
Fostering Commercial Space with Efficient Policy and Oversight Tools

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Largely driven by U.S. companies and organizations, commercial space activity is in the midst of a worldwide expansion, including new actors, new application areas, and new business models. Governmental authorization and supervision of commercial space activities is not only a key duty of responsible space leadership, but it is fundamental for a robust and vibrant space economy by providing legal certainty to private sector entities and by setting the norms that support free and fair competition internationally. The United States needs a space policy approach that sustains this growth of commercial space activity and orients it for economic and societal benefit by considering appropriate oversight mechanisms, the government’s role as a customer for commercial space firms, and policy measures to develop the space economy.

Background

The global space economy is estimated at around \$570 billion as of the second quarter of 2024. Approximately one-fifth of that is government space program budgets, while the value of commercial space products, services, infrastructure, and supporting industry services is estimated at approximately \$445 billion.¹ Traditionally, commercial space activities have largely been confined to satellite telecommunications services, a limited amount of commercial remote sensing activities, and a relatively small amount of commercial space launch services. Outside of those activities, most other space industry revenue is associated with government space programs as contractors or service providers. Many commercial space firms remain closely dependent on government programs.

Private sector space actors are introducing a range of new applications, services, and approaches to space activities. These include new direct-to-consumer and business-to-business services in remote sensing and communications; new in-space servicing assembly and manufacturing (ISAM) activities, including on-orbit satellite life extension and maintenance; interest in space resources utilization and lunar commercialization; and expanding activities in commercial human spaceflight and commercial LEO destinations.

These new business models and applications are attracting notable amounts of venture and private capital. Analysts estimated that in 2022, space start-ups attracted \$8 billion in investment capital, down from a record \$15.4 billion in 2021. Much of this activity is centered upon the United States—more

¹ Space Foundation, “The Space Report 2024 Edition,” The Space Report, accessed July 18, 2024, <https://www.thespacereport.org/>.



than 70 percent of the investment in 2022 went into American companies. The United States also represents the largest base of investment sources—in 2022, 47 percent of investors in space-related start-ups were based in the United States. The U.S. share (by number of investors) has remained essentially constant since 2018, with China being the next most significant source of both capital and individual investors.²

As private sector space activity becomes more prevalent, the pace of activity, the increasing number of actors, and the introduction of new services/applications challenge the continuity and safety of operations in the domain. A key aspect of space sustainability is the reality that the actions of one actor in the space domain can affect the ability of others to operate safely. Effective policy and regulatory practices for commercial space development should consider the role of sustainability and stability in enabling continued growth of the space economy.

Current Policy and Gaps or Shortcomings

The United States government must balance both industry promotion functions and oversight functions. Several agencies have both a regulatory role and an industry promotion role (e.g., the FAA's Office of Commercial Space Transportation, the Department of Commerce); others have an independent role that must consider both space and terrestrial industry needs (e.g., the Federal Communications Commission); while still other agencies play an important role as both a customer of the space industry and a developer of space technology (e.g., NASA, the Department of Defense). Agencies, including the Department of Commerce and the Department of State, also administer export control requirements that affect commercial space activities. The overall structure for commercial space-

related policy implementation and regulation in the United States is fragmented.

Additionally, as commercial space activities increase in number and complexity, the ability of licensing agencies to keep pace with the increasing number of applications has been challenged. Budgets, staffing, and capacity of oversight authorities have not kept pace with the amount of activity. In order for regulators to operate effectively, appropriate resourcing must be provided, and processes must be adapted to enhance efficiency while still ensuring obligations are upheld and public and operator interests in safety and sustainability are met.

Recognizing these challenges, there has been considerable effort made since the Obama administration, including work in both the first Trump administration and the Biden administration, to conduct regulatory reform efforts within commercial space. These include recent reforms to export control restrictions on space and satellite-related items; efforts to reform Part 450 launch licensing at the FAA to enhance efficiency; revisions to non-Earth imaging, rapid revisit, and synthetic aperture radar licensing restrictions on NOAA to enhance U.S. industry competitiveness, and the creation of streamlined licensing processes for certain categories of satellites at the FCC. While these efforts have made progress, certain challenges remain, including [further updates and consistency in orbital debris mitigation requirements](#), effective licensing processes for large constellations, and [continuing reform of commercial remote sensing licensing](#).

Most significantly, however, despite these regulatory reform efforts, there is still the unanswered question of how to authorize and supervise private sector space activities that do not clearly fall under the existing authorities of NOAA, the FAA, or the FCC. While regulators overlap in some areas, there is a clear absence of authority in other areas. Neither

² BryceTech, "Start-Up Space 2023," BryceTech, accessed February 8, 2025, https://brycetechnology.com/reports/report-documents/Bryce_Start-Up_Space_2023.pdf.



the FAA nor the Department of Commerce currently has authority to license on-orbit activities. This gap prevents commercial actors from knowing which regulator to approach for permission to undertake advanced, pioneering activities on orbit or on a celestial body. It increases costs to operators who must consult multiple agencies and creates uncertainty through a lack of consistency in licensing provisions. It has also led to concerns over agencies asserting authority over areas of activity that are potentially outside of their scope. Closing this gap is an opportunity to enhance the efficiency of government operations while increasing predictability and certainty for commercial operators.

The United States has a long-standing policy goal of “encouraging and facilitating the continued growth of a domestic commercial space sector.”³ There are opportunities to enhance outcomes in achieving this policy goal. In particular, commercial space-related procurement strategies used across the government are inconsistent and unevenly applied. In many cases, criteria used for decisions about purchasing commercial capabilities versus pursuing traditional development approaches are opaque at best. Furthermore, the government can play a critical role in advancing early space-related technology to commercially relevant levels of maturity, yet the early-stage technology programs within the government’s space-related agencies are often ineffective and, in particular, lack strategies to advance beyond the proof of concept stage to the validation and demonstration stages (where a commercial transition is more likely to occur).

The United States is not alone in efforts to develop a domestic commercial space sector. Countries around the globe have similarly initiated policy efforts focused on commercial space strategy, including in China, across Europe, Japan, and elsewhere. Commercial space will be both an area of economic cooperation and trade and an area of competition. Given this trend, it is important to continue efforts (which were initiated under the first Trump administration) to systematically track the economic size and return of the space sector, as a specific sector of the broader economy, in order to help set realistic policy goals and track their outcomes. Additionally, diplomatic efforts related to the space sector must consider commercial space activities as part of the overall approach to space-related foreign policy. •

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³ Office of Space Commerce, “National Space Policy,” U.S. Department of Commerce, accessed February 8, 2025, <https://www.space.commerce.gov/policy/national-space-policy/>.



Policy Recommendations

→ The Office of Space Commerce (OSC) within the Department of Commerce should act as the lead agency for the authorization and supervision of private sector space activities.

A clear and certain oversight process should be implemented with one agency designated as a lead to close the gap in licensing of commercial space operations and ensure consistency across the U.S. government. This agency should be the Office of Space Commerce (OSC) within the Department of Commerce and should be elevated out of NOAA to an office within the Office of the Secretary of Commerce. Making OSC the lead agency will complement its developing role of providing civil space situational awareness data and services to support spaceflight safety as it works towards developing a future space traffic coordination system.

→ Implement [mission authorization](#) through an interagency process, with OSC as the lead.

Acting as the lead agency for the authorization and supervision of private sector space activities, OSC should serve as a clearinghouse or tracking point for private sector space activities seeking government approval. This will provide more clarity for commercial companies who may not otherwise know who to go to in the U.S. government for a license and also help OSC better understand the breadth and scope of private sector space activities to inform its mission to promote such activities. For further discussion of mission authorization, please refer to the focus section.

→ Ensure licensing authorities are resourced at levels to ensure responsiveness.

Efforts to reform regulatory provisions to enhance the competitiveness of the U.S. space industry must be complemented by ensuring that licensing authorities have the appropriate amount of budgetary and staffing resources to respond to applications and issue licenses in an efficient manner. This should include retaining the Space Bureau at FCC, which has made progress in enhancing the responsiveness of that agency to satellite industry activities.

→ Establish an international dialogue on oversight of commercial space.

In order to improve the linkages between commercial space and foreign and trade policy, the U.S. government should pursue an active strategy of diplomatic and civil society dialogue on international approaches to commercial space sector policy, including with competitor nations. Such an approach will help to identify and share regulatory best practices, reduce the risk of regulatory fragmentation and forum shopping, and potentially help to identify trade opportunities for U.S. companies. It will help to ensure that the United States is at the forefront of establishing the values that define economic competition in the space market.