“New International Standards Strategy” — Key Points

*“International standards” in this strategy broadly encompass De jure standard, Forum standard, and De facto standard.

June 3, 2025

Narrative of the International Standards Strategy

The international community and Japan face challenges such as “sustainable responses to global issues,” “risks of supply chain disruption,” “adapting to innovative technologies,” and “population decline and aging.”

- Medium- to long-term initiatives such as climate change countermeasures and human rights must address sustainability as a short-term challenge
- Amid the need for nations to tackle both norms compliance and economic resilience, global supply chain disruption risks are being faced due to factors like increasingly complex international circumstances
- The international community has not responded swiftly or adequately to the risks posed by disruptive innovative technologies including generative AI
- There are also mounting challenges domestically, such as addressing population decline and aging, and responding to rapid technological innovations like generative AI

The strategic utilization of international standards plays a vital role in addressing global and domestic challenges, including from the perspective of economic security.

- Strategic utilization of international standards is effective for addressing transitions toward achieving the international community's social and environmental goals, strengthening supply chains, and responding to technological innovation
- Strengthen engagement with international standards developing organizations including ISO, IEC, and ITU, while actively utilizing forum standards and regional standards
- Economic security is also growing in importance; perspectives should include ensuring autonomy, securing, maintaining, and strengthening advantages and indispensability through international standards

By contributing to solving challenges in the international community and Japan through international standards, and by advancing economic security, lead in “solving social challenges” and realize “market creation.”

- This international standards strategy will lead the solution of social challenges and the creation of markets through international standardization activities, as Japan's contribution toward solving challenges faced by the international community and Japan itself, and toward economic security.
- Japan will lead international standardization in fields closely related to solving challenges in the international community and where Japan possesses strengths, such as disaster prevention, energy, and quantum technology.
- Therefore, discussions will encompass not only specific standardization efforts but also the entire social industrial system, including the definition of new values and norms.

Strengthen the standard ecosystem by raising awareness reform and encouraging behavioral change in industry and academic communities, enhancing human resources development, reinforcing specialized services, and headquarters function.

Key Points of International Standards Strategy 1: Strengthening Leaders

- In addition to strengthening initiatives by industry and academia as key leaders, developing specialized services and specialized human resources is essential.
- Active utilization of standards and a market where specialized services and specialized human resources can thrive are necessary.
- Strengthen key leaders and networks across Asia and globally through international collaboration.
- Establish public-private headquarters to advance international standards activities as a unified government, in close cooperation with the private sector.

<Business and Academia>	<Specialized human resources and specialized services>	<International human resources and networks>
Engagement with the business community and the financial community (Through public-private partnerships, targeting management to establish CSOs and promote investor understanding, etc.)	**Strengthening human resources development systems** (Including development by each ministry and agency, training via digital platforms, and database development)	**International collaboration and networking in human resources development** (International human resources development, active participation in UN agencies and international organizations, etc.)
Encouragement for the academic community (Promoting the proper evaluation of staff members' international standards activities at national research institutes, etc.)	**Developing and enhancing specialized services** (Resolving mismatches with companies, promoting cross-disciplinary collaboration, international partnerships, strengthening testing facilities, etc.)	**Strengthening collaboration with other countries** (Promoting cooperation within Asia in areas including ISO, IEC, ITU, and various fields; fostering and strengthening certification authorities through international mutual recognition, etc.)
Support for standardization during the R&D phase (Incorporating standardization support into national R&D projects, etc.)	**Active utilization of standards and certifications** (considering the integrated promotion of regulations, standards, and certifications as industrial policy (New Approach), expanding the development of domestic and proprietary standards, utilizing standards and certifications in public procurement, etc.)	**Hosting international conferences** (Hosting international conferences related to international standards in Japan, placing international standards on the agenda at international conferences held in Japan, etc.)

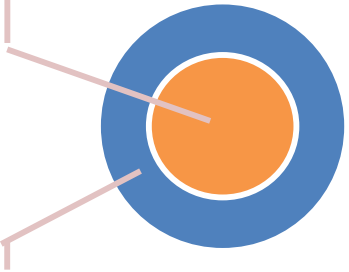
Establishment of public-private collaboration platforms
(Public-private collaboration for monitoring and follow-up and strategy review, digital platforms, overseas public-private networks, etc.)

Key Points of the International Standards Strategy 2: Selecting Key and Strategic Domains

・Identify 17 Key domains that are important to the international community and where international standards can be a Key success factor and strengthen public-private efforts.
・Select 8 strategic domains among the Key domains from the viewpoint of urgent focus.
・The selected Key and Strategic domains are not fixed; they will be revised, added, or upgraded as appropriate.

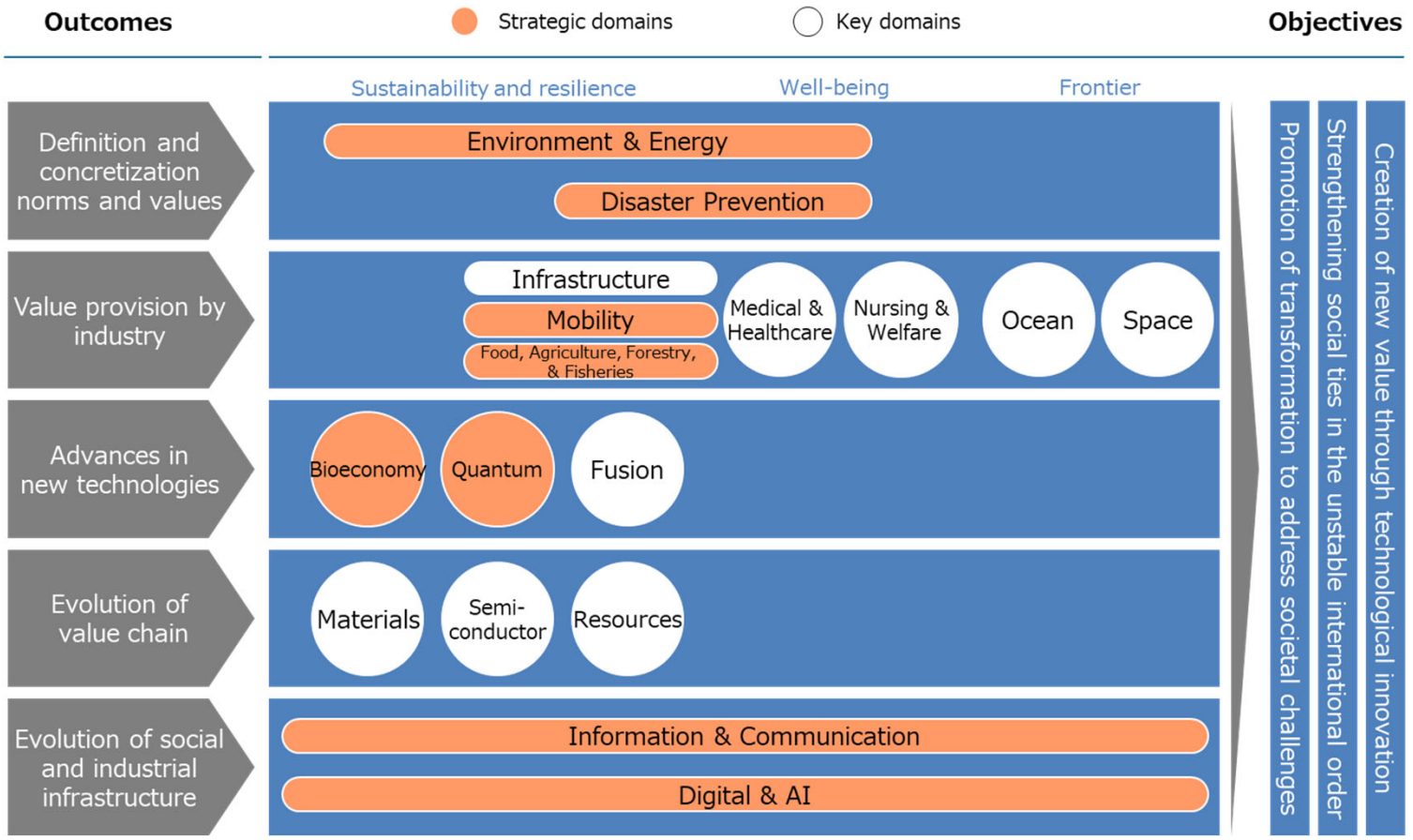
Strategic domains

➡Domains recognized as currently having international standards activities both domestically and internationally, having urgency for action, and where the need for additional support or continuation of current
➡Priority support targets by ministries, agencies and the Cabinet Office / Targets for action plan and roadmap development support / Targets for monitoring and follow-up



Key domains

➡Domains recognized as having Japan's strengths, feasibility, and a certain market size
➡Support from a medium- to long-term perspective



[Reference] Direction of Strategic Domains

Environment & Energy	**Climate change・Energy・GX**	We will demonstrate practical solutions for decarbonization tailored to each country's circumstances, while contributing to global transition efforts through Japan's technology and expertise. This includes concepts and management of transition, evaluation methods for manufacturing processes and products, GHG emissions calculation and reporting, and rules for credit utilization.
	Symbiosis with nature	In collaboration with international initiatives such as the Convention on Biodiversity and TNFD, while considering each country's regional specificity, we will contribute to an effective transition to Nature Positive. This includes concepts and management of symbiosis with nature, unique indicators and datasets for information disclosure, evaluation methods at the product level to promote Nature Positive products and services, and valuation and trading rules for natural capital and biodiversity.
	Circular economy	Leveraging Japan's advanced technological capabilities, we will develop circular economy businesses related to resource recycling and services utilizing goods history data. Simultaneously, we will contribute to the international transition to a circular economy through developing indicators for appropriate evaluation of performance and disclosing corporate circular economy initiatives, and also ensure resource autonomy. This includes advance resource recycling technologies such as the 3Rs, corporate collaboration management, data management for product environmental information, eco-design tailored to each product's reality, circular economy regulations and systems, circulation indicators, and an information disclosure scheme.
Food, Agriculture, Forestry, & Fisheries		Through overseas deployment of smart and environmentally friendly agriculture, as well as the international promotion of high-quality, high added value products and diverse, nutritionally balanced diets, we will contribute to the sustainable food supply, food safety, and nutritional improvement globally and in Japan. This includes technological requirements for smart and environmentally friendly agriculture, definitions and testing methods for high-quality, high added value agricultural, forestry, and fishery products and foods, and concepts for evaluating nutrition across entire meals.
Disaster Prevention		Through the overseas deployment of Japan's disaster prevention expertise and technology, we will contribute to reduce disaster risks and losses to lives, livelihoods, health, and assets worldwide. While coordinating with these efforts, we also continue to advocate for the importance of disaster prevention in international arena. This includes disaster risk finance to induce investment in pre-disaster preparedness, defining requirements for high-quality infrastructure, and establishing data standards for sharing disaster information.
Digital and AI	**Digital**	Under DFFT*1, we aim for the free cross-border data flow, promoting data utilization, establishing data utilization environments, building foundations for secure data flow, accumulating use cases in specific fields where Japan possesses expertise. We will also contribute to enhance overall societal productivity, and to advance support and cooperation for developing countries facing data disparities. This includes the development of interoperable digital identities and establishment of data space standards and connections with overseas data spaces ensuring secure data flow within the data integration platform.
	AI	We will contribute to expand markets for advancing social acceptance and technological development of AI, promote the realization of AI applications in new fields such as robotics, and contribute to solving global societal challenges. This includes establishment of AI safety requirements, data quality, structure, and format necessary for data analysis and machine learning, area-specific AI, and safety and operational standards that facilitate the widespread adoption of robots that collaborate with humans.
Mobility		We aim to promote the adoption of technologies that enhance the safety, compatibility, and environmental performance of next-generation mobility, build a foundation supporting the economic growth of the international community through technological development, creation of use cases, data preparation, and reduction of environmental impact. This includes data formats for logistics enabling inter-vendor and inter-system integration, safety and environmental performance requirements for developing next-generation aircrafts and ships, performance evaluation for railways and ports, and safety testing standards for onboard batteries in next-generation vehicles.
Information & communication		In the future, AI will be utilized across various societal settings, generating and enabling the distribution of data necessary for its learning and advancement. This raises concerns that it will accelerate increases in communication traffic and power consumption. Therefore, we will contribute to realize Beyond 5G, low-latency, high-reliability, low-power consumption next-generation information and communication infrastructure, at an early stage. This includes all-optical networks, non-terrestrial networks (NTN), radio access networks (RAN), and other fields.
Quantum		In the quantum computers market, we will focus on the application (manufacturing), hardware (material development), and high-added-value software (algorithm) . For quantum cryptography, we will focus on advancing the technological development of quantum key distribution (QKD). For quantum sensing, we will focus on enhancing and strengthening the technological foundations supporting its utilization. These include evaluating algorithm performance and standardizing components and materials for quantum computers, implementing network protocols and safety certification for QKD devices, and evaluating component and material performance for quantum sensing.
Bioeconomy		We will focus on strengthening microbial improvement technologies with biomanufacturing and will contribute to building an international bioeconomy by enhancing recognition of bio-derived products. This includes conceptualizing the added value of biomanufacturing, establishing safety standards for biomanufacturing, developing biomanufacturing technologies, and setting quality standards and certification for bio-derived products.

*1: Data Free Flow with Trust (Reliable and unrestricted data circulation)

[Reference] Direction of Key Domains

Nursing care and welfare	We will contribute to the international community's response to aging societies and disability welfare by raising awareness of the importance of healthy life expectancy, sharing expertise in welfare equipment and care, as well as disseminating welfare equipment. This includes establishing high-quality care services through quality and safety criteria, developing guidelines for using welfare equipment, and conducting safety and quality assessments for care technologies including service robots
Infrastructure	We aim to develop efficient global infrastructure through infrastructure services tailored to each country's circumstances, including long-term initiatives such as operation and maintenance, and to establish data formats and usage guidelines suitable for utilizing Japanese technology, constructing disaster-resilient smart cities through integration of foundational systems with disaster prevention technologies, and undertake efficiency improvement measures for construction production and management systems. This includes establishing standards and guidelines for BIM/CIM*1 and developing 3D urban models*2.
Fusion	We will contribute to the implementation of fusion energy by starting with component manufacturing and material supply, while also engaging in the development of diverse reactor types and ensuring safety. This includes establishing conceptual frameworks and safety standards related to the safety and utility of fusion energy, design and construction specifications of fusion reactors, material standards of components, establishing welding and testing standards, and developing tritium management, measurement equipment, and safety management systems.
Space	We will contribute to space development under international cooperation through the expansion of the space industry infrastructure centered on satellite manufacturing technology, know-how, and the provision of space solution services,. This includes establishing norms including safety standards for cooperative space development and preventing the generation of space debris.
Semiconductor	We will strengthen the semiconductor production infrastructure, while advancing efforts to simultaneously enhance performance and reduce environmental impact in power semiconductors, components, material, and manufacturing equipment. This includes the stable global supply of semiconductors by establishing energy-efficient and environmentally conscious semiconductor performance and manufacturing requirements, testing and evaluation methods, and authenticity assurance.
Materials	We will enable the enhancement of material performance and the fulfillment of diverse needs through the optimization of R&D efficiency and environmentally conscious manufacturing processes, as well as support globally environmentally conscious manufacturing, thereby contributing to solving global social issues. This includes standards for sustainable manufacturing, measurement methods and quality evaluation for functional materials, and data standards anticipating the transition to data-driven R&D.
Resources	We will promote the stable procurement of mineral resources while aiming to achieve sustainable utilization of mineral resources in each country through sustainability-conscious manufacturing. This includes establishing sustainable manufacturing standards and quality evaluation of components using resource-saving and alternative materials.
Ocean	Regarding the assurance of navigational safety, VDES performance and technical standards
Medical and healthcare	We will establish a foundation that enables the effective utilization of medical data while protecting personal information through medical DX, as well as the advancement of Japan's drug discovery tools and processes, and sharing of medical technologies and devices, aiming to improve healthcare services and extend healthy life expectancy in various countries. This includes the international standardization of medical data interoperability, secondary data utilization, and performance specifications for medical technologies and devices such as wearable devices, and harmonize guidance and regulations concerning pharmaceuticals and medical technologies, including biodrug development.

＊1: Building/Construction Information Modeling, Management
＊2: Regarding the field of 3D city models, which are being developed and utilized domestically, we are working with international standards organizations engaged in the standardization of geospatial information to collaborate on the development of new standards.

Key Points of International Standards Strategy 3: Economic Security

- The importance of preventing acts that threaten the security of the state and its citizens in relation to economic activities has increased due to the growing complexity of the international situation and changes in socioeconomic structures.
- This strategy will also incorporate economic security into the overall perspective of international standards activities and the perspective of the selection of areas.

Perspectives of economic security in international standards activities overall

Based on the perspectives of ensuring autonomy, securing, maintaining, and strengthening advantages and indispensability, and maintaining and strengthening the international order, utilize international standards.

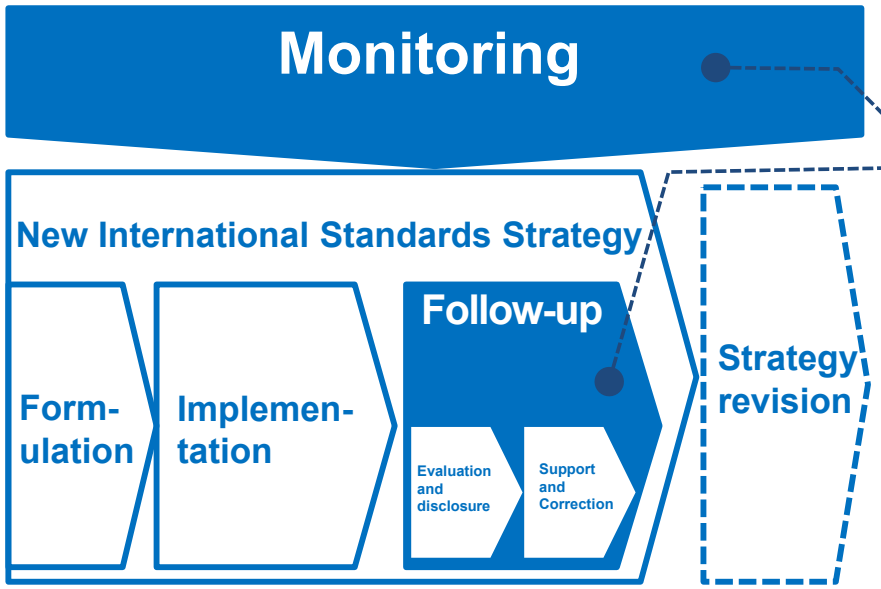
- From the perspective of ensuring autonomy and strengthening supply chains, the use of international standards contributes to securing stable supplies of critical materials.
- Address concerns about information leakage through overseas certification activities. Additionally, prevent risks through domestic regulations and certification regarding digital architectures, goods, and services entering Japan.
- On the other hand, address concerns about losing technological superiority and technology leakage through international standardization.
- Utilize international standards from the perspective of cooperation with allied countries.
- In doing so, respond comprehensively across all international standards activities, including forum standards, not just de jure standards such as ISO, IEC, and ITU.
- Closely monitor the operational status of the Standard Essential Patent (SEP) and patent pools.

Perspectives for selecting key areas

Flexibly incorporate areas critical to Japan's economic security into the selection of key sectors

- The areas selected based on the importance of “technology, industry, and society” under this strategy's sector selection criteria encompass many specified critical technologies, specified critical materials, and core infrastructure.
- Review key areas as appropriate, while taking into account the progress of discussions on economic security.

Strengthening Monitoring and Follow-up and Headquarters



Understanding (monitoring) international standardization trends that significantly impact the international community and Japan, and evaluating and disclosing (follow-up) the development of implementation strategies

Public- private partnership platform for international standards activities → **Headquarters**

Promoting area-crossing public-private partnerships

Collaboration

Digital platform

Information sharing platform for promoting international standardization (information aggregation, sharing, and consultation services related to international standards)

Monitoring targets

Conduct periodic surveys to explore opportunities for international standardization and assess the current situation, and analyze other countries for policy

- **Identifying new standardization needs and seeds**
- **Monitoring of key technology and industrial Key domains**
- **Opportunities to explore new definitions of social value**
- **Advanced country/region benchmarks (Europe, America, China)**
- **Analysis of collaborative partners (Global South, etc.)**

Follow-up targets

Set qualitative and quantitative indicators, track progress annually, and disclose information as appropriate

- **Follow-up on “Initiatives by Industry, Academia, Government, and Finance,” “Standard Ecosystem,” “Clarification and Governance of Standardization Strategy,” and “International Collaboration”**
- **Follow-up on Key domains and Strategic domains**