Document 4-3

Evaluation criteria/indicators and monitoring indicators (draft)

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(Appendix 2) Evaluation criteria and related indicators

Mid to long-term objectives	Evaluation criteria	Related evaluation/monitoring indicator
3. Implementation of space projects to achieve the goals in the space policy scheme 3.1. Satellite positioning 3.2. Satellite remote sensing 3.3. Satellite communications 3.4. Space transportation system 3.5. Space situational awareness 3.6. Maritime domain awareness, early warning capacity, etc. 3.7. Mission assurance 3.8. Space science and exploration 3.9. International Space Station 3.10. International manned space exploration 3.11. Basic technologies for development and operation of satellites, etc. (tracking and maneuvering, environmental test technologies, etc.) **4. Works in cross-disciplinary R&D** 4.1. Expansion of space utilization and industrial promotion in collaboration with private sectors 4.2. Maintenance and reinforcement of space industry/ scientific bases for creating new value (e.g., space debris measures, space solar power generation)	**[Realization of a secure and safe society and ensuring security]** ○ Appropriateness of planning, investigation and management efforts for assuring national security and realizing a safe and secure society and production of relevant outcomes **(Mainly in 3.1 - 3.7, 3.11, 4.2)**	**<Evaluation indicator>** (Outcome index) ○Outcomes of efforts for assuring security and realizing a safe and secure society (Management index) ○Advance verification concerning the implementation of R&D ○Management concerning the implementation of R&D (Example: R&D progress management, installation, maintenance and operation of facilities and equipment, etc.) ○Coordination and collaboration with external security and disaster management organizations, etc. **<Monitoring indicator>** (Outcome index) ○R&D outcomes according to international benchmark (Example: Core rocket launch success rate, on-time success rate) (Management index) ○Coordination and collaboration with external security and disaster management organizations, etc. (Example: No. of agreements and joint research projects, etc.) ○Acquisition and operation of external funds (Example: No. of commissions)
	[Growth in space utilization and promotion of industry] ○Appropriateness of planning, investigation and management efforts for expanding space utilization including the creation of new businesses, industrial promotion, and improvement of the international competitiveness of Japan's space industry, and resulting outcomes **(Mainly in 3.1 - 3.5, 3.8 - 3.11, 4)**	**<Evaluation indicator>** (Outcome index) ○Outcomes of efforts for expanding space utilization, promoting industries and improving the international competitiveness of the space industries including efforts taking quality, costs and schedules in account (Management index) ○Advance verification concerning the implementation of R&D ○Management concerning the implementation of R&D (Example: R&D progress management, installation, maintenance and operation of facilities and equipment, etc.) ○Coordination and collaboration with external organizations including private business operators **＜Monitoring indicator＞** (Outcome index)

		○R&D outcomes according to international benchmark (Example: Core rocket launch success rate, on-time launch success rate) ○Provision of opportunities for space demonstration (Example: Provision of opportunities for demonstration to private sectors and universities) ○Social return and dissemination of R&D outcomes (Example: No. of applications for intellectual property right, no. of acquired rights, no. of licensing cases of such right, no. of commissioned businesses, no. of ISS utilizations, no. of facilities and equipment sharing cases) ○Creation of new businesses (Example: No. of businesses created by private business operators relating to JAXA) ○Distribution of data to outside (Example: No. of satellite data items distributed to domestic and overseas related organizations) (Management index) ○Coordination and collaboration with external organizations including private business operators (Example: No. of agreements and joint research products, No. of technical supports, No. of private business operators and universities which participated in JAXA's policies or institutions) ○Acquisition and operation of external funds (Example: No. of businesses using private funds)
	[Producing the world's highest results as well as maintaining and improving Japan's global presence in space science and exploration fields] ○Appropriateness of planning, investigation and management efforts for conducting space science research, space exploration and manned space activities to contribute to creating the world's highest level scientific outcomes and maintaining and improving the international presence of Japan; resulting outcomes	**＜Evaluation indicator＞** (Outcome index) ○Outcomes of efforts for creating the world's best outcomes in space science and exploration, and maintaining and improving Japan's international presence (Management index) ○Advance verification concerning the implementation of R&D ○Management concerning the implementation of R&D (Example: R&D progress management, installation, maintenance and operation of facilities and equipment, etc.) ○Coordination and collaboration with external organizations including universities and overseas organizations **＜Monitoring indicator＞** (Outcome index)

	(Mainly in 3.8 - 3.10, 4.2)	○R&D outcomes according to international benchmark (Example: Presentation in in prominent magazines) ○Outcomes of institutional development and operation for fostering human resources (Example: Career options for received students) (Management index) ○Coordination and collaboration with external organizations including universities, overseas organizations (Example: No. of agreements and joint research projects) ○Institutional development and operation for fostering human resources (Example: No. of students received, personnel exchanges) ○No. of papers (Example: No. of peer-reviewed papers. No. of highly cited papers) ○Acquisition and operation of external funds (Example: Amount and number of acquisitions of external funds such as Grants-in-Aid)
5. Aeronautical science and technology	**[Promoting the aviation industry and enhancing our global competitiveness]** ○Appropriateness of planning, investigation and management efforts for promoting the aviation industry and strengthening the international competitiveness of Japan; resulting outcomes	**＜Evaluation indicator＞** (Outcome index) ○Outcomes of efforts for promoting the aviation industry and strengthening international competitiveness (Management index) ○Advance verification concerning the implementation of R&D ○Management concerning the implementation of R&D (Example: R&D progress management, installation, maintenance and operation of facilities and equipment, etc.) ○Coordination and collaboration with external organizations including universities and private business operators **＜Monitoring indicator＞** (Outcome index) ○R&D outcomes according to international benchmark ○Social return and dissemination of R&D outcomes (Example: No. of applications for intellectual property right, no. of acquired rights, no. of licensing cases of such right, no. of facilities and equipment sharing cases) (Management index) ○Coordination and collaboration with external organizations including universities and private business operators (Example: No. of agreements and joint research projects) ○Acquisition and operation of external funds (Example: No. of commissions)

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Note) The evaluation indicator is an index for evaluation. The monitoring indicator is an index required for understanding accurate facts for accurate and strict evaluation. In actual operation, an appropriate indicator needs to be selected and set according to the evaluation item.