From Artemis to Allied Advantage: Accelerating U.S.-Japan Space Cooperation Through Strategic Technology Partnerships

By David Helvey

The U.S.-Japan Alliance has long been a foundation of stability, deterrence, and economic growth in the Indo-Pacific. For more than six decades, it has anchored the American presence in Asia, preserved and strengthened Japan's security and that of the Indo-Pacific region as a whole, and adapted to successive shifts in the regional security environment. Today, that process of adaptation is accelerating.

The strategic environment confronting U.S. and Japanese leaders is more contested, technologically dynamic, and economically interconnected than at any point since the Cold War. Great power competition, exacerbated by the People's Republic of China's great power ambitions, extends beyond traditional measures of the military balance into supply chains, digital infrastructure, advanced manufacturing, artificial intelligence, and other critical technologies. Space sits at the center of this transformation.

The United States and Japan have already demonstrated what deeper cooperation in space exploration and development can achieve. Japan's role in the Artemis program—including its contribution to lunar surface mobility and Gateway systems—reflects a level of technical sophistication and strategic trust that would have been difficult, if not impossible, to imagine a mere generation ago.

Artemis should be viewed not as the culmination of this collaboration, but as the foundation for something broader: a long-term strategic technology partnership capable of strengthening allied and alliance resilience, accelerating innovation, and reinforcing a free and open order in space and beyond. Realizing that opportunity will require Washington and Tokyo to build the industrial ecosystems, operational architectures, commercial partnerships, and allied technology networks necessary to sustain long-term advantage in the space domain.

The policy basis for that vision already exists. In both Washington and Tokyo, policymakers increasingly view space, economic security, industrial resilience, and advanced technology competition as interconnected strategic challenges rather than separate policy areas.

The United States has emphasized the importance of maintaining a robust space enterprise across civil, commercial, and national security sectors while integrating commercial capabilities into military operational planning. Recent U.S. strategy documents place renewed emphasis on space superiority, cislunar awareness, hybrid commercial-government architectures, and the resilience of the space industrial base.[1]

1 See also: The White House, "National Space Policy for the United States of America," December 2020 https://trumpwhitehouse.archives.gov/wp-content/uploads/2020/12/National-Space-Policy.pdf; White House, "United States Space Priorities Framework," December 2021, https://bidenwhitehouse.archives.gov/wp-content/uploads/2021/12/United-States-Space-Priorities-Framework-_-December-1-2021.pdf.

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Japan is moving in a similar direction. Tokyo's 2023 Basic Plan on Space Policy identifies space security, national resilience, innovation, exploration, and industrial competitiveness as core national priorities. Japan's Space Security Initiative highlights space domain awareness, resilient communications, and integration of space into broader national security planning, while the Japan Aerospace Exploration Agency (JAXA)-administered ¥1 trillion ($6.3 billion) Space Strategy Fund is designed to strengthen the country's long-term commercial and industrial capacity in the sector.

Japan's economic security framework reinforces this trajectory. The Economic Security Promotion Act treats geographic diversification of supply chains, critical infrastructure protection, advanced technologies, and public-private coordination as matters of national security. That logic applies directly to space systems, which depend on trusted suppliers, secure software, advanced materials, microelectronics, cybersecurity, and advanced manufacturing capacity.

Finally, Japan's Free and Open Indo-Pacific (FOIP) concept provides the broader geopolitical context. In her May 2026 speech in Hanoi outlining the latest iteration of FOIP, Prime Minister Sanae Takaichi linked space cooperation, satellite data, supply-chain security, digital infrastructure, and security cooperation within a common strategic framework centered on resilience and preserving each country's freedom to make sovereign choices across economic, technological, and security domains.

Taken together, these policies point toward the same conclusion: the next phase of U.S.-Japan space cooperation should move beyond project-based collaboration toward a more integrated strategic ecosystem.

Building the Next Phase of Cooperation

If the United States and Japan are serious about treating space as a strategic domain, the Alliance must move beyond cooperation organized around individual programs and toward a more integrated ecosystem approach. That effort should be built around five pillars:

1. **Integrating space more fully into Alliance strategy;**
2. **Developing practical cooperation in key mission areas;**
3. **Strengthening commercial and industrial linkages;**
4. **Expanding cooperation with allies and partners; and**
5. **Reinforcing the economic-security foundations of a resilient space ecosystem.**

Collectively, these pillars would transform space cooperation from a collection of successful initiatives into a durable source of Alliance advantage.

PILLAR 1: Elevating Space Cooperation as a Standing Pillar of Alliance Strategy

The U.S.-Japan Comprehensive Dialogue on Space already provides a useful institutional foundation, but the agenda should be expanded to include a cross-cutting "space resilience and strategic technology" component to better integrate civil space, national security space, commercial space, and economic security policy.

That matters because many of the Alliance initiatives now underway—including deeper command-and-control integration, defense-industrial cooperation, emerging technology coordination, and more integrated approaches to deterrence—depend heavily on space-enabled capabilities. Communications, indications and warning, logistics, missile defense, targeting, and maritime awareness all rely on resilient space architectures. As space becomes one of the domains through which Alliance modernization is taking shape, it should no longer be treated as a niche portfolio.

PILLAR 2: Taking An Operational Approach to Space Cooperation

Artemis remains politically and strategically important, but Alliance leaders should also prioritize mission areas with more immediate operational relevance. Space situational awareness should be near the top of the list. Japan has steadily expanded its space domain awareness capabilities, while the United States brings unmatched sensor networks, operational experience, and analytic infrastructure. Shared awareness of activity in orbit—and increasingly in cislunar space—will become more important as the number of space actors and objects continues to grow.

Remote sensing offers another area for deeper cooperation. The Indo-Pacific is both a maritime theater and one of the world's most disaster-prone regions. Commercial and government remote-sensing data can support maritime domain awareness, disaster response, infrastructure monitoring, illegal fishing detection, and climate monitoring. Japan's updated FOIP framework already links satellite data to disaster prediction and climate response. The next step is developing more integrated data-sharing and analytic frameworks with partners across Southeast Asia and the Pacific Islands.

Resilient communications and data infrastructure should receive similar attention. Modern operations depend on moving large volumes of data securely and reliably across contested environments. Japan's FOIP Digital Corridor concept—which includes satellite communications, undersea cables, Open Radio Access Network (Open RAN) architectures, and all-optical networks—points toward a broader model of integrated digital resilience. U.S.-Japan cooperation should connect space-based communications with terrestrial digital infrastructure, cyber resilience, and trusted data governance across allied and partner networks.

PILLAR 3: Strengthening Commercial-Space Integration

The United States has already recognized the need to integrate commercial capabilities into national security space initiatives, while Japan's Space Strategy Fund is intended to strengthen its long-term private-sector space and space-adjacent technology ecosystems. The next step should be creating more structured pathways for American and Japanese firms, research institutions, investors, and government agencies to identify complementary technologies, industrial capabilities, and commercial opportunities.

This cooperation should extend across satellite systems, robotics, autonomous systems, space situational awareness, lunar infrastructure, advanced propulsion, secure software, AI-enabled analytics, and in-space servicing. It should also include the industrial and engineering base that supports these capabilities: advanced manufacturing, aerospace suppliers, digital engineering, systems integration, certification infrastructure, and production scaling.

The objective is not simply commercial expansion. It is building greater allied resilience and technological depth across the broader space ecosystem.

PILLAR 4: Widening the Aperture

The Artemis program already demonstrates the logic of multinational space cooperation. NASA, JAXA, the European Space Agency (ESA), the Canadian Space Agency, and other partners are contributing to a shared exploration architecture. ESA's Lunar I-Hab project, which incorporates Japanese contributions to environmental control and life-support systems, reflects how multinational cooperation can create genuine technical interdependence.

That model could be expanded further with the United States and Japan working more deliberately with Europe and ESA on cislunar domain awareness, lunar infrastructure, interoperability standards, space sustainability, and commercial-space services. France, Italy, Germany, Luxembourg, and the United Kingdom all bring relevant capabilities, while NATO's growing focus on commercial space integration and space-enabled security provides an additional framework for transatlantic coordination with NATO's Indo-Pacific Partners (IPP) Australia, Japan, New Zealand, and the Republic of Korea.

There is also room for minilateral cooperation in the Indo-Pacific. The U.S.-Japan-ROK trilateral space security dialogue is a useful start. Australia, Canada, and European partners, for example, could be brought into specific mission areas where they add value. Southeast Asian partners could be included in applications such as remote sensing, disaster response, maritime awareness, and digital connectivity.

PILLAR 5: Building Supply-Chain Resilience

Space systems depend on far more than launch vehicles and satellites. They rely on a complex ecosystem of trusted foundries, radiation-hardened microelectronics, advanced materials, precision-machined components, electromechanical assemblies, sensors, batteries, secure software, testing infrastructure, communications networks, ground systems, and highly specialized suppliers. Many of these capabilities reside deep within supply chains and industrial ecosystems that are difficult to replace quickly once disrupted.

The growing convergence of physical and digital infrastructure makes this challenge more acute. Modern space architectures depend not only on spacecraft in orbit, but also on secure software supply chains, resilient ground stations, trusted communications links, digital engineering environments, and the data networks that connect them. A vulnerability in a satellite's software, a compromised ground segment, or a disruption affecting critical suppliers can degrade mission effectiveness long before a spacecraft itself is threatened.

That reality is becoming more consequential as strategic competition intensifies. China's space program continues to advance across civil, commercial, and military sectors, while Beijing is simultaneously expanding both its lunar ambitions and its counterspace capabilities. Russia also remains a significant counterspace actor. The Center for Strategic and International Studies' Space Threat Assessment 2025, for example, details the proliferation of counterspace capabilities across direct-ascent, co-orbital, electronic warfare, directed-energy, and cyber technologies and concludes "[t]he normalization of space as a military operational domain and its integral role in joint operations mean that space is fair game during conflict." Yet the most consequential vulnerabilities may lie closer to Earth. Access to trusted microelectronics, specialized manufacturing capacity,

secure software, advanced materials, and resilient communications infrastructure increasingly determines whether space systems can be produced, sustained, upgraded, and operated at scale.

For the United States and Japan, this creates a shared strategic imperative. Washington and Tokyo should identify critical vulnerabilities across space-related supply chains, expand trusted sourcing arrangements, strengthen industrial linkages between allied suppliers, coordinate approaches to technology protection, and improve visibility into supply-chain vulnerabilities before they become operational risks. Particular attention should be paid to areas where allied cooperation can enhance access to trusted manufacturing capacity, digital engineering expertise, qualification and certification infrastructure, advanced materials, and other enabling capabilities that support the full lifecycle of space systems.

The objective extends beyond mitigating disruption. A more resilient U.S.-Japan space ecosystem would increase surge capacity, accelerate innovation, reduce dependence on potential adversaries, and strengthen the industrial foundations that underpin civil, commercial, and national security space activities alike. In an era of strategic competition, industrial depth is itself a source of strategic advantage.

Connecting U.S.-Japan Space Cooperation to Alliance Strategy

Ultimately, the importance of U.S.-Japan space cooperation extends beyond the space domain itself.

Space capabilities support military operations, but they also underpin civil infrastructure, economic activity, environmental monitoring, scientific discovery, communications, and disaster response. The strategic value of the U.S.-Japan Alliance to both capitals increasingly hinges on its ability to integrate these functions across security, economic, and technological domains.

This is also why Artemis matters beyond its exploration mission. The program demonstrates that democratic allies can organize large, technically demanding, and strategically consequential projects in ways that are open, interoperable, and sustainable over time. Japan's contribution to lunar surface exploration reflects the depth of trust and ambition already present within the Alliance.

The challenge ahead is translating that ambition into durable institutional and industrial capacity. The Alliance already has the policy frameworks, bilateral dialogue mechanisms, and technical relationships to move in this direction. What it has been lacking is a more deliberate effort to connect them.

By drawing on the five pillars outlined above, this memo lays out a practical agenda for implementation, one that focuses on a more integrated Alliance space dialogue; priority mission cooperation in space domain awareness, remote sensing, data relay, communications, and disaster response; a structured commercial-space partnership; multinational coordination with Europe, ESA, and Indo-Pacific partners; and a supply-chain resilience effort tied to economic security.

A more integrated approach to space cooperation—one that spans civil exploration, national security missions, commercial development, and supply-chain resilience—would strengthen deterrence, expand economic opportunity, and reinforce the case that open, allied systems can compete effectively in an era of strategic technology competition.

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