



Overview of the Space Strategy Fund (SSF)

Japan Aerospace Exploration Agency (JAXA)
The Space Strategy Fund Department

JAXA's New Role: The Space Strategy Fund (SSF)



“Basic Plan on Space Policy” – Cabinet decision on June 13, 2023

“Strengthen JAXA's strategic and flexible funding function. By doing so, JAXA will be utilized as a hub for technology development and demonstration, human resources, and technical information among industry, academia, and government, both domestically and internationally”

“Comprehensive Economic Measures” – Cabinet decision on November 2, 2023

“Establish a 10-year "Space Strategy Fund" at the Japan Aerospace Exploration Agency (JAXA) ... with the aim of providing support of 1 trillion yen (approx. 6 billion \$) in total as soon as possible.”

FY2023 Supplementary budget for the Fund: JPY 300 billion

(MEXT: JPY 150 billion, METI: JPY 126 billion, MIC: JPY 24 billion)

JAXA Missions



Space Strategy Fund

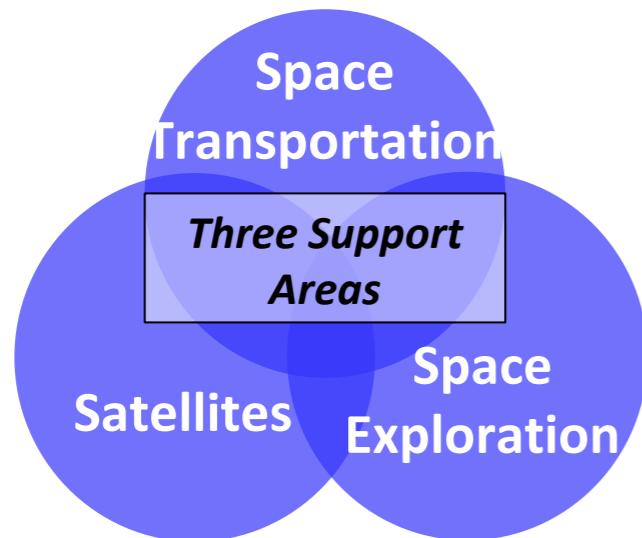


NEW! Since 2024

SSF Objectives/ Scheme

- The fund aims to accelerate and strengthen the achievements of the below **three goals**.

*Caution: This fund is for entrustment and grant allocation, not for equity investment.



Three goals

- Expanding the space market

Double the size of Japanese domestic space market (4T JPY → 8T JPY (approx. 60B USD) in the early 2030s)

- Solving global and social issues

Contribute to solving global and social issues by utilizing space

- Pioneering frontier

Deeper exploration of knowledge in the universe, and stronger basic and fundamental technologies

SSF Direction of Technology Development



Space Transportation

- ✓ Establish low-cost space transportation systems that can accommodate the diversifying launching needs for satellites manufactured both in Japan and overseas.
KPI: Improve Japan's rocket launching capabilities by securing approx. 30 flagship and private rocket launches annually by the first half of 2030s.
- ✓ Establish industrial infrastructure to achieve the above target and ensure its independence and autonomy, while acquiring the technology required to realize new space transportation systems and enhance Japan's overall international competitiveness.

Satellite

- ✓ Realize autonomous satellite systems that will increase international competitiveness of Japanese private companies (including startups) providing small to large-scale satellite services (communications, observation, etc.) and on-orbit servicing.
KPI: Establish more than five satellite systems through domestic private companies by early 2030s.
- ✓ Establish the domestic industrial infrastructure to achieve the above target and ensure its independence and autonomy, while acquiring innovative satellite infrastructure technologies to improve Japan's overall international competitiveness.
- ✓ Expand space-related markets through the use of satellite systems, including those mentioned above.
KPI: By the early 2030s, complete implementation of more than 30 major communications and satellite data utilization services by domestic private companies, etc. in Japan and overseas.

Exploration

- ✓ Ensure Japan's international presence in space explorations to the Moon, Mars and beyond, and initiatives to expand realms of human activity.
KPI: By the early 2030s, ensure that domestic private companies, universities, etc. will participate in more than 10 new missions and projects to explore the Moon, Mars and beyond.
- ✓ Create and expand post-ISS businesses initiated by Japanese private companies from 2030 onwards.
KPI: By the early 2030s, create more than 10 new business projects by Japanese companies utilizing low Earth orbit.
- ✓ In addition, leverage these opportunities to accomplish exceptional scientific results in fields such as solar system science and astrophysics, and contribute to large-scale international projects.

SSF Basic policy and Implementation policy



- The Ministries sets the overall system design of the entire project as "Basic Policy" and specific details of the goals and content of each technology development theme as "Implementation Policy."
- In setting the technology development themes, reference is made to the technology items identified in the Space Technology Strategy.
- Themes that can be more effectively promoted by private companies and universities, rather than by JAXA itself, will be set as technology development themes.

Basic Policy

- Objectives and overview
- Goals, direction of technological development
- Setting of technological development themes and concept of goals
- Method of implementing technological development
- Technology development management
- Economic security considerations

Implementation Policy

- Technology development theme name
- Theme goal
- Technology development implementation content
- Technology development implementation structure
- Support method
- Evaluation and review points
- Technology development management

MEXT

METI

MIC

Cabinet Office

Technology Development Themes (total 22) for FY2023 Supplementary budget



Transportation

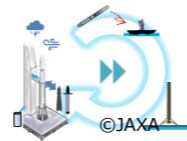
【MEXT】 Innovative technology for light weight-high performance and lower cost. (12B Yen)



©JAXA

【METI】 Mass production technology development for main materials of solid rocket motor. (4.8B Yen)

【MEXT】 Ground systems for future transportation. (15.5B Yen)



©JAXA

【METI】 Development of integrated navigation system for space transportation. (3.5B Yen)



Experiment of Solid rocket booster.

Satellite

【MEXT】 Optical observation satellite system with high resolution/high frequency. (28B Yen)

【METI】 Accelerating commercial satellite constellation deployment. (95B Yen)

【MIC】 Development/verification of satellite communication technology with quantum cryptography. (14.5B Yen)

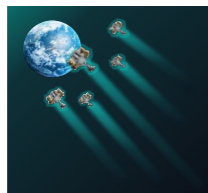
【MEXT】 Innovative satellite LiDAR technology utilizing high power laser. (2.5B Yen)

【METI】 Development/verification of parts/components for establishing satellites supply chain. (18B Yen)

【MIC】 Supporting implementation of communication technology required for satellite constellation. (1.9B Yen)

【MEXT】 High accuracy satellite formation flight technology. (4.5B Yen)

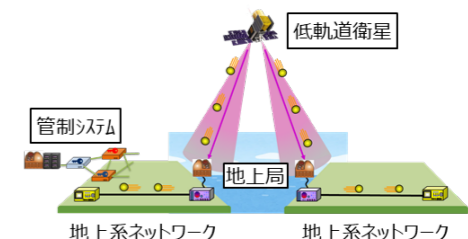
【METI】 Feasibility study of overseas demonstration of satellite data utilization system. (1B Yen)



Formation Flight image



Satellite Constellation



Quantum Cryptography Network

Technology Development Themes (total 22) for FY2023 Supplementary budget

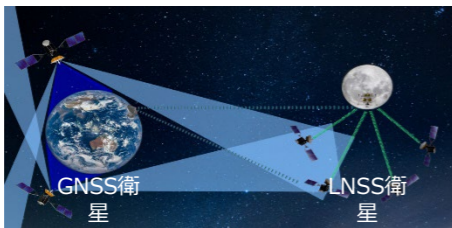


Exploration

Lunar Development

【MEXT】 Development of Lunar Positioning System Technology (5B Yen)

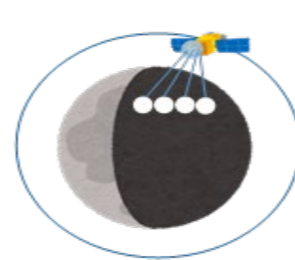
【MEXT】 Development of Regenerative Fuel Cell System (23BYen)



Lunar Positioning System Image ©JAXA

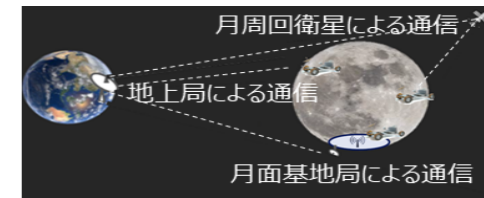
【MEXT】 Fundamental technology for Semipermanent power supply. (1.5B Yen)

【MIC】 Technology for lunar water resource exploration. (6.4B Yen)



Lunar water resource exploration Image

【MIC】 Feasibility Study for development/verification of Cislunar communication. (0.5B Yen)



Cislunar communication system Image

LEO Utilization

【MEXT】 Technology for cargo delivery system with international competitiveness and independence. (15.5B Yen)

【MEXT】 Technology for LEO autonomous flying module system. (10B Yen)

【MEXT】 Technology for LEO universal experiment system (2B Yen)



Autonomous flying module image ©JAXA

Mars Exploration

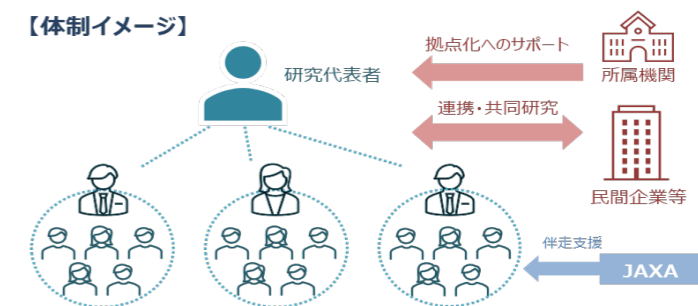
【MEXT】 Fundamental low cost technology for atmospheric entry/aerodynamic damping. (10B Yen)



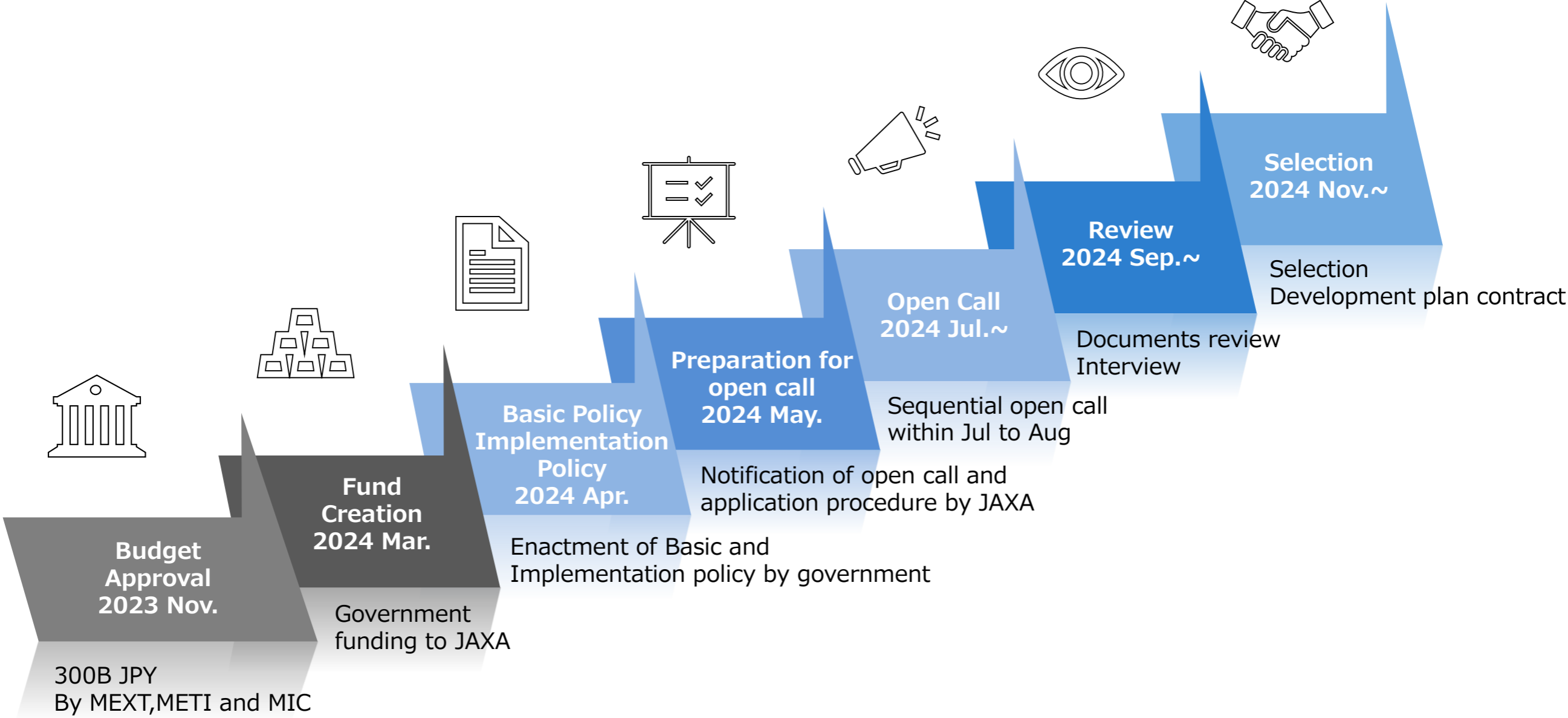
Expanded Aeroshell Image ©JAXA

Common Development

【MEXT】 SX research and development site (11B Yen)



Schedule and milestones in 2024 for FY2023 Supplementary budget



Q1: Is the SSF for equity investment?

- No. SSF is provided in the form of funds for a project commissioned or subsidized by JAXA.

Q2: Can foreign companies apply for the SSF?

- The eligible applicants are private companies, universities, National Research and Development Agencies, etc., incorporated under the laws of Japan and having its R&D centers in Japan. In addition, only residents of Japan are qualified to be Principle-Investigator or Co-Investigator of applicant organizations.

Q3: How can foreign companies benefit from the SSF?

- We would like foreign companies to partner with Japanese companies. Japanese companies can apply to SSF for international project proposals.
e.g., FS of overseas demonstration of satellite data utilization system. (1B Yen)

Q4: How can foreign Space Agencies cooperate with JAXA?

- We are considering a so called “co-funding” scheme in which both space agencies subsidize an international project in which Japanese and foreign companies partner. The scheme is currently under consideration.

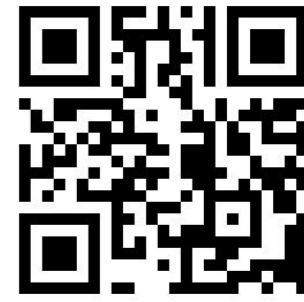
Detailed Information of SSF (Sorry, Japanese only)



Cabinet Office HP
The Space Strategy Fund



JAXA YouTube
Explanation of The Space Strategy Fund



JAXA The Space Strategy Fund
website

Questions?

The symbol of the Space Strategy Fund is a **flock of cranes**.



Cranes have been loved as a good-luck charm in Japan since ancient times, and in winter they migrate to faraway wintering grounds. When they do so, **they fly in formation**, and it is said that they can fly farther as a flock by riding the air currents created by the flapping wings of the bird in front. **Three birds can fly farther than one.**

This overlaps with the Space Strategy Fund's desire to “catapult Japan's space industry forward” as a hub for industry, academia, and government.