing	Data Governance Act (Regulation (EU) 2022/868); Data Act (Regulation (EU) 2023/2854)	Applies to general EU data-economy and access vocabulary: who controls access to data versus who receives or uses it.	These instruments do not supply the Act’s definition; the Act asks who provides the service of providing space-based data.
data provider	Digital Services Act, Delegated Regulation (EU) 2025/2050, Article 40 (Regulation (EU) 2022/2065)	Applies to the platform researcher-access context: a designated VLOP or VLOSE to which a reasoned data-access request may be addressed.	No. This is a narrow DSA-specific meaning and does not carry over to the Space Act.
space-based data provider	EU Space Act Compromise Text (Council Doc. ST 7806/26, Articles 5, 23a)	Sector-specific phrase, the operative compromise term is “space-based data provider.”	Yes. This is the operative Space Act term.
equivalence / mutual recognition (for the space activity and the data-provision pathway)	EU Space Act Compromise Text (equivalence provisions); similar to GDPR adequacy (Article 45) and EU–U.S. mutual-recognition agreements	When comparing to U.S. regimes, the question focuses on who provides the service in the Union, whether the underlying space object or activity is registered or recognized, and whether a third-country equivalence route applies — not who “owns” the data.	Yes. Central to the U.S.-equivalence analysis under the Act.

D. What Is a “Space-Based Data Provider”?

The phrase “space-based data provider” is a new, sector-specific term and as drafted, appears to serve a functional purpose in identifying the entities subject to registration and e-certification requirements.¹¹⁷

The EU Space Act draft proposal initially described “primary providers of space-based data” as space service providers established in the EU or a third country that initiate the first processing of space-based data. The proposal then gave examples for electronic communications data and observation data.¹¹⁸ That original phrase was narrower and more technical than a generic data provider. It focused on the first processing step: the party that turns space-origin data into a form that can be subsequently provided. The Commission explained the policy logic that primary providers of space-based data act as intermediaries between space operators and

¹¹⁷ *EU Space Act, Compromise Text 2026, ST 7806/26, supra* note 1 at art. 5.

¹¹⁸ *Draft EU Space Act, COM (2025) 335, supra* note 2 at art. 5, recital (22).

recipients of space-based data and therefore can help ensure that data originates from compliant space operators.¹¹⁹ The draft text's recital (22) stated:

(22) Primary providers of space-based data play a key role as intermediaries between the upstream and downstream sectors as they channel space-based data from space operators towards the various subsequent uses of such space-based data, for the benefit of the entire economy and citizens. In that respect, although the substantive rules which apply to space operators should not apply to them, they still play an important role in the space sector, by ascertaining that the space-based data which they pass down in the value chain originates from space operators that are compliant with this Regulation. Therefore, the Agency should draw-up a list of such primary providers of space-based data in the Union. In light of their role of intermediary, primary providers of space-based data are best placed to receive alerts or complaints about potential irregularities in respect to the use in the Union of space-based data, to directly alert their suppliers or bring to the knowledge of the Agency or the relevant competent authority in the Member State where they are established, any allegations about space-based data potentially originating from unregistered or non-compliant space operators, which may be in use in the internal market.¹²⁰ (emphasis added)

1. Providers and Operators

The Compromise Text changed the text to “provides the service of providing space-based data.” Recitals (-1) and (-1c) of Article 5 define space-based data and space based-data provider:

(-1) “space-based data” means raw or processed data originally received from a space object in outer space, including but not limited to data of interception, of transmission of a signal generated by a space object;

(-1c) “space-based data provider” means any natural or legal person established in the Union or in a third country, including an international organisation, that provides the service of providing space-based data;¹²¹ (emphasis added)

This definition is circular with provision defined by the act of providing. It does not ask where in the value chain the data is “raw” or “process” or whether the provider is a controller, data holder, or data recipient. It asks whether the entity “provides the service of providing space-based data.” Recitals (-1d) and (1f) of Article 5 distinguish the data providers from operators:

(-1d) “space operator” means a public or private entity, including an international organisation, that performs or undertakes to perform space activities, including ... operation, control and disposal of a space object (“spacecraft operator”); ... operation, control and

¹¹⁹ *Id.*

¹²⁰ *Id.*

¹²¹ *EU Space Act, Compromise Text 2026, ST 7806/26, supra note 1 at art. 5, recitals (-1) and (-1c).*

monitoring of the launch process of a space object ("launch operator"); ... operation and control of a space object for the purposes of provision of in-space operation and service.

(1f) "third country space operator" means a space operator established in a third country, except where it qualifies as a Union space operator ..., and which carries out any of the following: (a) provides space operation services to Union space operators, or in relation to Union-owned assets or to governmental or non-governmental space assets; (b) acts itself as a space-based data provider; or (c) provides space operation services to space-based data providers that provide space-based data within the Union.

The text appears to treat "operator" and "provider" as terms that describe the activity, rather than an identity. An "operator" can "provide" operation services, while a "space-based data provider" can "provide" space-based data. The "activities" that the "operator" performs is what subjects the entity to rules regarding the provision of data or provision of in-space operation and service.

This raises the question, however, of the role of data in operations. All operations presumably require data to coordinate the services for operating a satellite such as sending communications between devices. It would seem impossible for an "operator" to not provide data. This is where the amount of data as a "sole" or "decisive" or not "mere use" would come into play. However, it's unclear if it's at all possible to operate a satellite without generating data. To whom that data is "provided" may be of use internally, externally, for satellite operations, or ancillary to operations as far as the language seems to indicate.

2. "Sole" or "Decisive" Part of Services

The Compromise Text does narrow the scope of "provision" to those providers who provide space data as a "sole" or "decisive" part of the service, not merely ancillary, while also excluding data provided for research or educational purposes.¹²² The scope of the carve-outs will significantly affect the reach of the statute, depending on how it is determined the fraction of research, educational, and defense-related uses are conducted by a particular operator. The Compromise Text's Article 23a states:

2. For the purposes of this Article, space-based data is provided where the provision of that space-based data is the sole service, or a decisive part of the service, provided by the space-based data provider. In particular, this does not include situations where providing space-based data is an ancillary part of the service provided, or where space-based data is merely one source for the data or other service provided. The provision of space-based data for purely

¹²² *Id.* at art. 23a.

research or educational purposes does not constitute the provision of space-based data.¹²³ (emphasis added)

Recital (17e) of Article 5 limits the scope to entities that are not a “mere user” of a facility:

(17e) Where an entity which is an electronic communications network and services provider only acts as a mere user of a facility offered by a space operator, it should only qualify as a space-based data provider under this Regulation. If an electronic communications network and services provider also operates or controls a satellite, or performs launch operations, it should qualify as a space operator under this Regulation.¹²⁴ (emphasis added)

How this proportionality phrase creates categories of entities is yet to be determined because the statute does not define what “sole,” “decisive,” “ancillary,” or “mere” mean in terms of provision of data service. Satellite operators seeking to enter the market may face uncertainty in expecting how the EU determines the operator’s categories of provision in the carve-out provisions.

3. *Anti-Circumvention*

In any event, the anti-circumvention goal of the text is what seems to matter for statutory interpretation. If the EU Space Act becomes law in this form, “space-based data provider” is part of an enforcement structure on space operators for licensing purposes. The law is trying to prevent a non-compliant or non-registered space object from avoiding EU operational requirements by selling or routing space-origin data through downstream channels.

The Opinion of the Legal Service, released in January 2026 which predated the Compromise Text released in March 2026, mentioned the definition of space-based data.¹²⁵ The Opinion explained that the proposal distinguishes between the provision of space services and the provision of space-based data, saying that provision of space-based data can be used as an enforcement mechanism for standards applicable to the underlying space operation.¹²⁶ It, however, warns that broad anti-circumvention rules may raise proportionality concerns, especially if they reach downstream websites, educational uses, resales, or services where satellite data is ancillary rather than decisive.¹²⁷

¹²³ *Id.*

¹²⁴ *Id.* at art. 5, recital (17e).

¹²⁵ *Opinion of the Legal Service, Doc. ST 5893/26, supra* note 6.

¹²⁶ *Id.*

¹²⁷ *Id.*

Recitals (43h) and (43i) of Article 5 in the Compromise Text emphasize the motivation for defining who is covered by the provision of space-based data for purposes of anti-circumvention measures:

(43h) ... Space operators could therefore circumvent EUSA's common requirements by launching or operating from a third country before providing precisely the same space data to the downstream economy. ... it is necessary to impose obligations on a limited number of key actors, in order to respect the principle of proportionality, who act as gatekeepers between the space operation services economy and downstream markets. Those key actors should be required to ensure that any space-based data they provide in the Union originates from space objects whose activities are entered in the Union Repository of Space Activities (URSA), or ... specifically excluded from EUSA's scope.¹²⁸ (emphasis added)

(43i) These anti-circumvention obligations should be effective and proportionate. ... they should only apply to those key actors acting as gatekeepers It should not include other actors providing space-based data, and in particular it should exclude research and educational provision of such data Second, these obligations should only apply where the provision of space-based data is the sole service provided or a decisive part of that service. It should not apply where that provision is an ancillary or minor part of the service, or where the space-based data is merely used as a source for another data and service.¹²⁹ (emphasis added)

Recital (43h) frames the restriction as an anti-circumvention device and that without it, “space operators could ... circumvent EUSA’s common requirements by launching or operating from a third country before providing precisely the same space data to the downstream economy.”¹³⁰ The paragraph therefore imposes obligations on “a limited number of key actors ... who act as gatekeepers between the space operation services economy and downstream markets.”¹³¹

Recital (43i) supplies the limiting principles that determine the category’s true breadth. The anti-circumvention obligations “should be effective and proportionate,” and the text narrows them in three ways. First, they apply only to “key actors acting as gatekeepers and retaining a close link with the space economy.”¹³² Second, they apply “only ... where the provision of space-based data is the sole service provided or a decisive part of that service,” and not where the data is “an ancillary or minor part of the service, or where the space-based data is merely used as

¹²⁸ *EU Space Act, Compromise Text 2026, ST 7806/26, supra* note 1 at art. 5, recital (43h).

¹²⁹ *Id.* at art. 5, recital (43i).

¹³⁰ *Id.* at art. 5, recitals (17e), (43h)-(43i).

¹³¹ *Id.*

¹³² *Id.*

a source for another data and service.”¹³³ Third, research and educational provision is excluded outright—“such as an educational website giving access to satellite imagery.”¹³⁴ Recital (17e) adds that an electronic-communications provider acting as a “mere user of a facility” qualifies only as a data provider, not as a space operator.¹³⁵ The transparency list operationalizes verification: any person may “verify the source of the space-based data,” subject to data-protection and confidentiality limits.¹³⁶

The definition matters because of Article 23a. A space-based data provider may provide space-based data only where that data is generated by a space object whose activities are entered in the proposed registry called the Union Repository of Space Activities (URSA) and carry an e-certificate.

Article 23a states:

1. Space-based data providers may only provide space-based data within the Union where:

(a) that data was generated by a space object whose space activities are entered in URSA and carry the e-certificate referred to in Article 25; or

(b) that data was generated by a space object whose space activities are excluded from the scope of this Regulation under Article 2(3).

3. Central government authorities referred to in Annex I of Directive 2014/24/EU²¹, as well as Union institutions, bodies and agencies, shall ensure that all space-based data used to provide the services that they procure were generated by a space object whose space activities are entered in URSA and that those space-based data carry an e-certificate as referred to in Article 25.¹³⁷ (emphasis added)

Article 23a goes into more detail on the operative regulation on space-based data providers to be allowed to provide space-based data within the EU only if that data is generated by a space object whose activities are entered in the register and carry an e-certificate, or if the data is generated by an excluded space object. The provision asks the question of whether the entity provides the service of providing space-based data, rather than a question of ownership, processing, or platform designation.

¹³³ *EU Space Act, Compromise Text 2026, ST 7806/26, supra note 1 at art. 5, recital (43i).*

¹³⁴ *Id.* at art. 5, recitals (17e), (43h)-(43i).

¹³⁵ *Id.* at art. 5, recital (17e).

¹³⁶ *Id.* at art. 5, recital (47).

¹³⁷ *EU Space Act, Compromise Text 2026, ST 7806/26, supra note 1 at art. 23a.*

The Opinion of the Legal Service accepts the anti-circumvention objective but cautions that broad rules may raise proportionality concerns where they reach downstream, ancillary, educational, or resale uses.¹³⁸ The unresolved interpretive question is therefore where the line between a covered “decisive” provision and an excluded “ancillary” use will be drawn. That line will determine whether “space-based data provider” functions as a narrow gateway rule or as the foundation of a broad, extraterritorial data regime.

Of note, EU law uses anti-circumvention provisions in two distinct senses of regulatory and technological anti-circumvention. The first is *regulatory anti-circumvention*, which prevents evasion of substantive obligations. The clearest example is Article 13 of the Digital Markets Act, which is itself titled “Anti-circumvention” and forbids a gatekeeper from segmenting, dividing, or splitting its services to fall below the designation thresholds, while requiring that the obligations be fully and effectively complied with.¹³⁹ The GDPR performs a similar function through its extraterritorial scope: Article 3(2), read with the “targeting” criterion in recital (23), extends the Regulation to non-EU controllers so that a controller cannot circumvent EU rules merely by locating its establishment outside the Union.¹⁴⁰

The second sense is *technological anti-circumvention*. The model “anti-circumvention clause” in EU law is Article 6 of the Copyright Directive (2001/29/EC), which requires Member States to provide legal protection against circumventing effective technological protection measures and against trafficking in devices designed for that purpose, the EU equivalent to the U.S. Digital Millennium Copyright Act.¹⁴¹

4. Proportionality

When the Opinion of the Legal Service warns of “proportionality concerns” about the EU Space Act, it is invoking this established test and asking whether a broad space-data rule that reaches downstream, ancillary, educational, or resale uses goes beyond what is necessary to achieve the Act’s safety and registration objectives.

In data-protection law, proportionality operates both as a substantive drafting constraint, expressed through the GDPR’s data-minimization rule,¹⁴² which requires that personal data be

¹³⁸ *Opinion of the Legal Service, Doc. ST 5893/26, supra* note 6.

¹³⁹ *Digital Markets Act 2022, Contestable and Fair Markets, infra* note 155 at art. 13.

¹⁴⁰ *GDPR 2016, supra* note 46 at art. 3(2), 3(23).

¹⁴¹ Directive 2001/29/EC, Article 6, 2001 O.J. (L 167) 10, <https://eur-lex.europa.eu/eli/dir/2001/29/oj/eng> (on the harmonization of certain aspects of copyright and related rights in the information society).

¹⁴² *GDPR 2016, supra* note 46 at art. 5(1)(c) (data minimization).

“adequate, relevant and limited to what is necessary,” and as the standard used to test the validity of EU data measures.

In the Digital Services Act and Digital Markets Act, proportionality governs how far asymmetric obligations may reach. The heavier duties placed on very large online platforms and on gatekeepers are justified, in the legal-basis reasoning, as proportionate responses to specific, demonstrated risks rather than across-the-board burdens.¹⁴³

“Proportionality” is a general principle of EU law and a constitutional limit on how the EU exercises its competences. Article 5(4) of the Treaty on European Union (TEU) provides that “the content and form of Union action shall not exceed what is necessary to achieve the objectives of the Treaties,” and the criteria for applying it are set out in the application of the principles of subsidiarity and proportionality.¹⁴⁴ The same principle runs through the EU’s digital and data regimes, which is why it surfaces in the Legal Service’s Opinion.¹⁴⁵

A companion principle is “subsidiarity.” Under Article 5(3) of the TEU, in areas that do not fall within the EU’s exclusive competence the EU may act only where the objectives of a proposed measure cannot be sufficiently achieved by the Member States and can, by reason of scale or effects, be better achieved at EU level.¹⁴⁶ For the EU Space Act, subsidiarity and proportionality work in tandem. Subsidiarity asks whether the Union should act at all on a given question, such as space-based data, given that Member States remain the treaty-facing authorizing and supervising states under the Outer Space Treaty. Proportionality asks whether the chosen means exceed what is necessary. A measure can clear the Article 114 competence threshold yet still draw objection if Member States can show that national authorization regimes already address the asserted fragmentation.

E. Constitutional Basis of the EU Space Act

The Article 114 vs. Article 189 issue is a core constitutional question of the EU Space Act. The Commission did not base the proposal on the EU’s space-policy provision in Article 189, instead it used Article 114, the internal-market harmonization power.¹⁴⁷ That choice matters

¹⁴³ See *Digital Services Act 2022*, *supra* note 94 at (7), (75)–(76).

¹⁴⁴ *Treaty on European Union (TEU)*, art. 5(4), Consolidated Version, 2012 O.J. (C 326) 206, https://eur-lex.europa.eu/resource.html?uri=cellar:2bfl40bf-a3f8-4ab2-b506-fd71826e6da6.0023.02/DOC_1&format=PDF [hereinafter *TEU 2012*].

¹⁴⁵ *Opinion of the Legal Service*, Doc. ST 5893/26, *supra* note 6.

¹⁴⁶ *TEU 2012*, *supra* note 144, at art. 5(3).

¹⁴⁷ *Opinion of the Legal Service*, Doc. ST 5893/26, *supra* note 6 at ¶¶ 24–29 (summarizing the Article 114 test: genuine improvement of internal-market conditions and elimination of obstacles to free movement or appreciable distortions).

because Article 189 is textually specific to space and must not seek to harmonize the laws and regulations of the Member States, a power which is reserved for Article 114.¹⁴⁸

An Article 189 instrument would look like European space-policy programming: funding, infrastructure, ESA/EUSPA cooperation, Galileo, Copernicus, GOVSATCOM, IRIS2, and Union-owned capabilities. An Article 114 instrument can look very different: operator requirements, registration, technical standards, certification, free-movement clauses, market surveillance, national competent authorities, equivalence for third-country operators, and sanctions. That is why the same space policy can produce two very different legal architectures.¹⁴⁹

1. *Article 114 vs. Article 189 of the TFEU*

The TFEU, the EU constitutional layer, is separate from the UN-treaty layer of the Outer Space Treaty. Within the TFEU, Article 189 governs space policy and Article 114 governs the internal market.

Article 189 TFEU authorizes the Union to draw up a European space policy, promote scientific and technical progress, industrial competitiveness, and space applications, and establish the measures necessary for the Union space program. But Article 189 contains a limiting clause that measures adopted under that provision must not entail harmonization of Member State laws and regulations. Article 189 on space policy explicitly excludes harmonization laws:

To promote scientific and technical progress, industrial competitiveness and the implementation of its policies, the Union shall draw up a European space policy. To this end, it may promote joint initiatives, support research and technological development and coordinate the efforts needed for the exploration and exploitation of space... To contribute to attaining the objectives referred to in paragraph 1, the European Parliament and the Council, acting in accordance with the ordinary legislative procedure, shall establish the necessary measures, which may take the form of a European space programme, excluding any harmonisation of the laws and regulations of the Member States."¹⁵⁰ (emphasis added)

¹⁴⁸ TFEU 2012, *supra* note 3; *Draft EU Space Act, COM (2025) 335, ST 10935/25, supra* note 2.

¹⁴⁹ *Id.* at ¶¶ 35-39 (describing Article 189 TFEU as a parallel space-policy competence that supports initiatives, research and technological development, and coordination, but excludes harmonization of Member State laws and regulations); Regulation (EU) 2021/696 of the European Parliament and of the Council of Apr. 28, 2021, Establishing the Union Space Programme and the European Union Agency for the Space Programme, 2021 O.J. (L 170) 69, <https://eur-lex.europa.eu/eli/reg/2021/696/oj/eng> [hereinafter *EUSPA 2021*]; Regulation (EU) 2023/588 of the European Parliament and of the Council of Mar. 15, 2023, Establishing the Union Secure Connectivity Programme for the Period 2023-2027, 2023 O.J. (L 79) 1, <https://eur-lex.europa.eu/eli/reg/2023/588/oj/eng> [hereinafter *Union Secure Connectivity Programme 2023*].

¹⁵⁰ TFEU 2012, *supra* note 3 at 131, art. 189.

Article 114 TFEU, by contrast, authorizes approximation of laws for the establishment and functioning of the internal market. Article 114 states:

The European Parliament and the Council shall, acting in accordance with the ordinary legislative procedure and after consulting the Economic and Social Committee, adopt the measures for the approximation of the provisions laid down by law, regulation or administrative action in Member States which have as their object the establishment and functioning of the internal market.¹⁵¹ (emphasis added)

If the EU Space Act were framed only as space policy under Article 189, its ability to harmonize national operator rules would be textually limited. By relying on Article 114, the Commission frames the measure as an internal-market instrument: divergent national rules impede, or are likely to impede, the provision of space-operation services and space-based data. Table 5 summarizes the operational difference between the two provisions and how each would change the likely shape of an EU space regime.

Table 5 — Article 114 vs. Article 189 TFEU

Issue	Article 114 TFEU	Article 189 TFEU	Possible EU Space Act Result
Treaty function	Approximation of laws for the establishment and functioning of the internal market. The legislature must identify divergent or likely divergent national rules that obstruct free movement or appreciably distort competition. ¹⁵²	European space policy. The Union may promote scientific and technical progress, industrial competitiveness, and space applications; it may draw up policy and establish necessary measures, but the treaty text excludes harmonization of Member State laws and regulations. ¹⁵³	Article 114 supports a market-opening statute; Article 189 supports a space program statute.
Core legal test	Is the measure genuinely designed to improve internal-market conditions by removing existing or likely barriers or distortions? Mere disparity or abstract risk is insufficient.	Is the measure part of EU space policy, research, technological development, coordination, or Union space program implementation, without harmonizing national laws?	The EU Space Act's recitals and impact assessment must show national-law fragmentation, not merely a desire for better space policy.
Type of legal act it can support	Regulations or directives imposing common substantive requirements, common procedures, free-movement rules, market surveillance, EU agency functions, and equivalence or recognition regimes.	Program regulations, funding instruments, procurement/governance rules for Union space assets, cooperation with ESA, support for research and deployment of Union capabilities.	A licensing/certification regime points toward Article 114; Galileo/Copernicus-style institutional governance points toward Article 189.
Operational requirements	Authorization conditions, registration, technical safety rules,	Requirements for participation in EU programs, procurement	If the EU Space Act imposes operator duties independent of EU

¹⁵¹ TFEU 2012, *supra* note 3 at 94, art. 114.

¹⁵² *Opinion of the Legal Service, Doc. ST 5893/26, supra* note 6 at ¶¶ 24-29 (summarizing the Article 114 test: genuine improvement of internal-market conditions; elimination of obstacles to free movement or appreciable distortions; likely future obstacles may suffice; mere disparities or abstract risk do not).

¹⁵³ *Id.* at ¶¶ 35-39 (describing Article 189 TFEU as a parallel space-policy competence that supports initiatives, research and technological development, and coordination, but excludes harmonization of Member State laws and regulations).

Issue	Article 114 TFEU	Article 189 TFEU	Possible EU Space Act Result
	cybersecurity/resilience requirements, sustainability rules, conformity assessment, labels, reporting, audits, incident notification, penalties, and third-country equivalence.	specifications, security accreditation for EU systems, data-access rules for EU-owned assets, and program governance; not general harmonization of national licensing laws.	program participation, Article 114 is the natural route.
What remains national	Anything not harmonized: liability, insurance, national security/public order, defense carve-outs, property/contract rules, and residual supervision required by UN space treaties.	Most operator licensing remains national because Article 189 does not harmonize national law.	Even under Article 114, the compromise text likely preserves substantial Member State control.
Mutual recognition	Common EU requirements can justify mutual recognition, passporting, a free-movement clause, or a presumption that an operator compliant in one Member State may provide services elsewhere.	Article 189 alone does not create a mutual-recognition architecture for national operator laws.	The more robust the Article 114 harmonization, the more plausible a real single market becomes.
Agency role	EU agencies may support implementation if linked to the harmonized internal-market regime	EUSPA can manage Union space-program functions and support program governance under space-policy legislation.	A space regulator or compliance board with market-access power is easier to defend under an internal-market theory but may still face proportionality and conflict-of-interest objections.
Examples	Digital Services Act; ¹⁵⁴ Digital Markets Act; ¹⁵⁵ AI Act; ¹⁵⁶ Cyber Resilience Act; ¹⁵⁷ GDPR; ¹⁵⁸ Tobacco Products Directive; roaming regulation; medical devices; REACH; financial-market harmonization.	Union Space Program Regulation; ¹⁵⁹ EUSPA; ¹⁶⁰ Galileo; EGNOS; Copernicus; SST framework; ¹⁶¹ GOVSATCOM; IRIS2 secure connectivity.	Article 114 creates market law; Article 189 creates space-policy and program law.
Risk of overreach	High if the measure is too remote from market access, merely regulates an activity because the EU thinks it should be regulated, or adds burdens without reducing fragmentation.	High if the measure purports to harmonize national operator statutes or licensing conditions.	The Council Legal Service's caveats on space-based data show this risk is live.
Startup impact	Could reduce legal cost if it creates a true one-stop shop or passport; could increase cost if EU compliance is layered on top of national licenses.	Less likely to create a general commercial passport; may help startups through funding, procurement, public infrastructure, data access, or research programs.	The key design question is whether the Act substitutes for national compliance or merely adds another layer.

¹⁵⁴ *Digital Services Act 2022*, *supra* note 94.

¹⁵⁵ Regulation (EU) 2022/1925 of the European Parliament and of the Council of Sept. 14, 2022, on Contestable and Fair Markets in the Digital Sector (Digital Markets Act), 2022 O.J. (L 265) 1, <https://eur-lex.europa.eu/eli/reg/2022/1925/oj/eng> and <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32022R1925> [hereinafter *Digital Markets Act 2022*, *Contestable and Fair Markets*].

¹⁵⁶ Regulation (EU) 2024/1689 of the European Parliament and of the Council of June 13, 2024, Laying Down Harmonised Rules on Artificial Intelligence (Artificial Intelligence Act), 2024 O.J. (L 2024/1689), <https://eur-lex.europa.eu/eli/reg/2024/1689/oj/eng> [hereinafter *AI Act 2024*].

¹⁵⁷ *Cyber Resilience Act 2024*, *supra* note 66.

¹⁵⁸ *GDPR 2016*, *supra* note 46.

¹⁵⁹ *EUSPA 2021*, *supra* note 149; *Union Secure Connectivity Programme 2023*, *supra* note 149.

¹⁶⁰ *EUSPA 2021*, *supra* note 149.

¹⁶¹ Decision No. 541/2014/EU of the European Parliament and of the Council of Apr. 16, 2014, Establishing a Framework for Space Surveillance and Tracking Support, 2014 O.J. (L 158) 227, <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32014D0541> [hereinafter *Space Surveillance and Tracking Support 2014*].

a) *The Article 114 Doctrine: The EU's Internal-Market Harmonization Power*

Article 114 is the workhorse of EU regulatory integration. It allows the Parliament and Council to approximate national laws only when doing so is directed toward the establishment and functioning of the internal market. The leading cases say that a law must genuinely have as its object the improvement of market conditions, particularly by eliminating obstacles to free movement or appreciable distortions of competition.¹⁶²

Tobacco Advertising I is the cautionary case.¹⁶³ The Court annulled the first tobacco-advertising directive because the EU legislature had invoked the internal-market legal basis too broadly. Article 114 cannot be used simply to regulate a socially important problem across Europe. The directive must be connected to real market barriers or distortions.

Tobacco Advertising II and the later tobacco-products cases show the other side of the doctrine.¹⁶⁴ Once the legislature demonstrates that divergent national rules are likely to obstruct cross-border trade, Article 114 can support detailed and protective regulation, even when public health is a dominant policy concern. That matters for space because safety, cybersecurity, and sustainability can be valid internal-market harmonization objectives if they are tied to removing barriers or distortions created by divergent national licensing conditions.

An Article 114 regulation need to then identify fragmentation, impose common requirements, designate national competent authorities, create EU-level coordination or agency functions, add a free-movement or mutual-recognition rule, and then decide how much stricter national law remains permissible. This pattern appears across digital services, digital markets, AI, cybersecurity, data protection, pharmaceuticals, medical devices, chemicals, consumer products, and financial services.¹⁶⁵

¹⁶² Case C-376/98, *Germany v. European Parliament & Council*, 5 October 2000, ECLI:EU:C:2000:544, <https://curia.europa.eu/juris/liste.jsf?num=C-376/98> [hereinafter *Tobacco Advertising I*]; *Opinion of the Legal Service*, Doc. ST 5893/26, *supra* note 6 at ¶¶ 24-29 (summarizing the Article 114 test: genuine improvement of internal-market conditions; elimination of obstacles to free movement or appreciable distortions; likely future obstacles may suffice; mere disparities or abstract risk do not).

¹⁶³ *Tobacco Advertising I*, *supra* note 162.

¹⁶⁴ See also Case C-380/03, *Germany v. European Parliament & Council*, 12 December 2006, 2006 E.C.R. I-11573, ECLI:EU:C:2006:772, <https://curia.europa.eu/juris/liste.jsf?num=C-380/03> [hereinafter *Tobacco Advertising II*].

¹⁶⁵ *Digital Services Act 2022*, *supra* note 94; *Digital Markets Act 2022*, *Contestable and Fair Markets*, *supra* note 155; *AI Act 2024*, *supra* note 156; *Cyber Resilience Act 2024*, *supra* note 66; *GDPR 2016*, *supra* note 46.

b) *The Article 189 Doctrine: Space Policy Without Harmonizing Space Law*

Article 189 enables the EU to create space policy, promote joint initiatives, support research and technological development, and coordinate space exploration and exploitation. But it also contains a space-specific anti-harmonization clause. That is why Article 189 is a natural basis for space programs but a weak basis for a general operator statute.¹⁶⁶

Under Article 189, the Space Programme Regulation establishes and governs space components such as Galileo, EGNOS, Copernicus, space situational awareness, and GOVSATCOM, and it creates EUSPA as a space-programme agency.¹⁶⁷ Those instruments can contain operational rules, but the rules focused on procurement, governance, security accreditation, data access, Member State participation, and institutional roles. They do not purport to replace national authorization and continuing-supervision regimes for all private operators. That is the operational line between Article 189 and Article 114, where Article 189 can govern space assets and policy programs, Article 114 can harmonize private-market conditions if the internal-market test is satisfied.¹⁶⁸ Member States retain international responsibility for national activities in outer space and must authorize and continuously supervise nongovernmental activities. The EU can create a market-integration layer, but Member States remain liable to international space law obligations.¹⁶⁹

c) *Why the Drafters Chose Article 114 for the EU Space Act*

The drafters chose Article 114 because Article 189 cannot do the work they appear to want the EU Space Act to do. The EU Space Act is not merely a funding or infrastructure program. The Compromise Text recites the facts that national space laws differ, some Member States have space legislation while others are preparing it, and this fragments the internal market

¹⁶⁶ TFEU 2012, *supra* note 3; *Opinion of the Legal Service, Doc. ST 5893/26, supra* note 6 at ¶¶ 35-39 (describing Article 189 TFEU as a parallel space-policy competence that supports initiatives, research and technological development, and coordination, but excludes harmonization of Member State laws and regulations).

¹⁶⁷ EUSPA 2021, *supra* note 149; *Space Surveillance and Tracking Support 2014, supra* note 161; *Union Secure Connectivity Programme 2023, supra* note 149.

¹⁶⁸ *Opinion of the Legal Service, Doc. ST 5893/26, supra* note 6 at ¶¶ 35-39 (describing Article 189 TFEU as a parallel space-policy competence that supports initiatives, research and technological development, and coordination, but excludes harmonization of Member State laws and regulations); *id. at* ¶¶ 42-48 (Jan. 30, 2026) (explaining that the Article 189 harmonization exclusion does not by itself bar reliance on Article 114 when Article 114's internal-market conditions are met, but Article 114 cannot be used to circumvent a specific exclusion).

¹⁶⁹ *EU Space Act, Compromise Text 2026, ST 7806/26, supra* note 1; *Opinion of the Legal Service, Doc. ST 5893/26, supra* note 6 at ¶¶ 54-64, 110-12 (concluding that operational-space-service provisions are, subject to caveats, correctly based on Article 114, while broader space-based-data rules require closer proportionality and internal-market justification).

and reduces legal certainty. This is precisely the kind of record the EU legislature must build if it wants to survive *Tobacco Advertising I* scrutiny.¹⁷⁰

The Opinion of the Legal Service largely agrees and says that national rules are likely to create obstacles to the free movement of space operation services and space-related goods, and that common standards coupled with a free-movement clause can produce genuine internal-market benefits. The Legal Service gives a practical example that an operator in Member State A ordering a satellite in Member State B, launching from Member State C, and operating from Member State D should not need to satisfy four conflicting sets of technical standards for the same underlying operation.¹⁷¹

But the Opinion also questions whether broad rules on space-based data are sufficiently tied to fragmented national laws and whether some obligations may be disproportionate. Narrower anti-circumvention provisions may be more defensible than broad duties imposed on data providers or downstream actors. Article 114 is powerful, but it becomes vulnerable when it reaches too far beyond the market-fragmentation theory.¹⁷²

The Article 114 route is not novel in EU law. It is one of the central legal bases for the modern regulatory state of the internal market. The EU has used it to regulate tobacco, pharmaceuticals, chemicals, medical devices, data protection, digital services, platform gatekeepers, AI, cybersecurity products, roaming, and financial markets. In that sense, using Article 114 to build a common market for space operations is conventional as a method of EU law.¹⁷³

Using Article 114 is novel for space policy and EU space law to date has mostly been program law under Article 189, including Galileo, Copernicus, EUSPA, SST, GOVSATCOM, IRIS2, and space-strategy instruments. The proposed EU Space Act is a shift from program governance to market governance. That shift is why commentators describe the Act as an internal-harmonization instrument with external influence, or even a GDPR-like effort to project EU regulatory standards beyond the EU.¹⁷⁴

¹⁷⁰ *EU Space Act, Compromise Text 2026, ST 7806/26, supra note 1; Tobacco Advertising I, supra note 162.*

¹⁷¹ *Opinion of the Legal Service, Doc. ST 5893/26, supra note 6 at ¶¶ 54-64, 110-12.*

¹⁷² *Id.* at ¶¶ 54-64, 110-12.

¹⁷³ Andreas Engel and Anna Zemskova, *The Good, the Bad, or the Ugly? The Choice of Legal Basis in EU Digital Finance*, European Papers (2025), <https://www.europeanpapers.eu/e-journal/good-bad-ugly-choice-legal-basis-eu-digital-finance>; *Opinion of the Legal Service, Doc. ST 5893/26, supra note 6 at ¶¶ 24-29* (summarizing the Article 114 test: genuine improvement of internal-market conditions; elimination of obstacles to free movement or appreciable distortions; likely future obstacles may suffice; mere disparities or abstract risk do not).

¹⁷⁴ *EUSPA 2021, supra note 149; Gunes Unuvar, The EU Space Act: Internal Harmonisation and External Influence*, EJIL: Talk! (July 1, 2025), <https://www.ejiltalk.org/the-eu-space-act-internal-harmonisation-and-external-influence/>; Alberto Miglio, *The EU Space Act Proposal: A GDPR for Outer Space?*, European Law Blog (July 8, 2025), <https://www.europeanlawblog.eu/pub/9sj1z48z>.

Article 114 is often tempting when the EU wants a single-market rule across politically sensitive sectors. But the same convenience creates litigation risk if the measure is not genuinely about internal-market barriers, or if it is too disproportionate to the asserted barrier.¹⁷⁵ The Court can strike it down or force narrower drafting such as in the *Tobacco Advertising I* case.¹⁷⁶

2. Sectoral Comparisons: What the EU Space Act Might Come to Resemble

a) Product-Safety and CE-Marking

One Article 114 model is the product-safety model. The EU sets essential requirements, harmonized standards, conformity assessment, CE marking, and market surveillance. Member States retain enforcement authorities and penalties, but compliant products enjoy free movement. If the EU Space Act follows this model, it would produce common technical baselines for safety, resilience, and sustainability.¹⁷⁷

This model is attractive for hardware and technical requirements, but harder for ongoing operations. Space operations are dynamic, involve international liability, and implicate national security, export controls, launch jurisdiction, and orbital safety over time. A CE-marking comparison may work for components or cyber-resilient digital elements but it is less complete for continuing supervision of a satellite constellation.¹⁷⁸

b) Digital Services Act and Digital Markets Act

A second model is digital-platform regulation. The DSA and DMA harmonize some issues at EU level, preserve national competent authorities for many functions, and centralize certain high-impact enforcement. This resembles a possible EU Space Act design in which national authorities authorize and supervise ordinary operators while an EU body coordinates registration, technical standards, equivalence, and oversight of large or third-country operators.¹⁷⁹

The advantage is streamlined licensing but the risk is increased administrative complexity. If a space operator must satisfy national authorization, EU technical certification, EUSPA

¹⁷⁵ See generally *Tobacco Advertising I*, *supra* note 162.

¹⁷⁶ *Id.*; Vincent Delhomme, *The Paradoxical EU Competence to Regulate Tobacco Consumption*, College of Europe Research Paper in Law (2018), https://www.coleurope.eu/sites/default/files/research-paper/researchpaper_1_2018_vincent_delhomme_0.pdf.

¹⁷⁷ *Cyber Resilience Act 2024*, *supra* note 66; *Opinion of the Legal Service*, Doc. ST 5893/26, *supra* note 6 at ¶¶ 54-64, 110-12.

¹⁷⁸ *EU Space Act, Compromise Text 2026*, ST 7806/26, *supra* note 1; *Opinion of the Legal Service*, Doc. ST 5893/26, *supra* note 6 at ¶¶ 54-64, 110-12.

¹⁷⁹ *Digital Services Act 2022*, *supra* note 94; *Digital Markets Act 2022, Contestable and Fair Markets*, *supra* note 155.

review, third-country equivalence checks, data-provider obligations, and national security carve-outs, the result may look less like a single market and more like another layer of review.

c) *AI Act and Cyber Resilience Act*

The AI Act and Cyber Resilience Act show the modern Article 114 tendency to combine internal-market harmonization with risk regulation. This is the closest comparison to the EU Space Act's safety-resilience-sustainability structure.¹⁸⁰ Risk-based EU regulation may burden innovators, especially where definitions, conformity obligations, sandbox access, and sector-specific overlaps are unclear. The same danger exists for space startups if the EU Space Act does not clearly substitute EU compliance for national duplication.

d) *Tobacco and Public-Health Harmonization*

The tobacco cases are the best doctrinal comparison because they involve an express anti-harmonization concern in another treaty field.¹⁸¹ Article 114 measures are permitted to remove trade barriers even when the measure also pursues public health, but it measures that invoke the market as a pretext are rejected. For space, the safety, resilience, and sustainability motivations may serve the same purpose as the public health justifications in the analogous tobacco advertising cases. The same logic follows that these objectives can be pursued under Article 114 if they are tied to market integration, but not if they are simply free-standing policy goals.

e) *Financial-Services Harmonization*

Financial services offer another example because Article 114 has supported detailed market regulation, EU agency roles, and cross-border supervision. Article 114 can carry a lot of regulatory weight when the market-fragmentation problem is real and when the EU-level mechanism is necessary for market functioning. But agency powers, discretion, and proportionality must be drafted carefully.¹⁸²

f) *Innovation and Entrepreneurship*

The most practical question is whether the EU Space Act protects startups from multiple compliance layers or adds EU compliance on top of national licensing. Whether the EU

¹⁸⁰ *AI Act 2024*, *supra* note 156; *Cyber Resilience Act 2024*, *supra* note 66.

¹⁸¹ *Tobacco Advertising I*, *supra* note 162; *Tobacco Advertising II*, *supra* note 164.

¹⁸² See generally Case C-270/12, *United Kingdom v. Parliament & Council*, ECLI:EU:C:2014:18, <https://curia.europa.eu/juris/liste.jsf?num=C-270/12> (upholding Article 114 as a basis for certain EU agency powers in a harmonized financial-markets regime); Andreas Engel and Anna Zemskova, *The Good, the Bad, or the Ugly? The Choice of Legal Basis in EU Digital Finance*, European Papers (2025), <https://www.europeanpapers.eu/e-journal/good-bad-ugly-choice-legal-basis-eu-digital-finance>.

certificate substitutes for national technical review, and whether small businesses receive proportionate or light-regime treatment are key.¹⁸³

The pro-startup case is strong if the final Act creates real efficiencies that can satisfy one harmonized technical baseline, one recognized authorization or certificate, and then provide space services across the EU without repetitive national review. That would turn Article 114 into a market-opening device. However, it is likely that the final Act will create EU-level obligations while leaving national authorization in place. In that scenario, the EU does not replace national fragmentation but it adds a new federal-style compliance system on top of it. The Opinion of the Legal Service's concern about broad space-based-data provisions points in this direction.¹⁸⁴

German industry commentary has also raised concern that Article 114-based uniform rules could duplicate or disturb national procedures.¹⁸⁵ These are not neutral sources, but they are important evidence of the compliance-layering critique.¹⁸⁶ U.S. government commentary has focused on reviewing the updated text and prior U.S. comments about international alignment and access for U.S. providers.¹⁸⁷ Commenters argue that the proposal may impose disproportionate costs, regulatory uncertainty, and burdens on start-ups and non-EU operators.¹⁸⁸ Furthermore, if the practical details of the regime are disclosed in the implementing acts, it creates more uncertainty for operators, undermining the goals of streamlining and unifying the process. After the Act is adopted, can an EU operator substantially reduce the number of national-law reviews it must pass? If yes, the Act is an internal-market statute. If no, the Act may become a space-sector compliance burden.

II. Equivalence

A. The EU Space Regime

Even if the EU Space Act is implemented as currently proposed, the European space regime would not be a single licensing system. It sits atop layers including the United Nations

¹⁸³ European Parliament, Legislative Train Schedule, *EU Space Law*, <https://www.europarl.europa.eu/legislative-train/theme-a-europe-fit-for-the-digital-age/file-eu-space-law> (noting Article 114 as the identified legal basis and Article 189's exclusion of harmonization of Member State space legislation); *Opinion of the Legal Service*, Doc. ST 5893/26, *supra* note 6 at ¶¶ 54-64, 110-12.

¹⁸⁴ *Opinion of the Legal Service*, Doc. ST 5893/26, *supra* note 6 at ¶¶ 54-64, 110-12.

¹⁸⁵ Sarah Lam, *Is the Kessler Effect Overplayed in the EU Space Act?*, Aug. 12, 2025, <https://techpolicyinstitute.org/wp-content/uploads/2025/08/EU-Space-Act-Comments-81225.pdf>.

¹⁸⁶ *German Space Industry Position*, *supra* note 51.

¹⁸⁷ U.S. Office of Space Commerce, EU Space Act Update (Apr. 3, 2026), <https://space.commerce.gov/eu-space-act-update-april-2026/>.

¹⁸⁸ Kristian Stout & Eric Fruits, *ICLE Comments on the Proposed EU Space Act*, International Center for Law & Economics (Nov. 6, 2025), <https://laweconcenter.org/resources/icle-comments-on-the-proposed-eu-space-act/>

space treaties that allocate responsibility to states, with EU space programs, the European Space Agency (“ESA”) that procures European space missions as a separate intergovernmental organization, and national authorities that must authorize operators, supervise space activities, assign spectrum rights, and manage national-security and liability exposure. The proposed EU Space Act would not erase that architecture. At most, it would add a harmonized layer for safety, resilience, sustainability, registration, third-country access, and space-based data. The practical question is whether that layer becomes a genuine single-market certificate or an additional compliance layer on top of national licensing. ESA is often mistaken for the European “space regulator” but it is not. ESA is the programmatic, technical, and industrial engine of European space while Member States remain the treaty-facing sovereigns.¹⁸⁹

1. The EU Is Not the Treaty-Facing “State Party”

The Outer Space Treaty is written around “States Parties.” Article VI provides that states bear international responsibility for national activities in outer space, including activities carried out by nongovernmental entities, and that nongovernmental space activities require “authorization and continuing supervision” by the appropriate State Party. Article VII supplies the liability logic that a launching state that launches, procures the launch, or allows launch from its territory or facility is internationally liable for damage caused by its space object. The Registration Convention similarly requires a launching state to maintain a registry and provide information to the United Nations.¹⁹⁰

Another legal layer is the spectrum-orbit system administered through the International Telecommunication Union. Operators do not obtain a general “space license” from the ITU. Rather, satellite network filings are submitted by national regulatory authorities, often called administrations, on behalf of satellite operators. The ITU Space Services Department implements the Radio Regulations for space systems, earth stations, and radio astronomy stations, processes frequency-assignment notices submitted by administrations, and records assignments in the Master International Frequency Register. This is why a satellite operator’s path to market almost always

¹⁸⁹ See European Space Agency, *ESA and the EU*, https://www.esa.int/About_Us/Corporate_news/ESA_and_the_EU (explaining that ESA is intergovernmental while the EU is supranational); *Outer Space Treaty 1967*, *supra* note 37.

¹⁹⁰ *Outer Space Treaty 1967*, *supra* note 37, art. VI; *Liability Convention 1972*, *supra* note 38, arts. II, VII; *Registration Convention 1975*, *supra* note 39, arts. II-IV; United Nations Office for Outer Space Affairs, *Resources on Space Object Registration*, <https://www.unoosa.org/oosa/en/spaceobjectregister/resources/index.html>.

includes a national telecom or spectrum regulator even when the operator’s space object was authorized elsewhere.¹⁹¹

2. *The Institutional Map: Who Regulates, Who Procures, and Who Supervises*

Europe’s institutional map includes the EU, ESA, Member State licensing ministries, national space agencies, telecom regulators, and international bodies perform different functions. A Starlink-type operator, an Earth-observation operator, or a downstream space-based-data provider may interact with several of them, but not in a single linear order.¹⁹²

Table 6 — European Space Agencies

Institution	Source of Authority	Main Role in the Space Regime	What It Does Not Do
European Union legislature: European Parliament and Council	EU treaties; ordinary legislative procedure; Article 189 for space policy and Article 114 for internal-market harmonization	Enacts EU space-program legislation, internal-market rules, cybersecurity/data rules, and potentially the EU Space Act	Does not act as the State Party that authorizes every private space activity under Article VI of the Outer Space Treaty
European Commission, including DG DEFIS	EU executive; proposes legislation and manages EU policy portfolios	Proposes and implements EU space policy, manages Union programs, negotiates/oversees program arrangements, and proposed the EU Space Act	Does not replace national launch, spectrum, telecom, or security authorizations
EUSPA	EU agency established under Regulation (EU) 2021/696	Provides safe and secure Galileo and EGNOS services, commercializes Galileo/EGNOS/Copernicus data and services, engages in GOVSATCOM and IRIS2 secure SATCOM, operates the EU SST Front Desk, and has security-accreditation functions for EU Space Programme components	Is not ESA and is not a general commercial space-operator licensor
ESA	Separate intergovernmental organization with 23 Member States, including non-EU states	Develops, procures, and operates European space missions; implements major EU programs under EU-ESA arrangements; funds science, launchers, Earth observation, telecom, exploration, and technology programs	Is not an EU agency and generally does not grant commercial market-access licenses to private operators
National space ministries and agencies	Member State law; national implementation of UN treaty duties	Authorize and supervise national space activities, issue or support space-operation	Do not provide a Union-wide passport unless EU

¹⁹¹ International Telecommunication Union, *Space Services Department*, <https://www.itu.int/en/ITU-R/space/Pages/default.aspx>; International Telecommunication Union, *FAQs on ITU Satellite Filings (Mar. 2025)*, <https://www.itu.int/en/ITU-R/Documents/FAQs%20on%20ITU%20satellite%20filings-March%202025.pdf>; International Telecommunication Union, *ITU-R*, <https://www.itu.int/en/ITU-R/information/Pages/default.aspx>.

¹⁹² EUSPA 2021, *supra* note 149; EUSPA, *About EUSPA*, <https://www.euspa.europa.eu/about>; EUSPA, *The EU Space Programme*, <https://www.euspa.europa.eu/eu-space-programme>; European Space Agency, *ESA and the EU*, https://www.esa.int/About_Us/Corporate_news/ESA_and_the_EU; International Telecommunication Union, *Space Services Department*, <https://www.itu.int/en/ITU-R/space/Pages/default.aspx>.

Institution	Source of Authority	Main Role in the Space Regime	What It Does Not Do
		licenses, manage national registers, and advise on technical conformity and liability	or national law creates recognition effects
National telecom and spectrum regulators	National telecom law; EU electronic-communications framework; ITU administration role	Assign frequencies, authorize earth stations and user terminals, supervise interference, and act through ITU filings/coordination	Do not ordinarily authorize the entire space mission as such
ITU Radiocommunication Bureau / Space Services Department	ITU Constitution, Convention, and Radio Regulations	Coordinates radio-frequency spectrum and satellite-orbit resources through filings submitted by national administrations	Does not license private operators directly as a general matter
National defense/security authorities	National security, defense, export-control, and critical-infrastructure law	Review defense, dual-use, public-security, military-space, and sensitive infrastructure issues	Do not necessarily provide commercial telecom authorization
National courts and administrative courts	National and EU judicial systems	Review national licensing decisions and procedural compliance, as in the French Starlink public-consultation litigation	Do not set the entire EU space regulatory architecture <i>ex ante</i>

3. *How European Licensing Works Operationally Today*

A private operator does not normally go to “Europe” and receive one comprehensive European space operator license. It usually proceeds through a home-state authorization and country-by-country market-access path. The exact route depends on what the operator does: launch, operate satellites, provide satellite communications, collect remote-sensing imagery, operate ground stations, sell downstream data, provide government services, or process personal data.

For a new LEO operator, the path is a regulatory matrix rather than a sequential tour from France to Germany to the United Kingdom. The operator’s satellite constellation may be authorized and filed through its home state; launch activity may be licensed in the launch state; spectrum and orbit coordination may proceed through ITU filings by a national administration;¹⁹³ and service in each European market may require national telecom, spectrum, earth-station, consumer, security, and data-law compliance.¹⁹⁴ The proposed EU Space Act might add EU-level

¹⁹³ The ITU’s orbital slot allocation through a *a posteriori* system (first in time, first in right) and a *a priori* system (equitable distribution) has been subject to much debate as nations share orbital slots but also compete for them. See generally Buxton, *infra* note 260 at 703; Adrian Copiz, *Scarcity in Space, The International Regulation of Satellites*, 10 COMM.LAW CONSP. 207 (2002), <https://scholarship.law.edu/cgi/viewcontent.cgi?article=1243&context=commlaw>.

¹⁹⁴ Bundesnetzagentur, *Press Release: Spectrum Assignment for Broadband Internet via Satellite: Starlink Satellite System Receives Spectrum Usage Rights in Germany* (Dec. 18, 2020), https://www.bundesnetzagentur.de/SharedDocs/Pressemitteilungen/EN/2020/20201218_Starlink.html; ARCEP, *After a Public Consultation ARCEP Awards Starlink a New Authorisation to Use Frequencies* (June 2, 2022), <https://en.arcep.fr/news/press->

safety, resilience, sustainability, and third-country recognition requirements, but it would not necessarily eliminate national telecom and spectrum licensing.¹⁹⁵

Table 7 — European Space Licensing Today

Authorization	Regulatory Authority	Space Activity	LEO Illustration
Home-state satellite authorization	Home-state space and telecom authorities	Satellite operations, debris mitigation, orbital parameters, mission authorization, and/or spectrum filings	LEO constellation authorizations and modifications are principally U.S. FCC matters for the space-station/satellite-communications side
Launch authorization	Launch-state regulator and launch-site authority	Launch safety, reentry if applicable, range safety, insurance, and liability	U.S. launches are FAA/AST matters; launches from Guiana would implicate French/CSG/CNES arrangements
ITU coordination	National administration before ITU	Frequency assignments and orbital resources; coordination to avoid harmful interference	National administrations submit filings on behalf of operators
National spectrum assignment	National telecom/spectrum regulator	Use of frequencies in a country, interference conditions, coexistence, and sometimes gateway earth stations	Germany's Bundesnetzagentur issued spectrum usage rights to the LEO operator and included coexistence conditions and earth-station assignments
National market access for broadband services	National telecom regulator, and sometimes consumer/competition authorities	Electronic communications service obligations, user terminals, installation rules, consumer obligations, and emergency/lawful-intercept issues where applicable	ARCEP authorized LEO frequency use in France after public consultation following annulment of the earlier authorization
Ground stations and gateways	National spectrum/telecom regulator and local permitting bodies	Fixed earth stations, gateway operations, siting, RF exposure, local permitting, and security	Ofcom has handled NGSO gateway earth-station license variations in the United Kingdom
Space-based data or downstream services	Data, telecom, cybersecurity, and sector-specific authorities	Remote sensing, data access, personal data, NIS2/CER, public-sector procurement, defense/security conditions	Under the proposed EU Space Act, space-based data provided in the Union may become an EU-level compliance trigger

[releases/view/n/frequencies-020622.html](https://www.ofcom.gov.uk/consult/condocs/frequencies-020622/frequencies-020622.html); ARCEP, *ARCEP Is Complying with the Conseil d'État Ruling and Launching a Public Consultation* (Apr. 8, 2022), <https://en.arcep.fr/news/press-releases/view/n/frequencies-starlink-080422.html>; Ofcom, *Statement: SpaceX Application for Variation of Non-Geostationary Gateway Licence*, <https://www.ofcom.org.uk/spectrum/space-and-satellites/spacex-application-variation-non-geostationary-gateway-licence>; Reuters, *French Court Annuls License Granted to Musk's Starlink* (Apr. 5, 2022), <https://www.reuters.com/technology/french-court-annuls-license-granted-musk-starlink-2022-04-05/>.

¹⁹⁵ *EPRS Report 2025*, *supra* note 8; *EU Space Act, Compromise Text 2026*, ST 7806/26, *supra* note 1; International Telecommunication Union, *FAQs on ITU Satellite Filings* (Mar. 2025), <https://www.itu.int/en/ITU-R/Documents/FAQs%20on%20ITU%20satellite%20filings-March%202025.pdf>.

Authorization	Regulatory Authority	Space Activity	LEO Illustration
National security and defense	National defense/security ministries and screening bodies	Sensitive government, defense, dual-use, critical-infrastructure, encryption, and procurement risks	This layer remains substantially national even if the EU Space Act is adopted

The approval path for a new low-Earth-orbit operator currently in Europe would begin with home-state authorization for the satellite system itself. The operator would need to obtain or maintain authority for the constellation, including spectrum and orbital parameters, space-station authorization, debris-mitigation commitments, and continuing supervision by the relevant national authority. The French Starlink example is especially useful because it shows that national administrative law still matters even for a global U.S.-licensed satellite operator. ARCEP had granted Starlink frequency authorization in 2021. The Conseil d'État annulled the decision in April 2022 because ARCEP had not conducted the required public consultation. ARCEP then launched a consultation and later awarded a new authorization. The episode was not about France authorizing the entire Starlink constellation as a space object. It was about national market access and spectrum use for Starlink service in France.¹⁹⁶

Launch authorization would proceed separately from constellation authorization. The launch state and launch-site authorities would license or approve the launch activity, which means the applicable regime depends on where the launch occurs. A launch from the United States would generally involve the FAA's Office of Commercial Space Transportation, while a launch from French Guiana would implicate French authorities, Guiana Space Centre and CNES arrangements, and the broader European launcher framework. At the same time, the operator's national administration would remain responsible for submitting filings and coordinating frequencies and orbital resources through the International Telecommunication Union. The ITU coordinates use of the spectrum-orbit resource, but national administrations remain the central actors in that process.

After the constellation and launch approvals are addressed, the operator would still need market-by-market authority to provide service. To offer broadband in Germany, France, the

¹⁹⁶ ARCEP, *ARCEP Is Complying with the Conseil d'État Ruling and Launching a Public Consultation* (Apr. 8, 2022), <https://en.arcep.fr/news/press-releases/view/n/frequencies-starlink-080422.html>; ARCEP, *After a Public Consultation ARCEP Awards Starlink a New Authorisation to Use Frequencies* (June 2, 2022), <https://en.arcep.fr/news/press-releases/view/n/frequencies-020622.html>; Reuters, *French Court Annuls License Granted to Musk's Starlink* (Apr. 5, 2022), <https://www.reuters.com/technology/french-court-annuls-license-granted-musks-starlink-2022-04-05/>.

United Kingdom, or another European market, the operator would generally seek national spectrum, earth-station, and user-terminal authority from the relevant telecommunications regulator. Germany's Bundesnetzagentur, France's ARCEP, and the United Kingdom's Ofcom illustrate this national market-access layer. Additional approvals may also be required for the ground segment, including gateways and earth stations, which can raise questions of spectrum assignment, siting, environmental compliance, RF exposure, and security review.

Finally, the operator would need to comply with broader legal obligations that attach to the service, the data, and the infrastructure. Depending on the business model and customer base, these may include GDPR, NIS2, critical-entity rules, consumer-protection requirements, lawful-intercept obligations, public-procurement conditions, export controls, defense rules, or national-security review. If the EU Space Act is enacted, a non-EU provider offering space-operation services or space-based data in the Union may face an additional EU-level layer involving safety, resilience, sustainability, registration, recognition, or equivalence requirements, on top of existing national market-access rules.

a) ESA's Role: Programmatic Engine, Not Market Regulator

ESA occupies a central but often misunderstood place in European space governance. ESA is not an EU agency. While ESA is intergovernmental, the EU is supranational and the two organizations have different competences, different memberships, and different rules and procedures. ESA's membership includes non-EU countries, including the United Kingdom, Switzerland, and Norway. An "EU space regime" and a "European space regime" are not the same.¹⁹⁷

ESA is best understood as the European space system's funder of scientific missions, launcher development, Earth observation, telecommunications, navigation support, exploration, technology development, and other programs. It also implements large parts of EU space programs under EU-ESA arrangements. The 2021 Financial Framework Partnership Agreement between the Commission and ESA represented nearly 9 billion euros of EU investment for 2021-2027, illustrating that ESA can be the technical and procurement arm for EU space ambitions without becoming a general regulator.¹⁹⁸

¹⁹⁷ European Space Agency, "ESA and the EU," https://www.esa.int/About_Us/Corporate_news/ESA_and_the_EU; European Space Agency, "Member States & Cooperating States," https://www.esa.int/About_Us/Corporate_news/Member_States_Cooperating_States.

¹⁹⁸ *Id.*; EUSPA 2021, *supra* note 149; European Space Agency, "EU and ESA Sign Historic Space Agreement," https://www.esa.int/About_Us/Corporate_news/ESA_and_the_EU.

ESA's funding model is structurally important too. Mandatory activities are funded by all Member States, generally according to national economic size, and include the scientific program and basic activities. Optional programs are funded only by Member States that choose to participate, and ESA identifies those optional programs as covering areas such as Earth observation, telecommunications, satellite navigation, space transportation, the International Space Station, and microgravity research. ESA states that mandatory activities amount to roughly 20% of the funding it receives from Member States, with optional programs receiving the majority.¹⁹⁹

ESA also operates under a distinctive industrial-policy logic known as geographical return or fair return. Industrial policy and geographical distribution play an important role in ESA procurement and fair return is one of the main elements of that system. In simplified terms, ESA procurement aims to return industrial contracts to Member States roughly in relation to their financial contributions. That model helps maintain political support and industrial capacity across Europe, but it is in tension with the EU's single-market and competition-law instincts. That tension is one reason the EU and ESA cannot be collapsed into one institution for legal analysis.²⁰⁰

At the 2025 ESA Ministerial in Bremen, ESA Member States approved approximately 22.07 billion euros in contributions, the largest in ESA history. Germany's national space agency reported that Germany committed about 5.4 billion euros at current economic conditions and remained ESA's largest contributor at approximately 23%, ahead of France and Italy, each around 16%. That distribution is important for the France/Germany question below: Germany is now the budget and industrial-weight comparator, while France remains the legal and launch-infrastructure comparator.²⁰¹

b) France, Germany, Italy, UK, and Smaller States

No European country in particular is dominant in the space economy. France is known for legal architecture and operational infrastructure. Germany is the leading ESA funding source. Italy is a third pillar. The United Kingdom remains a major European space jurisdiction, but it is

¹⁹⁹ European Space Agency, "Funding," https://www.esa.int/About_Us/Corporate_news/Funding; European Space Agency, "ESA, an Intergovernmental Customer," https://www.esa.int/About_Us/Business_with_ESA/Business_Opportunities/ESA_an_intergovernmental_customer; European Space Agency, "Council at Ministerial Level 2025, Document 100," https://esamultimedia.esa.int/docs/corporate/CM25_document100.pdf.

²⁰⁰ European Space Agency, "Industrial Policy and Geographical Distribution," https://www.esa.int/About_Us/Business_with_ESA/How_to_do/Industrial_policy_and_geographical_distribution.

²⁰¹ European Space Agency, "ESA Member States Commit to Largest Contributions at Ministerial," Nov. 27, 2025, https://www.esa.int/About_Us/Corporate_news/ESA_Member_States_commit_to_largest_contributions_at_Ministerial; German Aerospace Center, Deutsches Zentrum für Luft- und Raumfahrt, (DLR), "Germany Invests 5.4 Billion Euros in the Future of European Space," Nov. 28, 2025, <https://www.dlr.de/en/latest/news/2025/germany-invests-5-4-billion-euros-in-the-future-of-european-space>.

outside the EU. Smaller states, including Luxembourg, the Netherlands, Belgium, and Spain, can be disproportionately important because they have specialized institutional, financial, or regulatory roles.

Table 8 — Top Space States in Europe

Country	EU Status	Regulatory Profile	Institutional Strengths	Relation to EU Space Regime
France	EU Member State and ESA Member State	Mature national authorization and supervision regime under the French Space Operations Act; ²⁰² CNES performs technical conformity and supervision functions; Guiana Space Centre is a core European launch site	CNES, ²⁰³ Guiana Space Centre, ²⁰⁴ Ariane ecosystem, ²⁰⁵ defense-space tradition, strategic autonomy	Best national example of a comprehensive European operator-law regime
Germany	EU Member State and ESA Member State	Major space actor but historically lacking a comprehensive general national space law for space activities	Largest ESA contributor after CM25; ²⁰⁶ strong industrial base; DLR ²⁰⁷ and German Space Agency	Shows why the EU sees fragmentation: huge industrial and budget weight without a fully unified national operator statute
Italy	EU Member State and ESA Member State	Significant national space law and agency framework; strong launch and industrial participation	ASI, ²⁰⁸ Avio, ²⁰⁹ Leonardo, Thales Alenia Space and Telespazio ecosystem ²¹⁰	Third pillar of European space industry and ESA participation

²⁰² French Space Operations Act (FSOA), <https://cnes.fr/en/projects/los>.

²⁰³ Centre National D'Etudes Spatiales (CNES), "Legislative and Regulatory Framework – French Space Operations Act," <https://spacecare.cnes.fr/en/la-securite-des-vols-spatiaux-english/legislative-and-regulatory-framework/>; United Nations Office for Outer Space Affairs, "France: National Space Law Submission," (updated Jan. 30, 2026), https://www.unoosa.org/documents/pdf/spacelaw/sd/France_updated_20260130.pdf.

²⁰⁴ Ariane Space, Guiana Space Center, <https://www.arianespace.com/the-guiana-space-center/>.

²⁰⁵ Ariane Group, <https://www.ariane.group/en/our-sites/>; ESA, "Ariane 6 – Made in France," Nov. 24, 2025, https://www.esa.int/Enabling_Support/Space_Transportation/Ariane/Ariane_6_made_in_France (describing Europe's newest heavy-lift rocket Ariane 6).

²⁰⁶ European Space Agency, "Council at Ministerial Level 2025, Document 100," https://esamultimedia.esa.int/docs/corporate/CM25_document100.pdf.

²⁰⁷ German Aerospace Center, Deutsches Zentrum für Luft- und Raumfahrt, (DLR), "Germany Invests 5.4 Billion Euros in the Future of European Space," Nov. 28, 2025, <https://www.dlr.de/en/latest/news/2025/germany-invests-5-4-billion-euros-in-the-future-of-european-space>.

²⁰⁸ Agenzia Spaziale Italiano (ASI), <https://www.asi.it/en/>.

²⁰⁹ Avio, <https://www.avio.com/> (leader in space propulsion with more than 1,500 employees in Italy, France, the U.S., and French Guiana).

²¹⁰ Telespazio, a Leonardo and Thales Company, "Thales Alenia Space to Develop the Space Segment of the Moonlight system led by Telespazio," Mar. 12, 2025, <https://www.telespazio.com/en/news-and-stories-detail/-/detail/thales-alenia-space-moonlight-telespazio>.

Country	EU Status	Regulatory Profile	Institutional Strengths	Relation to EU Space Regime
United Kingdom	Not an EU Member State; ESA Member State	Sophisticated licensing and commercial-space regime, especially for launch, satellite operations, applications, insurance, finance, and regulation	UKSA, ²¹¹ Ofcom, ²¹² CAA, ²¹³ strong smallsat and applications sector, legal and insurance markets	Major European comparator but not part of EU internal-market legislation; useful for non-EU equivalence and regulatory-leadership comparisons
Luxembourg	EU Member State and ESA Member State	Commercially sophisticated space-resources, finance, and satellite-services jurisdiction	Luxembourg Space Agency, ²¹⁴ SES ecosystem, ²¹⁵ finance and satellite services	Small state with outsized commercial and legal significance
Spain	EU Member State and ESA Member State	Increasing institutional and budget profile; new Spanish Space Agency, AEE inaugurated in 2023 ²¹⁶	AEE, ²¹⁷ growing ESA contribution, industrial and governmental role	Rising EU and ESA actor and potential regulatory comparator
Netherlands / Belgium	EU Member States and ESA Member States	Legally sophisticated jurisdictions with ESA and EU institutional links and national space-law roles	ESTEC ²¹⁸ in the Netherlands; Belgium's EU and NATO institutional setting	Important for institutional, technical, and legal capacity even if not dominant by launch infrastructure

The French Space Operations Act is one of Europe's most mature domestic implementations of the Outer Space Treaty authorization-and-supervision obligation. The French authority, Centre National D'Etudes Spatiales (CNES), explains that France adopted the Act to comply with treaty obligations. France also offers technical agency capacity, launch infrastructure in French Guiana, and a long tradition of space industry.²¹⁹

²¹¹ UK Space Agency (UKSA), <https://www.gov.uk/government/organisations/uk-space-agency>.

²¹² Ofcom, <https://www.ofcom.org.uk/>.

²¹³ UK Civil Aviation Authority (CAA), <https://www.caa.co.uk/space/>.

²¹⁴ Luxembourg Space Agency, <https://space-agency.public.lu/en.html>.

²¹⁵ SES, <https://www.ses.com/company/about-us>.

²¹⁶ Agencia Espacial Española (AEE), Spanish Space Agency, <https://www.aee.gob.es/>; Rafael Harillo, "Spain's New Space Agency is a Bigger Deal than it Seems," *Space News*, Dec. 18, 2023, <https://spacenews.com/spains-new-space-agency-bigger-deal-than-seems/>.

²¹⁷ *Id.*

²¹⁸ European Space Research and Technology Centre (ESTEC), https://www.esa.int/About_Us/ESTEC/ESTEC_European_Space_Research_and_Technology_Centre.

²¹⁹ Centre National D'Etudes Spatiales (CNES), "Legislative and Regulatory Framework – French Space Operations Act," <https://spacecare.cnes.fr/en/la-securite-des-vols-spatiaux-english/legislative-and-regulatory-framework/>; United Nations Office for Outer Space Affairs, "France: National Space Law Submission," (updated Jan. 30, 2026), https://www.unoosa.org/documents/pdf/spacelaw/sd/France_updated_20260130.pdf.

Germany is dominant for ESA funding and industrial weight. Germany remained ESA's largest contributor after the 2025 ESA Ministerial, at approximately 23% of contributions.²²⁰ Yet Germany still lacks a comprehensive general space law governing space activities. That combination of industrial strength and budget leadership without a comprehensive space statute is an illustration of the fragmentation problem that the EU Space Act tries to solve.²²¹

The United Kingdom is a leader in a different sense. It is not an EU Member State, but it remains an ESA Member State and a major space jurisdiction. The U.K. is strong in regulatory sophistication, satellite applications, small satellites, finance, insurance, and research. But the House of Lords' 2025 report²²² warned that the U.K.'s spending commitments are not commensurate with its ambitions and that it risks falling behind peer states absent stronger investment.

c) How the Proposed EU Space Act Would Change the Current Scheme

The EU Space Act proposes to add an EU layer, but will not necessarily offer a single complete license. The Compromise Text includes concepts such as registration, e-certificates, national competent authorities, third-country mechanisms, and conditions on the provision of space-based data. But because Member States remain treaty-facing actors under the Outer Space Treaty, Liability Convention, and Registration Convention, the Act will not be able to replace them entirely.²²³

This quandry resembles other EU internal-market regimes where the EU harmonizes certain requirements, Member States retain residual enforcement and national-security powers, and operators then argue about how much mutual recognition follows from compliance. The EU Space Act's practical success therefore turns on whether compliance actually reduces duplicative national compliance. If a French authorization, German spectrum assignment, Dutch registration, Luxembourg commercial data arrangement, and EU e-certificate all remain independently

²²⁰ German Aerospace Center, Deutsches Zentrum für Luft- und Raumfahrt, (DLR), "Germany Invests 5.4 Billion Euros in the Future of European Space," Nov. 28, 2025, <https://www.dlr.de/en/latest/news/2025/germany-invests-5-4-billion-euros-in-the-future-of-european-space>.

²²¹ *Id.*

²²² House of Lords Select Committee on UK Engagement with Space, *The Space Economy: Act Now or Lose Out*, HL Paper 190 (Nov. 4, 2025), <https://publications.parliament.uk/pa/ld5901/ldselect/ldukspace/190/190.pdf>; U.K. Government, "Government Response to the House of Lords UK Engagement with Space Committee Report," (Jan. 30, 2026), <https://www.gov.uk/government/publications/government-response-to-the-house-of-lords-uk-engagement-with-space-committee-report-the-space-economy-act-now-or-lose-out/government-response-to-the-house-of-lords-uk-engagement-with-space-committee-report-the-space-economy-act-now-or-lose-out>; Ofcom, "SpaceX Application for Variation of Non-Geostationary Gateway Licence," <https://www.ofcom.org.uk/spectrum/space-and-satellites/spacex-application-variation-non-geostationary-gateway-licence>.

²²³ *EU Space Act, Compromise Text 2026*, ST 7806/26, *supra* note 1; *Council Progress Report*, ST 8861/26 (Cyprus Presidency), *supra* note 8; *Outer Space Treaty 1967*, *supra* note 37, art. VI; *Liability Convention 1972*, *supra* note 38.

necessary without meaningful recognition, the Act may increase regulatory burden. If, by contrast, compliance creates a reliable presumption of market access for matters covered by the Regulation, it could operate as a real single-market instrument.²²⁴

B. The U.S. Space Regime

The United States does not have a single consolidated space-operator license. It has a federal, activity-specific regime built around launch and reentry, spectrum and satellite communications, commercial remote sensing, export controls, space situational awareness, and emerging mission-authorization proposals. This fragmentation is not accidental. It reflects a combination of constitutional separation of powers, agency-specific statutory delegations, national-security review, and the historical path by which commercial space emerged through launch, satellite communications, and imaging rather than through one omnibus space code.²²⁵

For EU equivalence analysis, that structure matters. A European evaluator cannot ask whether the United States has an equivalent “space operator law.” The better question is what rule is equivalent in which activity and under which agency? FAA launch safety is not the same as FCC spectrum authorization; NOAA remote-sensing licensing is not the same as Bureau of Industry and Security (BIS) export control; Commerce TraCSS is not a license at all. A future Space Commerce Certification²²⁶ could provide a more integrated front door for novel activities, but the Compromise Text expressly preserves other statutory obligations unless coordinated waiver or reliance mechanisms are adopted.

The executive branch gets operational licensing authority primarily from statutes enacted by Congress, not from a free-floating Article II space power. The President has important foreign-affairs, national-security, and treaty-execution responsibilities, and the United States is

²²⁴ *Opinion of the Legal Service, Doc. ST 5893/26, supra note 6; EPRS Report 2025, supra note 8; EEA EFTA States, “EEA EFTA Comment on the EU Space Act Proposal,”* (Apr. 23, 2026), <https://www.efta.int/sites/default/files/uploads/2026-04/EEA%20EFTA%20Comment%20on%20the%20EU%20Space%20Act%20Proposal.pdf>.

²²⁵ *Outer Space Treaty 1967, supra note 37; Commercial Space Launch Act of 1984, 51 U.S.C. §§ 50901-50923, https://uscode.house.gov/view.xhtml?path=/prelim@title51/subtitle5/chapter509&edition=prelim* [hereinafter *Commercial Space Launch Act of 1984*]; *Communications Act of 1934, Telecommunications Act of 1996, supra note 85; Part 960, supra note 81; Part 25, supra note 85; Land Remote Sensing Policy Act of 1992, supra note 80.*

²²⁶ Office of Space Commerce, OSC Releases Updated Mission Authorization Proposal (Mar. 24, 2026) (describing proposed Space Commerce Certification for activities such as satellite servicing, commercial stations, and lunar manufacturing), <https://space.commerce.gov/osc-releases-updated-mission-authorization-proposal/> [hereinafter *OSC Mission Authorization Proposal 2026*]; Office of Space Commerce, “Space Commerce Certification: OSC Proposal” (Mar. 2026) (explaining that existing FAA, FCC, and CRSRA statutory obligations may remain, but certification could help satisfy or streamline aspects of their review), <https://space.commerce.gov/wp-content/uploads/2026/03/Space-Commerce-Certification-OSC-Proposal-March-2026.pdf> [hereinafter *OSC Space Commerce Certification Proposal 2026*].

internationally responsible for national space activities under the Outer Space Treaty. But under ordinary U.S. administrative law and separation-of-powers principles, federal agencies must point to statutory delegations such as 51 U.S.C. chapter 509, the Communications Act, the Land Remote Sensing Policy Act, the Arms Export Control Act, or the Export Control Reform Act.

The “wild west” metaphor is tempting but misleading. Outer space is not national territory, and the Outer Space Treaty rejects national appropriation, yet it is also not lawless. States retain jurisdiction and control over registered space objects, bear international responsibility and liability, and must authorize and continuously supervise private actors.

A better description for space governance is a regulated commons with maritime and spectrum-like features such as freedom of use, no sovereignty over the medium, flag-state-like jurisdiction over objects, scarce orbital and spectrum resources coordinated through the ITU, and rising congestion and debris externalities.²²⁷

The question around reform is whether the U.S. should create a single front door for mission authorization in a streamlined approach to certification with the Office of Space Commerce.²²⁸ The most promising reform model is not necessarily a single super-regulator, but proposals have suggested a coordinated, risk-tiered, time-bound certification process that uses one application, interagency review, common data fields, explicit deadlines, a presumption of approval for low-risk activities, and international-standard alignment.²²⁹

Other reforms are concurrent. The FCC is modernizing its satellite licensing in an effort called the “Licensing Assembly Line.”²³⁰ The *Space Modernization Notice of Proposed Rulemaking (NPRM)* revises legacy rules from Part 25, proposes to adopt a new Part 100, and increases the speed of satellite license review while establishing bright-line criteria for public

²²⁷ *Outer Space Treaty 1967*, *supra* note 37; Iulia-Diana Galeriu, “Paper Satellites and the Free Use of Outer Space,” *GlobaLex*, NYU Law (April 2018) (describing the ITU first-come coordination problem and ‘paper satellite’ behavior from over-filing of orbital slot licenses despite unneeded uses of orbit by nations such as Tonga and Tongasat), https://www.nyulawglobal.org/globalex/paper_satellites_free_use_outer_space1.html.

²²⁸ *OSC Mission Authorization Proposal 2026*, *supra* note 226.

²²⁹ *AIAA Position Paper 2025*, *supra* note 44; United States Novel Space Activities Authorization and Supervision Framework (Dec. 2023), <https://bidenwhitehouse.archives.gov/wp-content/uploads/2023/12/Novel-Space-Activities-Framework-2023.pdf> [hereinafter *Novel Space Activities Framework 2023*]; *OSC Mission Authorization Proposal 2026*, *supra* note 226; Ctr. for Space Pol’y & Strategy, *Space Regulatory Reform Is a Wicked Problem* (2024), <https://aerospace.org/report/space-regulatory-reform-wicked-problem>.

²³⁰ FCC Press Release, “FCC Will Vote on Groundbreaking Acceleration of Space Bureau Process,” July 1, 2026, <https://docs.fcc.gov/public/attachments/DOC-422728A1.pdf>.

interest standards.²³¹ The NPRM requires satellite operators to share space situational awareness data with each other as well.²³²

1. The United States Has No Single “U.S. Space Act”

The United States does not regulate commercial space operations through a single omnibus “Space Act.” Instead, Congress has built an activity-specific statutory architecture. Congress can legislate in areas of interstate commerce, communications, national defense, spending, intellectual property, and treaty implementation. The President directs foreign affairs, national security, diplomacy, and executive-branch coordination. The permissions that a private launch provider, satellite operator, or remote-sensing company needs generally comes from statutes and regulations, not directly from the Constitution.

The Commercial Space Launch Act of 1984, now codified in §§ 50901-50923 of Title 51, is close to being the general commercial-space licensing statute that governs space activities in the United States.²³³ That statute gives the Secretary of Transportation, acting through the FAA Office of Commercial Space Transportation, authority to license and regulate commercial launches, reentries, and launch and reentry sites, including U.S.-person activities abroad. Operationally, this means the FAA reviews launch and reentry activities for public health and safety, safety of property, national security, foreign policy, and international obligations. The current implementing framework is 14 C.F.R. Part 450, which consolidates older launch and reentry licensing rules into a more performance-based vehicle-operator license structure.²³⁴

The Communications Act of 1934 (as amended by the Telecommunications Act of 1996) is a second statute which gives the Federal Communications Commission (FCC) authority over radio transmission and spectrum licensing.²³⁵ For satellite systems, this authority is implemented principally through Part 25 of the FCC’s rules.²³⁶ The FCC’s role is not merely communications housekeeping. Because any satellite system needs radiofrequency authority, the FCC has become

²³¹ *Id.*; *In the Matter of Space Modernization for the 21st Century*, FCC Notice of Proposed Rulemaking, SB Docket No. 25-306, Oct. 29, 2025, <https://docs.fcc.gov/public/attachments/FCC-25-69A1.pdf> (proposing to reorganize and modernize the satellite and earth-station licensing rules) [hereinafter *FCC Space Modernization NPRM 2025*].

²³² *Id.*

²³³ *Commercial Space Launch Act of 1984*, *supra* note 225.

²³⁴ *Commercial Space Launch Act of 1984*, *supra* note 225; *Part 450*, *infra* note 244; Fed. Aviation Admin., “FAA Streamlines Commercial Space License Approvals,” (Mar. 17, 2026), <https://www.faa.gov/newsroom/faa-streamlines-commercial-space-license-approvals>.

²³⁵ *Communications Act of 1934*, *Telecommunications Act of 1996*, *supra* note 85.

²³⁶ *Part 25*, *supra* note 85; FCC, “Part 25 Space Station Licensing Process and Timeline,” (Jan. 23, 2024), <https://www.fcc.gov/part-25-space-station-licensing-process-and-timeline>.

a de facto space-sustainability regulator through orbital-debris, collision-risk, disposal, casualty-risk, and interference-mitigation conditions attached to space-station and earth-station authorizations. Thus, for an EU equivalence analysis, FCC licensing is the U.S. system’s principal mechanism for spectrum coordination, harmful-interference control, and much of the practical supervision of satellite constellations after launch.

The Land Remote Sensing Policy Act, codified in §§ 60101-60162 of Title 51 is a third relevant statute.²³⁷ That statute authorizes the Secretary of Commerce, through the National Oceanic and Atmospheric Administration (NOAA), to license private remote-sensing space systems. NOAA’s regulations, now found at 15 C.F.R. Part 960,²³⁸ govern the operation of private remote-sensing systems within the United States or by U.S. persons. The regime is especially important for “space-based data” comparisons because it is the U.S. system’s closest equivalent to a licensing regime for commercial Earth-observation data. It does not license every satellite-data business, rather, it licenses private remote-sensing systems and then calibrates conditions based on national security, foreign policy, and international obligations.

A fourth statute regulating space operations concerns export control. The Arms Export Control Act authorizes the President to control the export and import of defense articles and defense services, implemented by the State Department through the International Traffic in Arms Regulations (ITAR).²³⁹ Many military, intelligence, launch, propulsion, spacecraft, satellite, and technical-data items can fall within ITAR. Parallel to ITAR, the Export Control Reform Act of 2018 supplies the modern statutory basis for the Commerce Department’s Export Administration Regulations (EAR), which control dual-use and certain commercial items, software, and technology. These export-control statutes are not “space licensing” laws in the narrow sense, but they are part of the U.S. space-operations regime because they govern who may receive controlled space technology.

The U.S. Commercial Space Launch Competitiveness Act of 2015 is another statute of note.²⁴⁰ It did not create a consolidated space regulator but instead, it amended the existing launch regime, extended key commercial-space protections, and added §§ 51301-51303 of Title 51 on commercial exploration and use of space resources. Chapter 513 declares that U.S. citizens

²³⁷ *Land Remote Sensing Policy Act of 1992*, *supra* note 80.

²³⁸ *Part 960*, *supra* note 81.

²³⁹ *Arms Export Control Act*, *supra* note 87; *International Traffic in Arms Regulations*, *supra* note 87; *Export Control Reform Act of 2018*, *supra* note 87; *Export Administration Regulations*, *supra* note 87.

²⁴⁰ U.S. Commercial Space Launch Competitiveness Act, Pub. L. No. 114-90, 129 Stat. 704 (2015), <https://www.congress.gov/114/plaws/publ90/PLAW-114publ90.pdf> [hereinafter *CSLCA 2015*].

engaged in commercial recovery of asteroid resources or space resources are entitled to possess, own, transport, use, and sell those resources, subject to applicable law and U.S. international obligations. For purposes of comparing the United States to the EU, the 2015 Act is important because it shows the American preference for enabling private activity by recognizing commercial rights and reducing barriers, while leaving authorization and supervision to existing agencies.²⁴¹

There is also a general background statute in the National Aeronautics and Space Act, now codified in §§ 20101-20164 of Title 51.²⁴² That statute is foundational for NASA and U.S. civil space policy, but it is not the main licensing statute for private operators. NASA may procure, partner, conduct missions, and support civil space development, but a private operator's legal path usually runs through FAA launch/reentry approval, FCC spectrum and satellite authorization, NOAA remote-sensing licensing if applicable, export-control review, environmental review where triggered, and any mission-specific national-security or interagency review.

2. How U.S. Licensing Works Operationally Today

a) FAA: Public-Safety Licensing for Launch and Reentry

FAA launch and reentry licensing is the clearest example of a mature U.S. commercial-space authorization system. Chapter 509 requires covered launches, reentries, and launch or reentry-site operations to be licensed or permitted.²⁴³ The statutory purpose is to both protect safety, national-security and foreign-policy interests, while encouraging and facilitating the commercial launch industry.

Part 450 modernized the FAA regime by replacing several legacy launch and reentry rules with a performance-based licensing framework.²⁴⁴ FAA itself describes Part 450 as reducing the number of times an operator needs approval and allowing one license to cover a portfolio of operations, vehicle configurations, mission profiles, and multiple launch and reentry sites. Part

²⁴¹ *CSLCA 2015*, *supra* note 240; 51 U.S.C. ch. 513; 51 U.S.C. § 51303.

²⁴² National Aeronautics and Space Act, 51 U.S.C. §§ 20101-20164; *Outer Space Treaty 1967*, *supra* note 37 at art. VI.

²⁴³ *Commercial Space Launch Act of 1984*, *supra* note 225 at § 50903(b) (directing the Secretary of Transportation to encourage, facilitate, and promote commercial space launches and reentries by the private sector); *id.* at § 50904(a)-(c) (requiring a license or permit for covered launches, reentries, and launch or reentry-site operations, including certain activities by U.S. citizens abroad or in areas outside national jurisdiction).

²⁴⁴ Launch and Reentry License Requirements, 14 C.F.R. Part 450, <https://www.ecfr.gov/current/title-14/chapter-III/subchapter-C/part-450> [hereinafter *Part 450*]; Fed. Aviation Admin., “FAA Streamlines Commercial Space License Approvals,” (Mar. 17, 2026), <https://www.faa.gov/newsroom/faa-streamlines-commercial-space-license-approvals> (describing Part 450 as allowing one license for a portfolio of operations, vehicle configurations, mission profiles, and multiple launch and reentry sites).

450 is an important domestic comparison for what the EU Space Act is trying to do to consolidate some authorizations without necessarily eliminating all agency or national concerns.

b) FCC: Spectrum, Satellite Communications, and De Facto Sustainability Review

The FCC is not a general space-safety regulator, but it is an important space regulator because satellite communications require spectrum authorization. The Communications Act empowers the FCC to regulate radio stations, assign bands and frequencies, prescribe services, and act in the public interest, and Part 25 contains the satellite licensing architecture for space stations and earth stations.²⁴⁵ Over time, FCC satellite licensing has also become a key sustainability gate through orbital-debris mitigation and end-of-life disposal showings. The FCC’s current modernization effort underscores that even the U.S. sectoral model needs to streamline its processes. In 2025, the FCC proposed a major modernization of its satellite and earth-station rules. The proposal is significant because it shows that regulatory consolidation can occur inside one agency even without a whole-of-government space code.²⁴⁶

c) NOAA: Remote Sensing and Space-Based Data

NOAA’s remote-sensing regime is close to a EU “space-based data provider” regime, but only for private remote-sensing space systems. The Land Remote Sensing Policy Act authorizes licensing of private remote-sensing systems while Part 960 applies to systems operated within the United States or by a U.S. person.²⁴⁷ A single Earth-observation operator, however, needs both NOAA remote-sensing authority and FCC spectrum authority, plus export-control review for hardware, software, or technical data.

For EU equivalence purposes, this distinction matters. A U.S. “space-based data provider” may be regulated by NOAA if it operates a remote-sensing space system, by FCC if it transmits data through licensed radiofrequency links, by Bureau of Industry and Security (BIS) or Directorate of Defense Trade Controls (DDTC) if data or technology is export-controlled, and by ordinary privacy, cybersecurity, sanctions, or procurement law depending on customers and use cases. There is no single U.S. legal definition of “space-based data provider.”

²⁴⁵ 47 U.S.C. § 303 (authorizing the Federal Communications Commission, as public convenience, interest, or necessity requires, to classify radio stations, prescribe services, assign bands and frequencies, regulate station powers and times, and perform related spectrum-management functions); *Part 25*, *supra* note 85.

²⁴⁶ *FCC Space Modernization NPRM 2025*, *supra* note 231.

²⁴⁷ *Land Remote Sensing Policy Act of 1992*, *supra* note 80; *Part 960*, *supra* note 81; *id.* at *Part 960.1-.2* (setting requirements for operation of private remote-sensing space systems within the United States or by a U.S. person and clarifying that NOAA does not authorize use of spectrum).

d) Export Controls: The Hidden Architecture of Space Governance

Export controls are not usually described as space-operator licensing, but they are operationally important for space activity. Spacecraft, satellite components, defense services, software, telemetry, encryption, technical data, and foreign-person access can trigger ITAR or EAR controls. The ITAR channel is defense-oriented and State Department-led while the EAR channel is Commerce and BIS-led, applying to dual-use and less-sensitive items. For international joint ventures, export control may be more consequential and time-consuming than FAA or NOAA licensing.²⁴⁸

e) Commerce and OSC: From SSA Services to Mission Authorization

The Office of Space Commerce is becoming a coordination hub for all these moving pieces. Space Policy Directive-3 (SPD-3)²⁴⁹ moved basic civil space situational awareness (SSA) and space traffic management (STM) services toward Commerce, and the Traffic Coordination System for Space (TraCSS) was established to provide basic SSA data and services to civil and private operators.²⁵⁰ TraCSS is not a license, but it is a regulatory infrastructure layer to provide operators with reliable space-object data and warnings, and governments with common civil channels for safety-of-flight information.

The March 2026 Office of Space Commerce Certification proposal is more ambitious.²⁵¹ There has been a long-standing mission-authorization gap where private activities that are covered by Article VI supervision in international law do not fit cleanly into FAA launch and reentry, FCC spectrum, or NOAA remote-sensing categories. The OSC proposal would implement a consolidated application and interagency review. Critically, however, FAA, FCC, and other statutory obligations will still apply.

²⁴⁸ *Arms Export Control Act*, *supra* note 87; *International Traffic in Arms Regulations*, *supra* note 87; *Export Control Reform Act 2018*, *supra* note 87; *Export Administration Regulations*, *supra* note 87; *EAR Commerce Control List*, *supra* note 87.

²⁴⁹ *SPD-5 (2020)*, *supra* note 75.

²⁵⁰ Office of Space Commerce, Space Situational Awareness / Space Traffic Coordination, <https://space.commerce.gov/space-situational-awareness-space-traffic-coordination/> (explaining that Space Policy Directive-3 designated the Department of Commerce as the lead civilian agency for basic SSA data and STM services to commercial operators); Office of Space Commerce, Traffic Coordination System for Space (TraCSS), <https://space.commerce.gov/traffic-coordination-system-for-space-tracss/> [hereinafter *OSC TraCSS*] (describing TraCSS as a system to provide basic space situational awareness data and services to civil and private operators).

²⁵¹ Executive Order 14335, *Enabling Competition in the Commercial Space Industry* (Aug. 13, 2025), <https://www.whitehouse.gov/presidential-actions/2025/08/enabling-competition-in-the-commercial-space-industry/> [hereinafter *EO 14335*] (directing the Secretary of Commerce to propose an authorization process for commercial space activities not clearly governed by existing frameworks); *OSC Mission Authorization Proposal 2026*, *supra* note 226; *OSC Space Commerce Certification Proposal 2026*, *supra* note 226.

Table 9 — Key U.S. Space Laws

Authorization	Principal Statute	Implementing Agency	Main Regulations
Launch, reentry, launch sites, reentry sites	Commercial Space Launch Act of 1984, 51 U.S.C. §§ 50901-50923	Department of Transportation and FAA Office of Commercial Space Transportation	14 C.F.R. Part 450; vehicle-operator licensing, public-safety review, flight-safety analysis, financial responsibility, mishap reporting, license terms and conditions.
Satellite communications, spectrum, earth stations, space stations	Communications Act of 1934, 47 U.S.C. §§ 301, 303, 307, 309 (as amended by the Telecommunications Act of 1996)	FCC Space Bureau and FCC International Bureau legacy functions	47 C.F.R. Part 25; space-station and earth-station licensing, ITU filings, frequency coordination, harmful-interference control, orbital-debris and disposal conditions.
Commercial remote sensing / Earth observation	Land Remote Sensing Policy Act, 51 U.S.C. §§ 60101-60162	Department of Commerce and NOAA Commercial Remote Sensing Regulatory Affairs	15 C.F.R. Part 960; licensing of private remote-sensing space systems, national-security and foreign-policy conditions, data-availability and system-operation review.
Defense articles, defense services, sensitive space technical data	Arms Export Control Act, 22 U.S.C. § 2778	State Department, Directorate of Defense Trade Controls (DDTC)	ITAR, 22 C.F.R. Parts 120-130; controls exports and temporary imports of defense articles and services, including covered satellites, launch items, spacecraft systems, and technical data.
Dual-use and commercial technology exports	Export Control Reform Act of 2018, 50 U.S.C. §§ 4801-4852	Commerce Department, Bureau of Industry and Security (BIS)	EAR, 15 C.F.R. Parts 730-774; controls exports, reexports, transfers, and certain U.S.-person activities involving dual-use and commercial space-related items.
Space resources	U.S. Commercial Space Launch Competitiveness Act of 2015, adding 51 U.S.C. §§ 51301-51303	President acting through appropriate federal agencies; no single dedicated regulator	Recognizes rights of U.S. citizens to possess, own, transport, use, and sell recovered asteroid or space resources, subject to applicable law and international obligations.
Civil space program and NASA authorities	National Aeronautics and Space Act, 51 U.S.C. §§ 20101-20164	NASA	Civil research, exploration, procurement, partnerships, technology development; not a general private-operator licensing statute.

C. How the EU Should Evaluate U.S. Equivalence

The EU should build an equivalence matrix to evaluate the U.S. regime. For launch and reentry, it should consider FAA rules. For satellite communications and radio frequency interference, FCC licensing and ITU coordination are operative. For remote-sensing space-based data, NOAA Part 960 governs. For satellite data, ITAR and EAR apply. For orbital safety and space situational awareness, FCC rules and TraCSS apply. For novel in-space servicing, assembly, and manufacturing (ISAM) applications, commercial stations, and lunar activities, a new streamlined mission-authorization framework is still being formalized.²⁵²

The hardest obstacle, however, may be the EU Space Act's requirement to grant reciprocal recognition of the EU framework. Article 105(2)(ca) of the Compromise Text conditions any EU equivalence decision on the third country having "undertaken to recognise and, within a reasonable period, does recognise on a reciprocal basis the legal and supervisory framework of the Union..."²⁵³ That reciprocity requirement is difficult for the United States to satisfy, because the United States has no single federal space regulator able to grant reciprocal recognition of the EU framework. Recognition would instead have to be assembled across the FAA, FCC, NOAA, and the Departments of State and Commerce, each acting under its own statute. Even if a particular U.S. regime is substantively equivalent, the absence of a counterpart that can deliver country-level reciprocity may stall a unilateral equivalence decision, making a sector-specific international agreement under Article 106 a feasible pathway.²⁵⁴

1. U.S. Fragmentation Compared with EU Fragmentation

U.S. fragmentation and EU fragmentation are not the same legal problem. In the U.S., fragmentation occurs inside one federal sovereign. Congress can, if it chooses, create a new

²⁵² *Part 450*, *supra* note 244; *Part 25*, *supra* note 85; *Part 960.1-2*, *supra* note 81 (setting requirements for operation of private remote-sensing space systems within the United States or by a U.S. person and clarifying that NOAA does not authorize use of spectrum); *Arms Export Control Act*, *supra* note 87; *International Traffic in Arms Regulations*, *supra* note 87; *Export Control Reform Act 2018*, *supra* note 87; *OSC TraCSS*, *supra* note 250; *OSC Mission Authorization Proposal 2026*, *supra* note 226.

²⁵³ *EU Space Act, Compromise Text 2026, ST 7806/26*, *supra* note 1 at art. 105, recital (2)(ca) and art. 106.

²⁵⁴ *Id.* at art. 106. The 2017 EU–U.S. Covered Agreement on insurance is the canonical example of the EU achieving "equivalence by bilateral agreement" with a U.S. regime that is fragmented and has no single federal counterpart regulator capable of reciprocity. Bilateral Agreement on Prudential Measures Regarding Insurance and Reinsurance (signed 2017; OJ L 258, 6.10.2017, p. 4; Council Decision (EU) 2017/1792) (achieving mutual deference, elimination of reinsurance collateral and local-presence requirements, and mutual recognition of group supervision, without harmonizing U.S. law or creating a single U.S. regulator. Reciprocity was delivered at agreement level, not regulator level, but required U.S. enabling legislation in Dodd-Frank Title V which established the Federal Insurance Office and authorized Treasury and USTR to negotiate "covered agreements" (31 U.S.C. §§ 313–314). This outcome took several years of negotiations starting in 2015 and a parallel U.S.-UK agreement in 2018); Directive 2009/138/EC arts. 172, 227, 260 (Solvency II).

statutory system, assign a lead agency, preempt state interference, and order interagency reliance. In the EU, fragmentation occurs across Member State authorization regimes plus EU treaty limits. The EU must identify a legal basis, respect Member State international responsibility under space treaties, and avoid using Article 189 of the TFEU which forbids harmonization.²⁵⁵

The proposed EU Space Act is therefore not the European equivalent of creating a single U.S. “Department of Space Licensing.” It is more like Congress using an interstate-commerce theory to set uniform baseline requirements for launch, satellite operations, cyber resilience, sustainability, and space-derived data while leaving state governments, the FCC, the FAA, and national-security agencies with distinct residual roles. That is why equivalence with the United States will be challenging to establish. The EU will not be able to evaluate “the U.S. space regime” in the abstract. It will have to ask whether U.S. supervision is equivalent for a particular activity: launch, in-orbit operation, collision avoidance, remote sensing, broadband satellite service, space-based data provision, or cybersecurity/sustainability assurance.²⁵⁶ For the EU Space Act discussion, “equivalence” cannot simply be about whether U.S. space operators are licensed through the different agencies. It must ask whether the U.S. system achieves comparable supervision over the relevant risks to safety and space sustainability.

Schrems II may come to mind as a touchstone for EU “equivalence,” but it is an imperfect example for the EU Space Act. In *Schrems II*, the Court of Justice invalidated the EU–U.S. Privacy Shield because U.S. surveillance law did not afford protection “essentially equivalent” to that guaranteed within the EU and lacked adequate proportionality limits and judicial redress for EU data subjects.²⁵⁷ The European Commission had certified a third-country framework as adequate, and the Court tested that certification against the EU benchmark. The EU Space Act borrows the same architecture to determine if a third country’s “legal and supervisory framework” is equivalent, subject to monitoring, reassessment, and repeal.²⁵⁸

²⁵⁵ European Commission, “EU Space Act,” (June 25, 2025), https://defence-industry-space.ec.europa.eu/eu-space-act_en (describing the initiative as a harmonized framework for space activities across the Union focused on safety, resilience, environmental sustainability, and competitiveness).

²⁵⁶ Office of Space Commerce, “U.S. Government Provides Feedback on Draft E.U. Space Act,” (Nov. 4, 2025), <https://space.commerce.gov/u-s-government-provides-feedback-on-draft-e-u-space-act/>; Office of Space Commerce, “EU Space Act Update,” (Apr. 3, 2026), <https://space.commerce.gov/eu-space-act-update-april-2026/>; *EU Space Act, Compromise Text 2026*, ST 7806/26, *supra* note 1; *EPRS Report 2025*, *supra* note 8.

²⁵⁷ Case C-311/18, *Data Protection Commissioner v. Facebook Ireland Ltd. & Maximilian Schrems (Schrems II)*, ECLI:EU:C:2020:559 (invalidating the EU–U.S. Privacy Shield for want of essentially equivalent protection against U.S. surveillance), <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:62018CJ0311> [hereinafter *Schrems II*].

²⁵⁸ *EU Space Act, Compromise Text 2026*, ST 7806/26, *supra* note 1 at art. 105 (equivalence for third countries).

Schrems II concerned personal data and government access to it and the equivalence benchmark was the protection of fundamental privacy rights. Space-based data, by contrast, is generally operational rather than personal, including imagery, signals, and telemetry received from a space object. To the extent that satellite broadband carries personal communications, then GDPR and Schrems-style scrutiny would apply. But for operational data, the Schrems test of “essential equivalence of privacy protection” may not relate. The closer comparison for the space context is ordinary regulatory mutual recognition of the kind long used for food, pharmaceuticals, and manufactured products which proceeds on demonstrated regulatory equivalence and reciprocity rather than on a privacy-rights inquiry.

Like the adequacy regime, equivalence can translate into compliance and self-assessment burdens on third-country operators and can project EU standards outward through conditioned market access—the so-called “Brussels effect.”

2. Global Considerations

Aside from EU-US equivalence considerations, the EU Space Act should be considered in light of the laws of other countries. Space law is global because it is international law first, national implementation second, and sectoral administrative law third. The Outer Space Treaty creates the basic tenets for space governance including freedom of exploration and use, non-appropriation, state responsibility, authorization and continuing supervision, liability, registration, jurisdiction, and due regard.²⁵⁹ The UN is not a space police force and private actors still need to operate through national legal systems because states are internationally responsible for them.

The maritime comparison is useful but limited. Like the high seas, outer space is not subject to territorial sovereignty. Like vessels, space objects are registered and associated with a state that retains jurisdiction and control. Like maritime navigation, space operations create collision, rescue, safety, and commons-management problems. But unlike maritime law, there is no centuries-old integrated admiralty system, no port-state-control comparison for orbit, and no global traffic regulator with direct authority over private operators.

The “first come, first served” problem is clearest in spectrum and geostationary-orbit coordination through the ITU.²⁶⁰ Orbital slots and frequencies are not property in the ordinary

²⁵⁹ *Outer Space Treaty 1967*, *supra* note 37.

²⁶⁰ See Jack Wright Nelson and David S. Schuman, *Return to the Moon—First Come, First Served?*, HARV. INT'L L.J. ONLINE (Jan. 22, 2026), <https://journals.law.harvard.edu/ilj/2026/01/return-to-the-moon-first-come-first-served/>; Carol R. Buxton, *Property in Outer Space: The Common Heritage of Mankind Principle vs. the First in Time, First in Right, Rule of Property*, 69 J. AIR L. & COM. 689 (2004),

domestic-law sense, but priority, coordination, and filing behavior can produce race dynamics and “paper satellite” concerns. The same problem is now migrating to lunar landing sites, radio-quiet zones, cislunar trajectories, and large constellations: the law rejects appropriation, but operational presence can still create practical priority.

Table 10 highlights the space regimes in other countries such as China, Russia, India, and Japan, compared to the United States, France, and Germany.

Table 10 — Major Space Powers: Fragmentation, Agencies, and Regulatory Lessons

Country	Fragmentation	Main Agencies	Lesson for U.S.–EU Equivalence
United States	Fragmented but federal: one sovereign legal system, multiple specialized agencies.	FAA/DOT for launch and reentry; FCC for spectrum/satellite communications; NOAA/Commerce for remote sensing; State/DDTC and Commerce/BIS for export controls; OSC/Commerce for TraCSS and proposed mission authorization; DoD/State consulted for national security and foreign policy. ²⁶¹	Highly capable and market-oriented, but no single operator license. Equivalence must be activity-specific.
China	Politically centralized, but legally still fragmented and policy-heavy; no comprehensive national space law yet.	State Council/CNSA for civil space policy and international cooperation; MIIT/SASTIND and other ministries for industrial and technical regulation; state-owned champions and military-civil systems remain central; departmental rules govern civil launch permits and space-object registration. ²⁶²	Unified strategic direction may accelerate industrial goals, but legal transparency, civil-military boundaries, and equivalence to liberal-market supervision are difficult.
Russia	Centralized state-corporation and licensing model.	Law on Space Activity; Roscosmos and related government bodies; Ministry of Defense for military/national-security functions; licensing of space activity under national law. ²⁶³	Centralization can simplify command and licensing, but it is tied to state control, sanctions exposure, and limited commercial-market openness.
France	Most mature EU national space-	French Space Operations Act; CNES technical role; competent ministries; Guiana Space Centre	Best EU example of a comprehensive national authorization-and-

<https://scholar.smu.edu/cgi/viewcontent.cgi?article=1712&context=jalc> (“The Outer Space Treaty, which governs outer space, prevents national sovereignty claims, but does not expressly prohibit private appropriation, unlike the Moon Treaty, which prohibits both national and private appropriation of the moon and other.” *Id.* at 702-03).

²⁶¹ *Commercial Space Launch Act of 1984*, *supra* note 225; *Communications Act of 1934*, *Telecommunications Act of 1996*, *supra* note 85; *Part 960*, *supra* note 81; *Part 25*, *supra* note 85; *Land Remote Sensing Policy Act of 1992*, *supra* note 80; *Arms Export Control Act*, *supra* note 87; *International Traffic in Arms Regulations*, *supra* note 87; *Export Control Reform Act 2018*, *supra* note 87.

²⁶² China Nat'l Space Admin., “China’s Space Activities, CNSA Profile,” Jan. 29, 2022, <https://www.cnsa.gov.cn/english/n6465684/n6760328/n6760333/c6813192/content.html> (describing CNSA’s responsibilities for civilian satellites and intergovernmental space cooperation); General Introduction to Space Law in China, Lexology, Dec. 3, 2024, <https://www.lexology.com/library/detail.aspx?g=57881328-e01f-4eab-8026-8f5e5aa36cbf> (noting that China does not yet have a comprehensive national space law and relies on departmental rules for civil launch permits and space-object registration); Center for Security and Emerging Technology, “Translation: China National Space Administration Action Plan to Advance High-Quality Development of Commercial Space (2025-2027),” March 10, 2026, <https://cset.georgetown.edu/publication/china-commercial-space-plan-2025-2027/> (describing China policies to open state-funded technologies and facilities to commercial firms and establish laws and insurance for commercial space).

²⁶³ Law of the Russian Federation No. 5663-1 of Aug. 20, 1993, on Space Activity, arts. 1, 9, translated in UNOOSA National Space Law Collection, https://www.unoosa.org/oosa/en/ourwork/spacelaw/nationalspace-law/russian_federation/decree_5663-1_E.html (providing legal regulation of space activities and making space activity subject to licensing); Resolution of the Government of the Russian Federation No. 104 of Feb. 2, 1996, translated in UNOOSA National Space Law Collection, https://www.unoosa.org/oosa/en/ourwork/spacelaw/national-spacelaw/russian_federation/decree_104_1996E.html (stating that the Russian Space Agency issues licenses for space operations for scientific and national-economic purposes).

Country	Fragmentation	Main Agencies	Lesson for U.S.–EU Equivalence
	operations regime; relatively unified for authorization and supervision.	framework; spectrum/data rules through separate national/EU channels. ²⁶⁴	supervision system. If the EU Space Act becomes operationally strong, it may look partly like a French-style safety/supervision model scaled to the internal market.
Germany	Major space power but legally fragmented because there is still no comprehensive general national space law.	DLR and federal ministries for strategy/research/industrial policy; Bundesnetzagentur for spectrum; no overall binding licensing and supervision system for space activities in general as of 2025. ²⁶⁵	Germany illustrates the EU fragmentation problem: a leading industrial and ESA power can still lack a comprehensive national operator law.
Japan	Comparatively unified commercial space-activities statute, with separate spectrum/export/national-security channels.	Cabinet Office under the Space Activities Act for launch permission and spacecraft-control licenses; MIC for spectrum; METI and other bodies for export/security; liability rules in the Act. ²⁶⁶	A useful model for a national commercial licensing statute: clearer than the U.S. in some respects, but still sectoral for spectrum, remote sensing, and exports.
India	Emerging single-window policy model, still developing statutory architecture.	Department of Space/ISRO; IN-SPACe promotes, enables, authorizes, and supervises non-governmental entities; NSIL commercializes ISRO capabilities; Indian Space Policy 2023 and NGP provide current framework. ²⁶⁷	Important comparative model for a fast-growing space economy that is trying to open a historically state-led sector through a promoter-authorizer-supervisor body.

3. *Unifying the U.S. Space Regime*

The U.S. reform debate has converged around mission authorization. The problem is usually described as the “mission authorization” gap where some activities are regulated such as launch, reentry, spectrum, and remote sensing, but emerging in-space activities may not fit neatly into FAA, FCC, or NOAA licensing.

²⁶⁴ CNES, “All You Need to Know About the French Space Operations Act (FSOA),” <https://spacecare.cnes.fr/en/la-securite-des-vols-spatiaux-english/> (explaining that France adopted the FSOA on June 3, 2008, effective Dec. 10, 2010, to authorize and supervise space operations under French responsibility); United Nations Office for Outer Space Affairs, “France: Space Debris Mitigation Standards,” Mar. 9, 2026, https://www.unoosa.org/documents/pdf/spacelaw/sd/France_updated_20260130.pdf (noting that the FSOA established a national authorization and supervision regime for national space activities).

²⁶⁵ Fed. Ministry for Econ. Affs. & Climate Action (BMWK), “The German Federal Government’s Space Strategy,” Sept. 2023, https://www.bundeswirtschaftsministerium.de/Redaktion/EN/Publikationen/Technologie/the-german-federal-governments-space-strategy.pdf?__blob=publicationFile&v=1 (stating that a national Space Act would help Germany fulfill its obligations under the Outer Space Treaty).

²⁶⁶ Cabinet Office of Japan, “Information on Act on Launching Spacecraft and Launch Vehicles and Control of Spacecraft” (Act No. 76 of 2016), <https://www8.cao.go.jp/space/english/activity/application.html> (describing permission for launches and licenses for spacecraft control); Koji Ishikawa, “Japanese Government Plans to Amend Space Activities Act,” Greenberg Traurig, July 29, 2025, <https://www.gtlaw.com/en/insights/2025/7/japanese-government-plans-to-amend-space-activities-act-part-1> (noting that Japan’s Space Activities Act took effect in November 2018 and provides launch, satellite-control, and third-party-liability rules).

²⁶⁷ Indian Space Policy 2023, § 4, https://www.isro.gov.in/media_isro/pdf/IndianSpacePolicy2023.pdf (allowing non-governmental entities to undertake end-to-end space-sector activities through establishment and operation of space objects, ground assets, and related services); Indian Nat’l Space Promotion & Authorization Ctr. (IN-SPACe), “Norms, Guidelines and Procedures for Implementation of Indian Space Policy-2023 in Respect of Authorization of Space Activities,” (2024), https://www.inspace.gov.in/sys_attachment.do?sys_id=5d532e37877102503b0f0d060cbb35cf.

The Biden Administration’s 2023 Novel Space Activities Authorization and Supervision Framework recognized that authorization and supervision should continue throughout the life cycle of space systems and contemplated reforms complementary to future legislation.²⁶⁸ The National Space Council also transmitted a legislative proposal for an Authorization and Supervision of Novel Private Sector Space Activities Act, but Congress did not enact a consolidated framework.²⁶⁹

The Trump Administration’s 2025 version of this effort appears in Executive Order 14335, “Enabling Competition in the Commercial Space Industry,” issued in August 2025.²⁷⁰ That order directed agencies to streamline commercial launch and reentry regulation, spaceport infrastructure review, and authorization for novel space activities. In response, in March 2026, the Department of Commerce’s Office of Space Commerce released an updated “Mission Authorization” proposal and “Space Commerce Certification” process.²⁷¹ This OSC proposal would create a voluntary, light-touch certification process for novel commercial space activities that are not clearly covered by existing FAA, FCC, or NOAA licensing.

The best reform is likely not one giant Department of Space. The more realistic model is a process housed at Commerce or another lead agency to use one application, shared data fields, risk tiers, deadlines, public guidance, a presumption of approval for low-risk activities, and conditions tailored to concrete risks rather than speculative policy concerns.²⁷² If a Space Commerce Certification merely adds a Commerce review on top of FAA, FCC, NOAA, ITAR/EAR, NEPA, national-security, and procurement rules, it will create additional compliance complexity, but if it can speed up review, then it would be a beneficial reform for novel space activity.

4. Open Questions in the EU Space Act

As the EU Space Act moves forward, a main question is how the final text will preserve Article 114 as its legal basis and if it will include narrowing amendments. This question matters because many of the activities it touches implicate national licensing authority, security interests,

²⁶⁸ *Novel Space Activities Framework 2023*, *supra* note 229.

²⁶⁹ Office of Space Commerce, Notice of In-Space Authorization and Supervision Policy Additional Listening Session, 87 Fed. Reg. 73,220 (Nov. 29, 2022), <https://www.federalregister.gov/documents/2022/11/29/2022-25951/notice-of-in-space-authorization-and-supervision-policy-additional-listening-session>.

²⁷⁰ EO 14335, *supra* note 251.

²⁷¹ *OSC Mission Authorization Proposal 2026*, *supra* note 226; *OSC Space Commerce Certification Proposal 2026*, *supra* note 226.

²⁷² *AIAA Position Paper*, *supra* note 44; *OSC Mission Authorization Proposal 2026*, *supra* note 226.

and Member State obligations under international space law. The final legal basis will shape how far the EU can go in harmonizing space regulation across Member States.

Whether the EU Space Act will create meaningful single-market access for space operators or simply add a new EU compliance layer on top of existing national authorization systems is a core issue. The final statute will therefore need to clarify how EU-level rules interact with national authority. The definition of “space-based data providers” will determine how wide-reaching the regime will extend and how it could affect the wider data economy. Finally, the Act raises important questions about third-country equivalence, reciprocity, and international alignment. The European Commission may be given authority to make equivalence decisions, but it is not yet clear how they will evaluate U.S. space regulations.

III. Appendix – EU Space Act, Compromise Text (Mar. 30, 2026) (excerpts)

A. Article 5 — Definitions

(-1) “space-based data” means raw or processed data originally received from a space object in outer space, including but not limited to data of interception, of transmission of a signal generated by a space object;

(-1a) ‘space activities’ means a set of operations involving space objects, conducted by a space operator for the purpose of providing space-based data or space operation services;

(-1b) ‘space operation services’ means any of the following services: (a) operation, control and disposal of space objects; (b) provision of launch services; (d) in-space operations and services (ISOS);

(-1c) “space-based data provider” means any natural or legal person established in the Union or in a third country, including an international organisation, that provides the service of providing space-based data;

(-1d) “space operator” means a public or private entity, including an international organisation, that performs or undertakes to perform space activities, including ... operation, control and disposal of a space object (“spacecraft operator”); ... operation, control and monitoring of the launch process of a space object (“launch operator”); ... operation and control of a space object for the purposes of provision of in-space operation and service.

(1f) “third country space operator” means a space operator established in a third country, except where it qualifies as a Union space operator ..., and which carries out any of the following: (a) provides space operation services to Union space operators, or in relation to Union-owned assets or to governmental or non-governmental space assets; (b) acts itself as a space-based data provider; or (c) provides space operation services to space-based data providers that provide space-based data within the Union.

(17e) Where an entity which is an electronic communications network and services provider only acts as a mere user of a facility offered by a space operator, it should only qualify as a space-based data provider under this Regulation. If an electronic communications network and services provider also operates or controls a satellite, or performs launch operations, it should qualify as a space operator under this Regulation.

(43h) ... Space operators could therefore circumvent EUSA’s common requirements by launching or operating from a third country before providing precisely the same space data to the downstream economy. ... it is necessary to impose obligations on a limited number of key actors, in order to respect the principle of proportionality, who act as gatekeepers between the space operation services economy and downstream markets. Those key actors should be required to ensure that any space-based data they provide in the Union originates from space objects whose activities are entered in the Union Repository of Space Activities (URSA), or ... specifically excluded from EUSA’s scope.

(43i) These anti-circumvention obligations should be effective and proportionate. ... they should only apply to those key actors acting as gatekeepers It should not include other actors providing space-based data, and in particular it should exclude research and educational provision of such data Second, these obligations should only apply where the provision of space-based data is the sole service provided or a decisive part of that service. It should not apply where that provision is an ancillary or minor part of the service, or where the space-based data is merely used as a source for another data and service.

(44a) 'space infrastructure' means any asset or set of assets, systems and sub-systems or parts thereof, used to carry out space activities, through the interaction and operation of the ground, space and link segments;

(47) The information publicly accessible in URSA should ensure compliance with Regulation (EU) 2016/679 and with Regulation (EU) 2018/1725 as applicable and not contain any sensitive commercial data or data subject to intellectual property rights.

(60a) 'aggregated dataset' means a life cycle inventory of multiple unit processes or life cycle stages, for which inputs and outputs are provided only at the aggregated level, horizontally or vertically;

(61) 'disaggregated dataset' means the breakdown of an aggregated dataset into smaller horizontal or vertical unit processed datasets;

(62) 'derived dataset' means a dataset obtained by combining, through mathematical operations, two or more datasets or by combining at least one dataset with substantial additional information or other datasets;

(75) 'critical design review' means the stage in the engineering, manufacturing and development process, which determines that the systems and subsystems design and configuration satisfy all specified requirements of the space mission, in terms of performance, compatibility, product specifications, assessment of risks, preliminary test planning, adequacy of preliminary operation and provision of supporting documents, enabling to proceed to system implementation and integration.

B. Article 23a — Provision of Space-Based Data in the Union

1. Space-based data providers may only provide space-based data within the Union where:

(a) that data was generated by a space object whose space activities are entered in URSA and carry the e-certificate referred to in Article 25; or

(b) that data was generated by a space object whose space activities are excluded from the scope of this Regulation under Article 2(3).

2. For the purposes of this Article, space-based data is provided where the provision of that space-based data is the sole service, or a decisive part of the service, provided by the space-based data provider. In particular, this does not include situations where providing space-based data is an ancillary part of the service provided, or where space-based data is merely one source for the data or other service provided. The

provision of space-based data for purely research or educational purposes does not constitute the provision of space-based data.

3. Central government authorities referred to in Annex I of Directive 2014/24/EU²¹, as well as Union institutions, bodies and agencies, shall ensure that all space-based data used to provide the services that they procure were generated by a space object whose space activities are entered in URSA and that those space-based data carry an e-certificate as referred to in Article 25.

C. Article 75 — Relationship with Directives (EU) 2022/2555 and (EU) 2022/2557

1. This Regulation shall be without prejudice to Directive (EU) 2022/2555 in relation to Union space operators that qualify as essential or important entities pursuant to Article 3 of that Directive with regard to space activities and space operation services covered by this Regulation.

2. Where Union space operators have been identified as critical entities in accordance with Directive (EU) 2022/2557, this Regulation shall apply without prejudice to Directive (EU) 2022/2557.

D. Article 105 — Equivalence for Third Countries

1. The Commission may adopt, on the basis of a detailed assessment, an equivalence decision, by means of implementing acts, in accordance with Article 114(2), stating that the legal and supervisory framework of a third country ensures that the space activities of third country space operators established in that third country comply with legally binding requirements that are equivalent to the requirements laid down in this Regulation and are subject to an effective supervision and enforcement in that third country.

2. The legal and supervisory framework of a third country shall be considered equivalent to this Regulation only if it fulfils at least the following conditions: (a) the third country space operators established in that third country are subject to authorisation and effective supervision and enforcement on an ongoing basis; (b) [they] are subject to legally binding rules equivalent to the requirements laid down in Article 15; and (ca) that third country has undertaken to recognise and, within a reasonable period, does recognise on a reciprocal basis the legal and supervisory framework of the Union for Union space operators through a unilateral decision or an international agreement under Article 106.

3. The Commission may attach specific, proportionate and technology-neutral conditions to the equivalence decisions, such as where the scale and scope of the space-based data or the space operation services provided by third country space operators are likely to be of strategic importance for the Union, or to prevent regulatory arbitrage.

6. The Commission shall, with the support of the Agency, monitor whether the legal and supervisory framework of a third country continues to be equivalent with the requirements laid down in this Regulation.