Intellectual Property Strategic Program 2024

～Towards Rebuilding of the Intellectual Property Ecosystem that Creates and Promotes Innovation and Promotion of the “New Cool Japan Strategy” ～

June 4, 2024

Intellectual Property Strategy Headquarters

Intellectual Property Strategic Program 2024

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I. Introduction

[Basic Understanding]

(overall)

○ In the midst of drastically changing social and economic circumstances, such as the progress of digitization and DX and the rapid development of generative AI, as well as increasingly severe international conditions, including intensifying competition among nations, the “intellectual property strategy” has become even more important to stimulate Japan's economy and innovation, and to strengthen its international competitiveness. Therefore, it is even more important to make efforts in coordination with the latest science, technology, and innovation policies as well as economic and security policies.

○ In particular, with AI technology advancing rapidly and being implemented in society in a wide range of fields, the convergence of data and AI is accelerating global competition. Corporations make efforts to build new business models and create value by using AI to collect and analyze vast and diverse data, and the public and private sectors are working together to develop and secure AI human resources, promote the utilization of AI, and strengthen research and development capabilities at a rapid pace in many countries.

○ In addition, in addition to the popularity of Japanese content such as anime and manga overseas, the number of foreign visitors to Japan has recovered toward the level before the COVID-19 pandemic, and the amount of travel spending by foreign visitors to Japan has reached a record high (5.3 trillion yen, in 2023). Given this global focus on Japan, it is important for Japan to lead the world with its soft power by disseminating and appealing to the world with Japan's attractiveness.

○ In addition to responding to changes in values and lifestyles, such as resolving social issues as represented by the SDGs and growing health consciousness, Cool Japan efforts are creating possibilities for Japan to contribute to enriching the lives of people around the world through cultural activities as leisure time increases in the future.

Therefore, as the post-COVID era approaches, it is essential to further promote Cool Japan efforts such as overseas development of contents, attracting inbound tourism, and exporting agricultural, forestry and fisheries and food products.

(Transformation to a growth-oriented economy)

○ An overview of the current Japanese economy reveals that it is facing a medium- to long-term economic slump, with nominal gross domestic product (GDP) overtaken by Germany and falling back to fourth place in the world (in 2023), as well as a record low OECD ranking for labor productivity per hour (30th, in 2022).

○ On the other hand, in recent years, wage increases, capital investment, and stock prices have all recorded favorable levels, suggesting that the Japanese economy has an opportunity to transform itself into a new growth-oriented economy, breaking away from the "cost-cutting economy" symbolized by low prices, low wages, and low growth that has lasted for 30 years.

○ Under these circumstances, it is essential to promote future-oriented strategic investments and to continue to create new high-value-added products and new services that will help solve social issues, as set forth in the SDGs, using new ideas and research results. To implement such ideas and research results in society quickly and efficiently, visualizing the connection between intellectual property and revenue is required.

○ In addition to the creation and promotion of innovation through the collaboration of such entities as companies, universities, and startups, intellectual property is playing an even greater role now than before in disseminating Japan's attractiveness overseas as the popularity of Japanese animation, manga, and games grows in the world.

(Responding to international political and economic climate risks)

○ On the other hand, with the recent intensification of the confrontation between the U.S. and China and the prolonged invasion of Ukraine by Russia, the environment surrounding Japan's security has been becoming increasingly severe, and international political and economic climate risks have been rising.

○ Given the expansion of the security aspects of Japan's security to the economic field, efforts related to intellectual property, including the prevention of technology leakage and the promotion of strategic international standardization to strengthen international competitiveness, have become even more crucial. In the promotion of the Cool Japan Strategy, consideration of international political and economic

climate risks is also required.

○ With the rapid development of generative AI and the emergence of concerns and risks surrounding disinformation, intellectual property rights, privacy and personal data protection, etc., international rules for generative AI were discussed in the Hiroshima AI Process, which was launched in response to the results of the G7 Hiroshima Summit in May 2023.

○ In light of these global trends, it is necessary to continue to address concerns and risks surrounding intellectual property rights, including copyrights, and generative AI.

[Circumstances of the consideration]

○ Based on the above understanding, since November 2023, the "Conceptualization committee" under the Intellectual Property Strategy Headquarters has been vigorously discussing the formulation of the "Intellectual Property Strategic Program 2024" and the "New Cool Japan Strategy," as well as under the conceptualization committee, the "Content Strategy Working Group" was established to examine the current status and issues related to content and the direction of measures, and the "Create Japan Working Group" to examine measures to gain global sympathy for the promotion of Cool Japan, Thus, discussions on a new Cool Japan strategy have been promoted

○ In addition, based on the "Intellectual Property Strategic Program 2023" (approved by the Intellectual Property Strategy Headquarters in June 2023), the newly convened "Study Group on Intellectual Property Rights in the AI Era" has been working across the board since October 2023 to address issues surrounding the relationship between AI and intellectual property rights to appropriately address concerns and risks associated with generative AI, and published an "Interim Summary" in May 2024.

○ Considering the above-mentioned study results and discussions, the "New Cool Japan Strategy" has been compiled at the same time as the formulation of the "Intellectual Property Promotion Program 2024" in conjunction with this program.

[Composition of this year's program]

○ When building an intellectual property ecosystem for innovation creation and

promotion, it is necessary to promote the activation and virtuous cycle of the "intellectual creation cycle," which consists of "creation," "protection," and "utilization" of intellectual property by each entity, such as companies and universities.

○ This year, for Japan to lead the world in innovation creation, Based on the awareness of the need to review the overall measures for the creation, protection, and exploitation of intellectual property, including the promotion of domestic investment in innovation, value creation through investment in intellectual property and intangible assets, prevention of technology outflow, promotion of strategic use of standards, and promotion of social implementation through industry-academia collaboration, we have once again returned to the starting point of the “intellectual creation cycle” and reviewed the measures from the perspective: “creation of intellectual property” (Chapter 1), “protection of intellectual property” (Chapter 2), and “human resources” (Chapter 3), including the strategic development of advanced intellectual property human resources which support this cycle (Chapter 4).

○ In Chapter 5, based on the outline of the "New Cool Japan Strategy" recently formulated, we summarized the content strategy, which includes overseas business development and response to digital business, as well as cross-sectional efforts such as inbound incentives, export of agricultural, forestry and fisheries, and food products, and dissemination of regional attractiveness.

○ Furthermore, the number of pages in the "Intellectual Property Strategic Program" has been gradually increasing in recent years, resulting in insufficient consideration for reading, therefore, this year, we have tried to keep the text concise and reduce the number of pages, while making more use of figures and tables in the "current situation and challenges" section.

[Conclusion]

○ To realize a vibrant economic society through the strategic creation, protection and utilization of intellectual property, as well as to increase the number of foreigners who are fans of Japan and to strengthen Japan's soft power, all related industries, including industry, universities and the government, must work together to steadily implement measures based on this program.

II. Priority Measures of Intellectual Property Strategy

1. Creation of Intellectual Property

(1)Promoting domestic investment in innovation

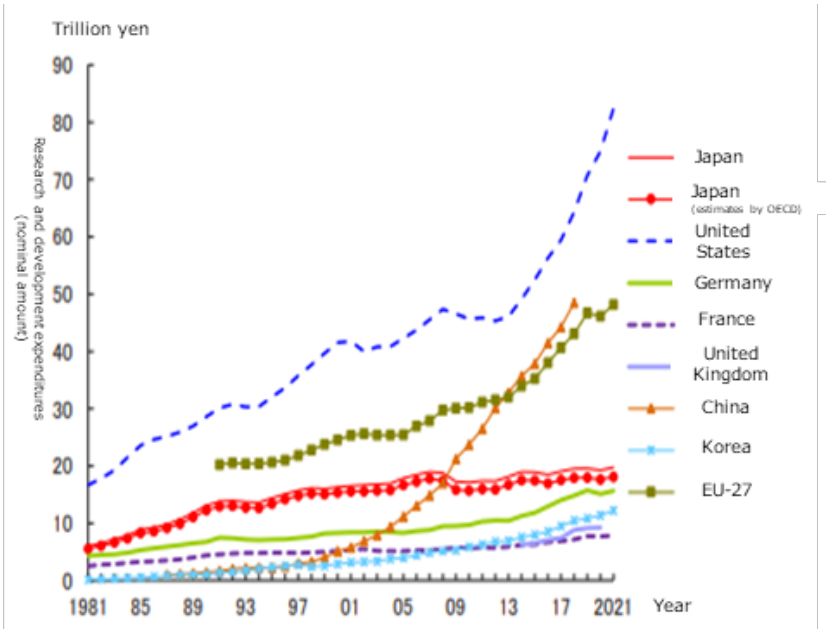
(Current situation and challenges)

<Promotion of domestic R&D investment>

R&D investment is an essential factor for sustainable growth and solving social issues, and plays a critical role in promoting innovation among companies and countries.

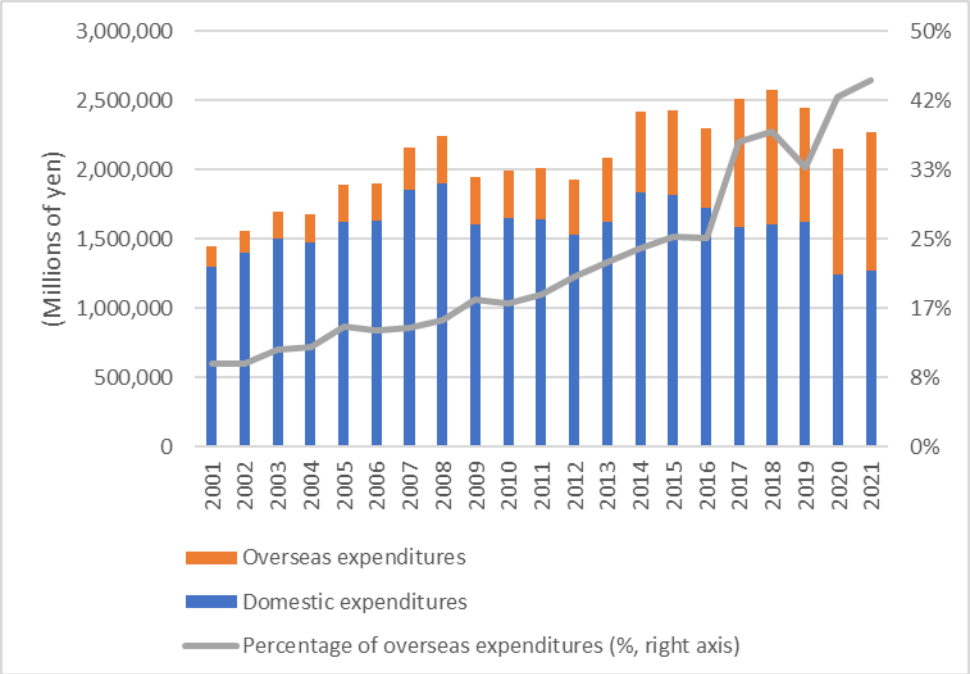
In determining R&D investment, it is required to invest more strategically from a medium- to long-term perspective, considering the benefits to be gained from R&D, as well as backcasts from issues to be solved in the future and markets to be acquired.

Over the past two decades, R&D expenditures have been stagnant in the private sector in Japan, compared to increases in the major countries. In addition, the globalization of R&D activities has been progressing in recent years, and a trend toward shifting R&D overseas has become apparent, with a doubling of overseas R&D investment since 2010. Given this background above, the predominance of the R&D environment in Japan is declining, and there are concerns about the leakage of cutting-edge technology and information to overseas countries.



(Source) National Institute of Science and Technology Policy, quoted from “Science and Technology Indicators 2023”

Figure 1: R&D expenditures in major countries



(Source) Compiled by Cabinet Office, Secretariat of Intellectual Property Strategy Headquarters, based on "Science and Technology Research Survey" by MIC and "Science and Technology Indicators 2023" by the National Institute of Science and Technology Policy

Figure 2: External R&D expenditures of Japanese firms (domestic and overseas)

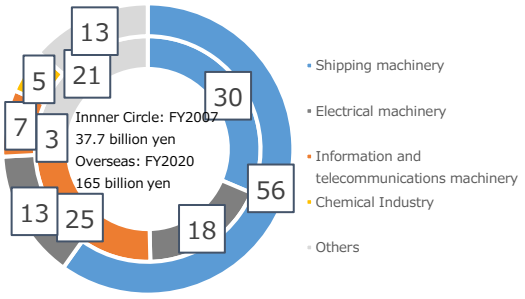


Figure 3: R&D expenditures for China by industry (%)

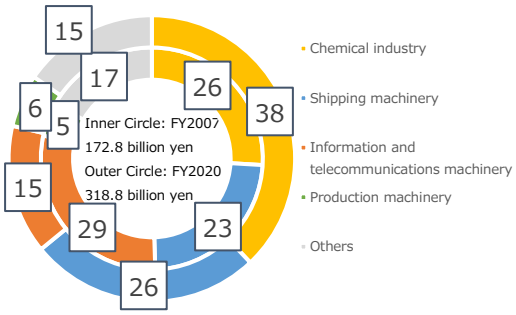


Figure 4: R&D expenditures for North America by industry (%)

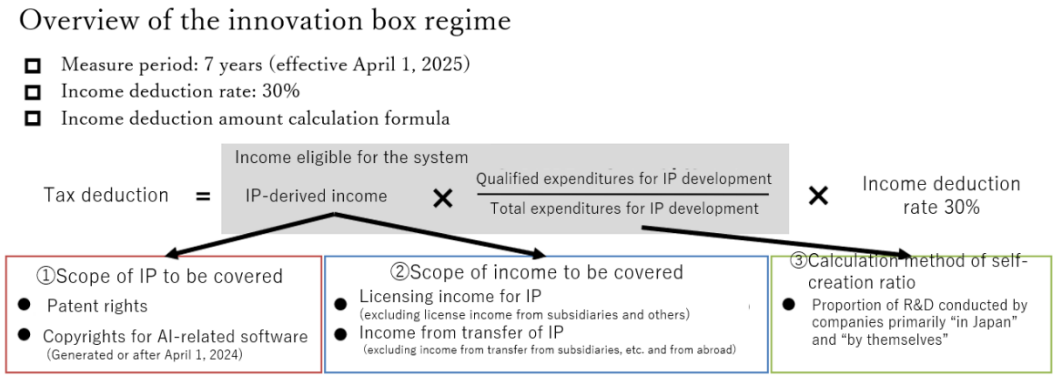
(Source) Compiled by Cabinet Office, Secretariat of Intellectual Property Strategy Headquarters, based on the "Basic Survey on Overseas Business Activities" by METI

As private sectors become more flexible and strategic regarding the location of their R&D centers, the business environment, including the taxation system, has become an important factor in the decision-making process for the location of R&D centers. In other countries, an innovation box regime focusing on the revenue generated from the

social implementation of intellectual property, which is the result of research and development, is in place.

The innovation box regime has been introduced mainly in Europe since the 2000s, and has recently expanded to Asian countries and regions such as India, Singapore, and Hong Kong. In Japan, it was decided to introduce an innovation box regime in December 2023.

Japan's system applies tax measures to income arising from patents and software intellectual property in the field of AI that companies have researched and developed themselves in Japan, and is expected to strengthen the competitiveness of locations as R&D centers and to encourage investment in intangible assets by private sectors. From April 2025, this system will be steadily enforced, and then the scope of this system and issues in its operation will be reviewed according to the situation after thoroughly examining the enforcement status and effects of the system.



(Source) METI website, "Fiscal 2024 Tax Reform"

Figure 5: The Innovation Box Regime

<Advancement of Innovation Management>

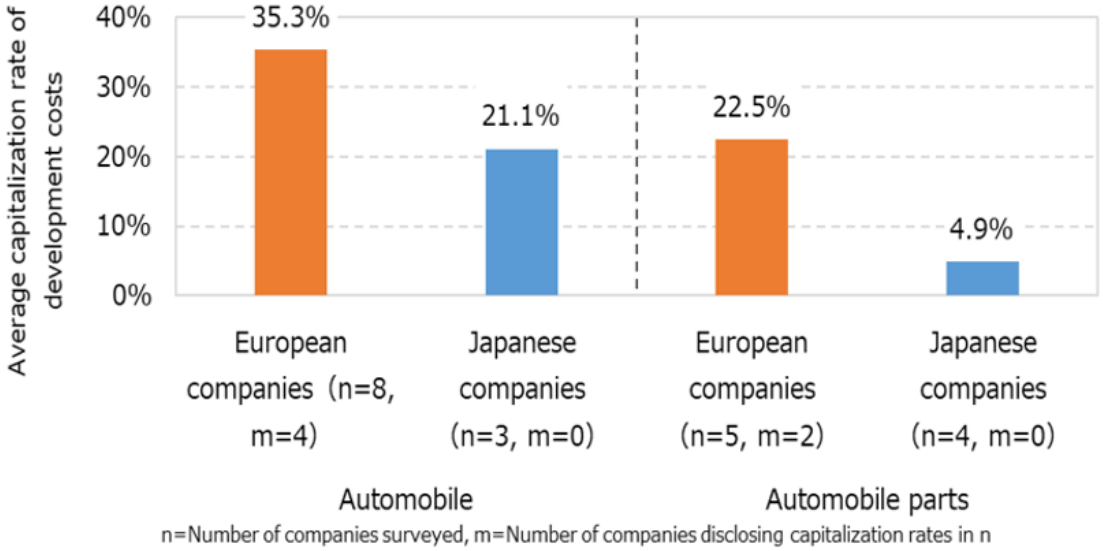
To realize strategic R&D investment, as a precondition, it is necessary to establish a mechanism to visualize the productivity of R&D investment within a company. Specifically, it is important to manage information (integration of financial and IP information) to trace "which R&D led to the creation of IP as a result of R&D investment" and "which of the IP created led to which level of revenue".

In addition to the above, for companies to consider R&D as an investment for the future, it is necessary to transform the corporate mindset to view R&D as an "asset" formation rather than an "expenses". Discussions on proactive capitalization of development costs, determination of amortization periods for development assets, and

how non-financial information including intellectual property and intangible assets should be valued and related to financial statements are beneficial from the perspective of upgrading innovation management.

In addition, International Financial Reporting Standards (IFRS) require capitalization of development costs under certain requirements, however, as shown in Figure 6, there are significant differences between Japanese and European companies that disclose financial information based on IFRS regarding the capitalization rate of development costs and other factors. Some experts suggest that Japanese companies tend to be cautious about capitalizing development costs because they have long used Japanese standards, which in principle require expensing of development costs.

Considering the recent introduction of the Innovation Box Regime in the tax reform of fiscal 2024 and the differences regarding the capitalization of such development expenditures, it is necessary to further upgrade corporate innovation management, including the visualization of the link between intangible assets and earnings.



(Source) Compiled by Cabinet Office, Secretariat of Intellectual Property Strategy Headquarters, based on the "Summary of Progress on Intangible Assets" (Business Accounting Standards Committee, June 28, 2013)

Figure 6: Capitalization rate of development costs, etc. for companies applying IFRS (FY2022)[1]

[1] Of the four industry categories in the report, we selected automotive (Category II: companies that capitalize internally generated development costs) and auto parts (Category III: a mix of companies that capitalize internally generated development costs and companies that do not capitalize internally generated development costs). In addition to the companies listed in the report, Japanese and European companies in the "Fortune Global 500" (as of April 2024) and Japanese and European companies that have already adopted IFRS were selected as survey targets.

(Direction of measures)

- Concerning the Innovation Box Regime, which was introduced in the tax reform of fiscal 2024 and applies tax measures to income generated from patents and software IP in the field of AI, the enforcement system will be strengthened, including the development of procedural rules, toward the start of the system in April 2025. In addition, in order for businesses to actively utilize the system, guidelines that explain the system in an easy-to-understand manner will be developed and awareness of the system will be promoted in cooperation with industry associations, as well as continuing to fully examine the execution status and effects of the system and the scope of the tax system, depending on the situation will be reviewed from the viewpoint of enforceability and other factors

  (short term, mid term) (METI)

- By reviewing the scope of the Innovation Box Regime, surveying trends in countries that have introduced similar systems, and examining how the value of intellectual property and intangible assets (including non-financial information) should be evaluated, promoting recognition of the link between intellectual property and intangible assets and corporate value as a result of research and development, thus leading to the advancement of innovation management.

  (short term, mid term) (METI)

(2)**Value creation through investment in IP and intangible assets**

(Current Situation and Challenges)

<Utilization of corporate governance mechanisms>

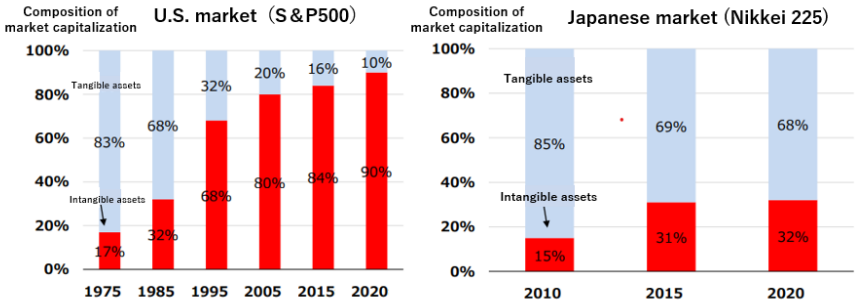
① Transformation into a "growth-oriented economy" through investment and utilization of IP and intangible assets

With the increasing importance of IP and intangible assets as a source of competitiveness, Japanese companies have lower proportion of intangible assets in their market capitalization compared to U.S. companies. In addition, while markup rates have increased in many countries since 1980, the rate of increase in Japan's markup rate has been low and has been at an internationally low level in recent years. It has been pointed out that Japanese companies have not sufficiently grasped the IP and intangible assets that form their strengths and developed business models that make use of these assets, possibly contributing to the stagnation of their corporate value.

For the past 30 years, Japan's economy has been a "cost-cutting economy" that generates profits by reducing investment in human resources, wages, and capital and R&D investment. However, in the future, the economy must be transformed into a

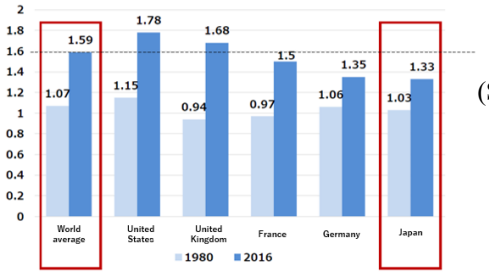
"growth-oriented economy" driven by sustained wage increases and active investment such as R&D investment and brand investment. Accordingly, it is important to further visualize how companies are building and implementing strategies for investment and utilization of IP and intangible assets, including the above-mentioned capitalization of development costs, and to establish a mechanism that will lead to obtaining funds for further investment in IP and intangible assets through constructive communication and other means with investors.

In addition, it is necessary to take a viewpoint of utilizing the resources of others, such as M&A and open innovation, rather than relying on a self-reliant approach when investing in and utilizing IP and intangible assets. From now on, it is extremely important for the management of Japanese companies to understand the IP portfolio strategy that supports business portfolio reform and to incorporate the IP strategy into the management strategy of Japanese companies.



(Source) New Capitalism Implementation Conference (5th) Document 1, p. 50 (2022)

Figure 7: Intangible assets as a percentage of market capitalization



(Source) New Capitalism Implementation Conference (24th) Document 1 P8 (2024)

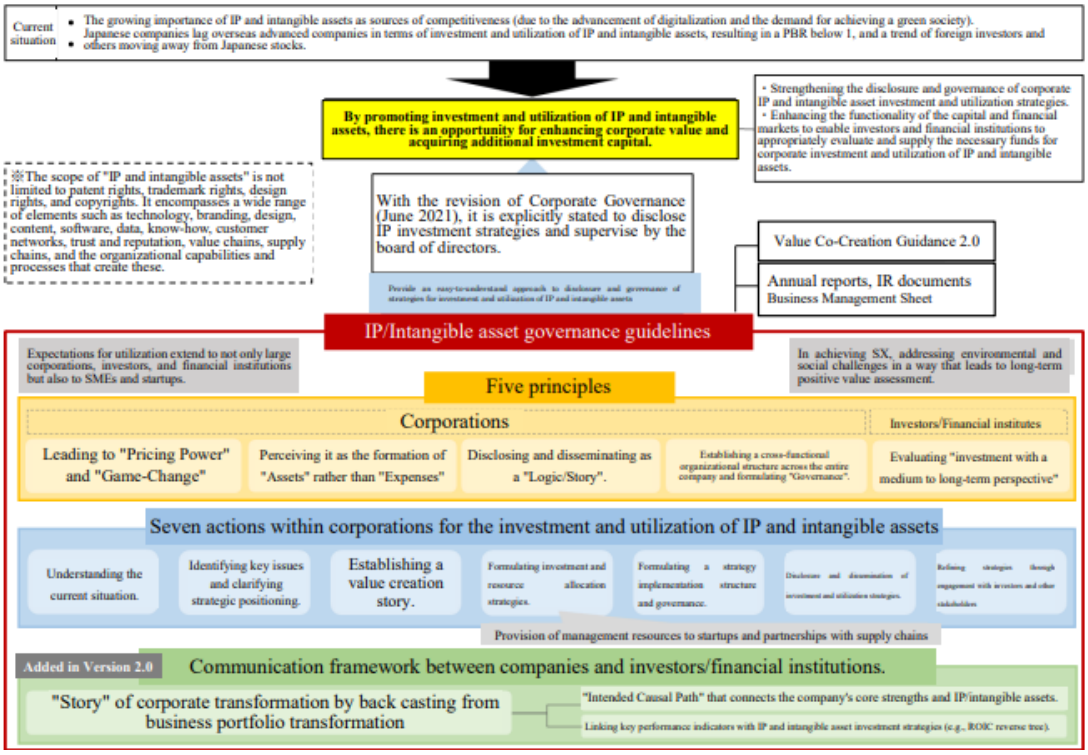
Figure 8: International comparison of markup rates

② Compiling the Intellectual Property and Intangible Assets Governance Guidelines

The revision of the Corporate Governance Code, in June 2021, incorporated the points that information on investments in intellectual property should be disclosed and provided in an easy-to-understand manner and that effective supervision by the board of directors should be implemented.

Considering the above, in January 2022, in the "Effective Disclosure and Governance of Intellectual Property Investment and Utilization Strategies Study Group (hereinafter referred to as the "Study Group")", the "Intellectual Property and Intangible Assets Governance Guidelines Ver. 1.0 (hereinafter referred to as "Ver. 1.0")" was released.

Subsequently, mainly to bridge the gap in the structure of thinking between companies and investors/financial institutions, in March 2023, the "Intellectual Property and Intangible Assets Governance Guidelines Ver. 2.0" (hereinafter referred to as "Ver. 2.0") "was released by the Study Group.



(Source) Compiled by Cabinet Office, Secretariat of Intellectual Property Strategy Headquarters

Figure 9: Overall picture of Intellectual Property and Intangible Assets Governance Guidelines Ver. 2.0

③ Corporate Governance Reform

With regard to corporate governance reform, efforts toward self-sustaining initiatives have been promoted through constructive communication between companies and investors. Against this backdrop, in April 2023, the "Action Program Toward Substantiating Corporate Governance Reform" was released by the Financial Services Agency. Continuing to promote reforms based on measures to promote the self-sustaining reform of awareness among companies and investors and measures to improve the effectiveness of constructive communication between companies and

investors, based on the above, it is appropriate to promote reforms for steady implementation of initiatives by companies and investors.

<Current situation surrounding sustainability>

The situation surrounding sustainability issues, including climate change and human rights issues, has had a significant impact on the sustainability of corporate activities.

① Current activities of the International Sustainability Standards Board (ISSB)

The International Financial Reporting Standards Foundation (IFRS Foundation), in charge of developing the International Financial Reporting Standards, established the International Sustainability Standards Board (ISSB) to set international sustainability standards in November 2022. In May 2023, the ISSB released a request for information, "consultation on agenda priorities," to solicit opinions on the following agenda priorities for activities during the two years beginning in 2024.

In June 2023, the ISSB also released IFRS S1 on general requirements for the disclosure of sustainability-related financial information and IFRS S2 on climate-related disclosures, marking the first standards to be issued since its establishment.

② Movements of the study group since the release of Ver. 2.0

In response to the above-mentioned ISSB consultation, to argue that the integrated thinking approach that has taken root in Japan is important for the creation of corporate value, and that investment and utilization of IP and intangible assets are essential for solving sustainability issues, the study group submitted a written opinion.

From now on, while keeping a close eye on domestic and international trends, it is important to keep constructive communication between companies and investors through further dissemination of these guidelines, so that a virtuous cycle of creating corporate value and obtaining investment funds can be realized.

③ Current situation of Sustainability Transformation (SX)

In addition, the "Ito Review 3.0" and "Value Co-Creation Guidance 2.0" were released in August 2022. Sustainability Transformation (hereafter referred to as "SX"), which synchronizes social sustainability with corporate sustainability, as advocated in this report is a management transformation based on the keyword "SX" and indispensable.

In February 2023, the Ministry of Economy, Trade and Industry (METI) and the Tokyo Stock Exchange (TSE) launched a program to select and award "SX Brands" to recognize leading companies that are working to enhance their corporate value over the long term and in a sustainable manner and released the "SX Brands 2024" in April 2024. The selection criteria for SX Brands include whether or not the company has

established an investment strategy to secure and strengthen its intangible assets, including intellectual property.

Through the release of the SX Brands, it is expected that Japanese and foreign investors will be encouraged to re-evaluate Japanese stocks, as well as to realize management reforms, including investment and utilization of intellectual property and intangible assets, thereby enhancing the corporate value of Japanese companies over the long term and on a sustainable basis.

④ Impact investment

As the world moves toward building a sustainable society, attention is increasingly focusing on impact investment, a type of sustainable finance that seeks to generate social and environmental benefits (hereinafter referred to as "impact") in addition to securing investment returns.

In March 2024, the FSA released "Basic Guidelines on Impact Investment (Impact)," which outlines basic ideas on impact investment, to foster and disseminate a common understanding of impact investment. In November 2023, the "Impact Consortium" was established to promote broad collaboration among industries, governments, academia, and finance, and so on.

Companies are required not only to provide products and services (output) but also to realize social and economic value (outcome) as a result. It is important to further encourage R&D investments and new business creation leading to the creation of intellectual property and intangible assets that contribute to solving social and environmental issues through the identification, measurement, and management of the impact of investments.

<Promote loans that focus on business potential through the establishment of a system that pledges the entire business, including intellectual property and intangible assets, as collateral (Enterprise Value Charge)>

For SMEs and startups, it is an important task to develop and implement strategies for investment and utilization of IP and intangible assets in order to obtain the necessary funds for growth. Therefore, for SMEs and start-ups, it is important to release them from the current situation in which tangible fixed assets are in reality the main collateral assets, and to create an environment in which the value of the entire business, including intellectual property and intangible assets and measures to utilize them, are properly evaluated, making it easier for investors and financial institutions to provide funds.

Under these circumstances, in December 2023, the Cabinet approved the "Basic Policy for Operations Regarding the Promotion of Loans Focused on Business

Potential" to promote loans focused on business potential that do not easily rely on real estate collateral, management guarantees, and others. In addition, the "Act on the Promotion of Cash Flow-Based Lending" was submitted to the ordinary National Diet in 2024. This bill includes the creation of the Enterprise Value Charge that is secured by the entire business, including intellectual property and intangible assets, to facilitate financing for startups and other businesses that lack tangible assets. Going forward, it is important to aim for the early passage of this bill.

(Direction of measures)

- To promote investment and utilization of IP and intangible assets, measures to be implemented with the cooperation of the private sector will be considered to promote an award system that publicizes activities that strategically utilize IP and intangible assets and increase corporate value as good examples. In addition, the concept of the IP/Intangible Assets Governance Guidelines will be promoted and disseminated domestically and internationally by promoting specific information disclosure and efforts by companies to attract startups to their ecosystems.

  (short term, mid term) (Cabinet Office [IP])

- In line with the " Action Program Toward Substantiating Corporate Governance Reform," encourage efforts related to investment in intangible assets, including intellectual property, aiming to promote profitable and growth-oriented management by companies.

  (short term, mid term) (FSA)

- To co-create a value creation story to realize SX, IP/Intangible Assets strategy is an important key along with strategies such as human capital strategy, business portfolio management strategy, and DX strategy, therefore, through the SX Brands, we recommend the integrated strategy development and disclosure of various strategies including IP/Intangible Assets strategy.

  (short term, mid term) (METI, Cabinet Office [IP])

- Early passage of the "Act on the Promotion of Cash Flow-Based Lending" submitted to the 2024 ordinary National Diet is aimed at.

  (short term, mid term) (FSA, Cabinet Office [IP], Ministry of Justice, METI)

- To promote the practice of management utilizing IP and intangible assets among Japanese companies, we will support the visualization of the position of IP and intangible assets in management, the establishment of a system for this purpose, and the disclosure of investment and utilization of IP and intangible assets that contribute to constructive dialogue with investors and other

stakeholders by dispatching not only experts in IP strategy development but also experts in information disclosure and investment to companies, as well as supporting the disclosure of investment and utilization of IP and intangible assets that contribute to the sustainable enhancement of corporate value, the disclosure of investment and utilization of IP and intangible assets, and the promotion of constructive dialogue with stakeholders.

(short term, mid term) (JPO)

- To promote the practice of management that utilizes IP and intangible assets among Japanese companies, we will disseminate a guidebook on IP landscapes that summarizes analysis methods by purpose for IP information and other information when formulating management and business strategies, thereby promoting IP landscapes that contribute to management strategies.

(short term, mid term) (JPO)

- Dissemination and utilization of the Green Transformation Technology Tables and the results of analysis of patent information using these technology classification tables will be promoted both domestically and internationally. In addition, efforts will be made to encourage foreign countries to incorporate such a technology classification table into an internationally unified technology classification table, and studies will be conducted to enhance the technology classification table, while also utilizing the knowledge of patent examiners.

(short term, mid term) (JPO)

- In impact investment, aiming to realize "social and environmental benefits" while ensuring a certain "return on investment," we will share and analyze case studies regarding the creative efforts of companies, including the use of intellectual property, with the aim of contributing to the dialogue between companies, financial institutions, and investors.

(short term, mid term) (FSA, Cabinet Office [IP])

(3)AI and intellectual property rights

(Current Situation and Challenges)

Throughout the world, new developments in AI are a hot topic of discussion every day.

The year 2023 was one of the most important themes, particularly at the G7, where Japan served as the chair, and the "Hiroshima AI Process Comprehensive Policy Framework" has been compiled.

On the other hand, the relationship between AI and intellectual property rights has

already been examined in Japan seven years ago by the New Information Property Examination Committee of the Intellectual Property Strategy Headquarters and a report was released (March 2017).

The report included an environmental improvement regarding the promotion of the creation of data for trained data as a matter appropriate for specific consideration, leading to the introduction of a flexible rights limitation provision in the Copyright Act (2018 revision of the Copyright Act) after consideration by the Council for Cultural Affairs. On the other hand, the report stated that it would be appropriate to continue to examine how AI products should be treated in the IP system in line with specific cases, while keeping a close eye on changes in AI technology and other factors.

Since then, AI technologies, including generative AI, have made rapid progress. In particular, the emergence of Chat-GPT in recent years has led to the wide dissemination of generative AI in society leading to its recognition as a familiar entity.

AI is a technology with great potential for improving accessibility of information, eliminating labor shortages, and increasing productivity. However, at the same time, the existence of AI that uses large amounts of content data to create products that cannot be distinguished from human creations raises the risk of copyright infringement and concerns about misuse (*).

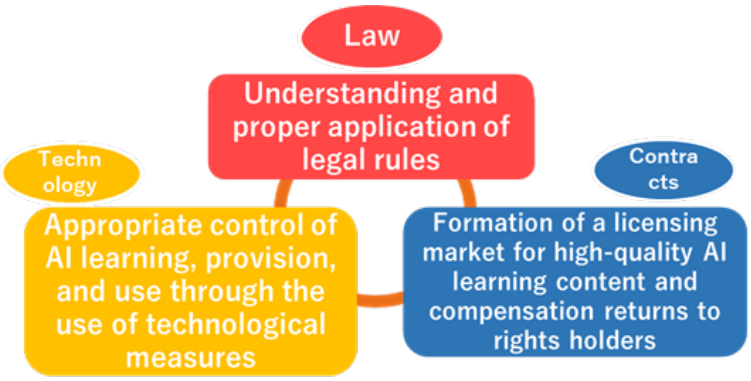
(*) For example, in the United States, lawsuits have been filed for copyright infringement regarding the generation and use of AI products and the use of copyrighted materials as trained data, and in 2023, strikes by the Screenwriters Guild of America (WGA) and the 2023 strike by the Writers Guild of America (WGA) and the Screen Actors Guild of America (SAG-AFTRA) against the Motion Picture and Television Producers Association also received significant media coverage.

In addition, generative AI is becoming increasingly multimodal, with the incorporation of text, images, video, etc., and specific consideration should be made regarding its relationship not only to copyright but also to intellectual property rights overall.

Considering these circumstances, in 2023, the government examined the relationship between AI and copyright at the Subcommittee on Legal Systems of the Copyright Subcommittee of the Council for Cultural Affairs, and released the "Concept on AI and Copyright" (March 15, 2024), while the relationship with intellectual property rights, including those other than copyright, was examined by the study group on intellectual property rights in the AI era, which published an "Interim Summary" (May 2024).

<Responses to concerns/risks surrounding generative AI and intellectual property>

The study group on intellectual property rights in the AI era confirms that there is a correlation among legal, technological, and contractual measures as countermeasures, which play complementary roles with respect to addressing concerns and risks surrounding generative AI and intellectual property, while also presenting ideas on examples of efforts expected of related entities, including AI developers, AI providers, and AI users, in order to realize an ecosystem where the promotion of AI technology progress and appropriate protection of intellectual property rights are compatible.



(Source) "Interim Summary" of the Study Group on Intellectual Property Rights in the AI era

Figure 10: Complementarity of legal, technological, and contractual means

As indicated in the interim summary, the risks of infringement of intellectual property rights involve a complex of issues that cannot necessarily be resolved solely by the rules of intellectual property law, such as the protection of voice and labor. Therefore, it is necessary for a wide range of parties involved in generative AI to work together in a flexible manner, combining legal, technological, and contractual means in an appropriate manner.

To promote the efforts of each entity, the Agency for Cultural Affairs, the Japan Patent Office, and the Ministry of Economy, Trade and Industry should conduct ongoing studies on the intellectual property laws under their jurisdiction, in light of the progress of AI technology etc., and the relevant government agencies involved in culture and industry must work together to promote awareness among the entities concerned. In addition, it is necessary to foster a common understanding that transcends the boundaries of each entity. Furthermore, in order to enforce the will of right holders to properly manage copyrighted materials and to realize the compensation return through contracts, it is necessary to strengthen measures against piracy on the Internet

as well as to promote the dissemination of properly managed legitimate copyrighted materials in the private sector[2].

<How to protect inventions considering the development of AI technology>

A number of good cases have already been reported of the utilization of AI technology in the field of invention, streamlining processes that are mainly manual work, while accompanying qualitative changes in invention creation activities.

【Cases of Initiatives】

＜AI utilization case in the materials science field＞

In January 2024, Microsoft, in collaboration with Pacific Northwest National Laboratory, announced that it had succeeded in narrowing down from 32 million inorganic material possibilities to 18 promising possibilities in just 80 hours by using AI to discover new battery materials[3].

＜AI utilization case in the drug discovery field＞

NEC, in collaboration with Transgene, has used AI to predict genetic mutations that differ from patient to patient and has been conducting research and development of a personalized cancer vaccine that recognizes and destroys tumor cells based on the patient-specific mutations. In 2021, they announced that good preliminary data had been obtained in clinical trials[4]. In January 2024, based on the results to date, they announced that they would further expand the clinical trials[5].

Considering these backgrounds, the Study Group on Intellectual Property Rights in the AI Era has been discussing how to protect inventions considering the development of AI technology.

First, regarding the requirements for being recognized as an "inventor" (including a co-inventor), looking at the current level of AI technology, it has not been confirmed that AI itself is engaged in creative activities autonomously without human involvement in the process of creation of an invention, and it is still common that AI is

[2] Refer to 2(2) below for "Strengthening measures against piracy and counterfeit products".
[3] Refer to the Microsoft homepage, "Discoveries in weeks, not years: How AI and high-performance computing are speeding up scientific discovery"
[4] Refer to NEC website, "Transgene and NEC announce positive preliminary data from Phase I studies of TG4050, a novel individualized neoantigen cancer vaccine"
[5] Refer to NEC website, “Transgene and NEC Extend Collaboration to Continue Joint Clinical Development of TG4050, a Personalized Neoantigen Cancer Vaccine”.

used to support natural persons in the process of invention creation. Therefore, it is considered that the natural person inventor should be recognized in accordance with the conventional view that the inventor is the person who has creatively contributed to the completion of the distinctive part of the invention.

On the other hand, it is desirable that the JPO, in cooperation with concerned government ministries, continue to study, as necessary, the handling of cases in which an AI is able to complete a characteristic part of an invention autonomously as a result of further development of AI technology, taking into account technological progress, international trends, user needs, etc., including the impact on the recognition of inventors.

Next, with regard to "issues in patent examination, including inventive step, in view of the expansion of the utilization of AI," it was stated that at present, there is no reason to change the existing patent examination practice due to the influence of the utilization of AI in the process of creating inventions. For instance, in judging inventive step and description requirements, it is considered that judgments should be made based on an accurate understanding of common sense and technical standards, including the utilization of AI during the invention creation process in a wide range of technical fields.

In this regard, the JPO has expanded its examination support system by increasing the number of AI officers from 13 to 39 in October 2023, and by newly establishing three AI advisors (external experts) to provide training and advice to the AI officers in April 2024. In March 2024, 10 new cases (four cases of inventive step, four cases of description requirements, and two cases of invention eligibility) of AI-related technologies were published to promote understanding among applicants.

On the other hand, if AI-based technologies for estimating functions and properties are further developed, it may no longer be possible to adequately protect the results of innovation with the existing approach of inventive step and description requirements, thus it is necessary to continue to monitor the impact on Japan's system, while keeping an eye on future developments in AI technologies.

Furthermore, the impact of the development of AI technology on creative activities, not only in the field of inventions but also in the field of designs, is also a matter that requires close attention, making it necessary to grasp the latest trends and consider how to respond to them in the examination practice.

(Direction of measures)

- With regard to generative AI, based on the "Concept of AI and Copyright" by the Legal Subcommittee under the Copyright Subdivision of the Cultural Council,

the Committee will raise public awareness of the copyright system in an easy-to-understand manner, collect good cases, and share them with those concerned, while continuing to examine ways to further clarify the system as necessary, and disseminate the results of the examination.

(short term, mid term) (Agency for Cultural Affairs)

- Regarding the utilization and generation of portraits and voices of actors, voice actors, etc. in generative AI, legal concepts concerning the relationship with the Unfair Competition Prevention Law should be organized and reviewed as necessary. In addition, legal perspectives on other related laws concerning the utilization and generation of the portraits and voices of others will also be organized.

(short term, mid term) (METI, Agency for Cultural Affairs, JPO, Ministry of Justice, Consumer Affairs Agency)

- Based on the "Interim Summary" by the Study Group on Intellectual Property Rights in the AI Era, in order to realize an ecosystem in which the promotion of AI technology progress and the appropriate protection of intellectual property rights are compatible, the relationship between each intellectual property law and AI and cases of expected efforts by each entity will be made known to the public, thus promoting efforts to achieve this.

(short term, mid term) (Cabinet Office [IP], METI,MIC, Agency for Cultural Affairs)

- Appropriate communication among those involved will be promoted, including the acquisition of a common understanding of generative AI and related technologies, the implementation status of licensing of copyrighted works for AI learning, etc., and the sharing of information on websites that carry pirated copies.

(short term, mid term) (Agency for Cultural Affairs, METI)

- Based on the results of the FY2023 research and study ("Research and Study on How AI-based Inventions Should be Protected under the Patent Law"), we will continue to conduct further study in depth in FY2024. In addition, in order to promote international discussions on AI-related inventions, information on Japan's examination practice, including patent examination cases of AI-related inventions expanded and published in FY2023, will be disseminated to other countries.

(short term, mid term) (JPO)

- In light of the expansion of the utilization of AI in the design field through the development of AI technology, issues in design examination practice such as

creative difficulty and other issues that arise in the design system will be organized and discussed with consideration of the situation in other countries.

(short term, mid term) (JPO)

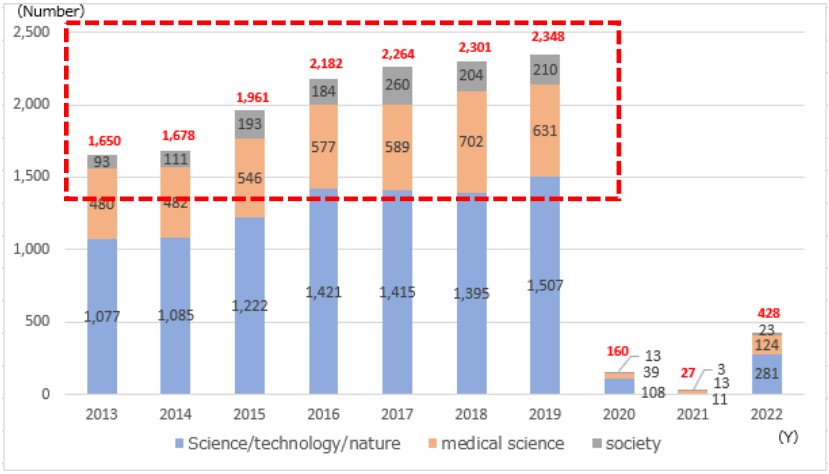
2.Protection of Intellectual Property

(1) Prevention of technology leakage

(Current Situation and Challenges)

< Globalization and openness of research activities>

Toward excellent R&D in Japan, international human resource exchanges and joint R&D involving the integration of diverse knowledge through open innovation have been promoted in academia and industry, thereby leading to the globalization and openness of research activities[6]. For instance, in terms of the status of international personnel exchange, the number of international conferences (in the fields of science, technology, nature, medical science, and society) held in Japan has been consistently increasing before the COVID pandemic and is currently in the process of recovering.



(Source) Compiled by Cabinet Office, Secretariat of Intellectual Property Strategy Headquarters, based on JNTO's “Statistics on International Conferences in 2022

Figure 11: Number of international conferences by sector

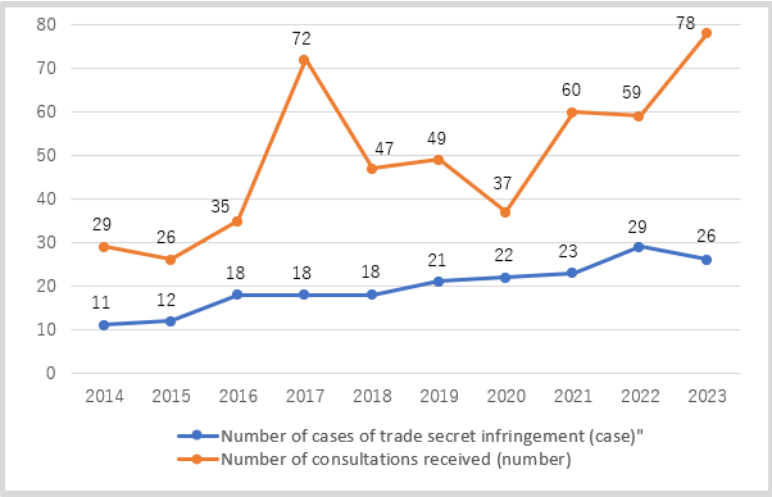
< Research Security and Integrity>

In response to the development of internationally open R&D activities, concerns about the damage to a sound research environment infrastructure and the risk of technology leakage have arisen, requiring thorough risk management.

As a countermeasure, regarding research security and integrity, various efforts have been made in the past from the viewpoint of security trade control and protection of trade secrets to deal with technology and information leaks, as well as transparency and accountability of research activities, taking international trends into

[6] For reference, the total number of foreign residents with the status of "Professor", "Highly Specialized Profession 1 (b)" or "Research" exceeded 10,000 as of the end of June 2023. (Source: "Statistics on Foreign Nationals Residing in Japan" by the Immigration and Naturalization Service)

consideration[7]. In the background, the importance of information management has become increasingly important, as the overall number of arrested cases of trade secret infringement and the number of consultations received have both been on the rise in recent years.



(Source) Compiled by Cabinet Office, Secretariat of Intellectual Property Strategy Headquarters, based on the NPA's "Arrests for Economic and Lifestyle Crimes in 2023

Figure 12: Trends in the number of cases of trade secret infringement and the number of consultations received

Therefore, since the 9th meeting of Integrated Innovation Strategy Promotion Council (April 27, 2021), which approved the "Policy Directions for Ensuring Research Integrity in Response to New Risks Associated with Increasing Internationalization and Openness of Research Activities" as the government's response policy for ensuring research integrity, initiatives have also been promoted based on three policies:① Appropriate disclosure of information by researchers themselves, ②strengthening of management by universities and research institutions, and ③confirmation at the time of application by public funding agencies.

These initiatives have been discussed in international frameworks including G7 and

[7] "Guidance for the Control of Sensitive Technologies for Security Export for Academic and Research Institutions" (revised February 2022), "Collection of Near-Miss Cases Concerning Security Trade Management in Universities and Research Institutes" (updated September 2023), "Necessity of Trade Secret Management in Universities and Research Institutes," "Economic Security Awareness Pamphlet", "Guidelines for University/National Research and Development Agency Collaboration with Foreign Companies - Promotion of Collaboration Based on Appropriate Approaches - (Interim Summary)", etc.

OECD, as well as at the national and regional levels[8] and in May 2023, the G7 Science and Technology Ministers' Communique reaffirmed the importance of common values and principles for global research security and research integrity and their dissemination.

In addition, as stated in the OECD policy paper, research security and research integrity are interrelated and both need to be viewed and addressed in an integrated manner.

In June 2023, an employee of the National Research and Development Agency was arrested on suspicion of violating the Unfair Competition Prevention Act. Following this incident, the Cabinet Office revised its checklist on research integrity for universities and research institutes and issued a notice requesting universities and research institutes to properly identify and respond to risks.

Based on the revision of this checklist, a follow-up was conducted by adding three new items, including the status of the system for objectively confirming the facts of information reported by researchers and staff members[9]. As a result, it was found that almost all of the National Research and Development Agency and other organizations have been implementing the items surveyed since FY2022, and 70-80% of them have been implementing the additional items since 2023, indicating that awareness of research integrity is increasing.

In a follow-up survey of universities[10], about 90% of national universities are currently implementing the items surveyed from FY2022, and about 80% are implementing the additional items from 2023, indicating that awareness is increasing. In the results including public and private universities, approximately 40-50% of them answered that they are implementing or planning to implement the items in 2023, indicating that further progress in efforts to ensure research integrity at each university is expected in the future.

Next, as to the Unfair Competition Prevention Act, Handbook for the Protection of Confidential Information has recently been revised to include an additional section on information management in organizations other than corporations, such as universities and research institutes, calling attention once again to the importance of trade secret management.

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[8] Research Integrity (2023), Research and Analysis Report on Research Integrity (2023, Future Engineering Research Institute)https://www8.cao.go.jp/cstp//kokusaiteki/integrity/ri_report_fy2022.pdf
The report contains the results of surveys and analyses of research integrity initiatives in each country and region (the U.S., U.K., Australia, Canada, and Europe).

[9] https://www.kantei.go.jp/jp/singi/titeki2/tyousakai/kousou/2024/dai2/siryou4.pdf

[10] https://www8.cao.go.jp/cstp/kokusaiteki/integrity/ri_follow-up_fy2023/unv_fu_fy2023_sum.pdf

In addition, in order to prevent acts that violate the Japanese Unfair Competition Prevention Act from being committed to comply with foreign laws and regulations, in the Article-by-Article Explanation of the Unfair Competition Prevention Act (version effective April 1, 2024), with respect to "disclosure" that is subject to heavy foreign penalties, the description "With respect to the crime of trade secret infringement, the fact that the relevant act is based on a foreign law requiring the provision of information to the government does not alone prevent its illegality" was added to clarify the interpretation of the law. In the future, activities to disseminate this clarification will be required.

In terms of security trade control, compliance with the "Compliance Standards for Exporters" under the Foreign Exchange and Foreign Trade Act is mandatory, and a thorough security trade control system is required based on the "Guidance for the Control of Sensitive Technologies for Security Export for Academic and Research Institutions (for universities and research institutes)" to prevent our sensitive technology from being diverted to military use.

As part of its efforts to strengthen the functions of National Research and Development Agencies, the government has further strengthened its efforts by formulating "Initiatives to Strengthen the Functions of National Research and Development Agencies" (March 29, 2024, agreement of concerned ministries), which includes securing diverse human resources through flexible personnel and salary systems, developing research management personnel, promoting social implementation of research results through appropriate intellectual property management, and ensuring and enforcing research security and integrity.

Efforts to ensure the various research security and integrity will help Japan build an internationally reliable research environment, making them indispensable for the future development of international cooperation and exchange, thus they should be reviewed on an ongoing basis.

<Prevention of technology leakage related to security>

Based on the interim report of the Subcommittee on Security Export Control Policy of the Industrial Structure Council (April 24, 2024), METI plans to establish a public-private dialogue scheme to strengthen technology management from a security perspective. Specifically, based on the identification of technologies and activities that pose a high risk of technology leakage, in addition to requiring prior reporting in accordance with the Foreign Exchange and Foreign Trade Act, a public-private dialogue is planned to be conducted, including the provision of information on concerns

from the government for appropriate technology management.

Additionally, other studies are being conducted on both promoting the utilization of R&D results of important technologies in the economic security field as well as preventing technology leakage, requiring concrete measures to be taken in accordance with the results of the studies.

For example, the Japanese version of the Bayh-Dole system allows intellectual property rights arising from government-commissioned research and development to be vested in the trustee (e.g., a private company). However, in cases where the trustee is a subsidiary or parent company, it may not be possible to prevent the results of government-commissioned research from leaking outside Japan. Specifically, there are cases where (1) research results (rights) are transferred to a foreign company that is a subsidiary or parent company, (2) the company that owns the results becomes a subsidiary of a foreign company through acquisition, etc., resulting in the transfer of the intellectual property to the foreign company, or (3) the headquarters of the company that owns the results move out of Japan.

For this reason, METI has prepared "Guidelines for Intellectual Property Management in Government-Commissioned Research and Development," which stipulate that when transferring intellectual property to a parent company or subsidiary of a foreign company, the contractor of the R&D should be notified in advance and, if necessary, coordination between the contractors should be made in the commissioning contract. From the perspective of economic security, the entire government, including relevant organizations, has been studying the issue in order to ensure that the guidelines are in place.

In addition, there are some opinions that, in general, outsourcing of R&D to overseas companies, etc. also contributes to the leakage of technology.

Furthermore, in May 2024, a patent application non-disclosure system based on the Act on the Promotion of Ensuring National Security Through Integrated Implementation of Economic Measures comes into effect. In the case that a patent application about an invention that should not be diffused for security reasons is filed, the application publication and other patent procedures will be withheld and measures will be taken to prevent information leakage through procedures called security designations. In addition, the government will compensate those who have suffered losses as a result of the security designations for the losses that would normally be incurred. With the introduction of the new system, it is necessary to continue to publicize, inform, and provide information to promote understanding of the system among businesses.

(Direction of measures)

- Strengthen awareness-raising activities to prevent the leakage of trade secrets by promoting awareness of the revised "Handbook for the Protection of Confidential Information" and by compiling and disseminating easy-to-understand educational materials (including translated versions in other languages) for employees.

  (short term, mid term) (METI)

- Based on the interim report of the "Subcommittee on Security Export Control Policy under the Trade Committee of the Industrial Structure Council," a scheme will be established to identify Japan's superior technologies that are considered to be at high risk of technology leakage and to take appropriate measures against technology leakage through public-private dialogue.

  (short term, mid term) (METI)

- Based on the "Initiatives to Strengthen the Functions of National Research and Development Agencies"[11](March 29, 2024, agreement of concerned ministries) and other relevant guidelines, promote efforts to ensure research security and integrity at research institutes and universities.

  (short term, mid term) (Cabinet Office (Science and Technology), concerned ministries)

- Regarding research and development projects for social implementation, such as government-funded research and development projects, that target technologies in which Japan has a technological advantage and technologies in which Japan aims to create a technological advantage in the future, and in which a disadvantage in terms of economic security is expected due to technology leakage, measures to prevent technology leakage will be taken from the entry stage to the exit stage, including risk-based technology access management and measures to be taken during technology transfer.

  (short term, mid term) (Cabinet Office [Director of Policy Planning (Economic and Security Affairs)), concerned ministries)

- With regard to the patent application non-disclosure system based on the Act on the Promotion of Ensuring National Security Through Integrated

[11] Other relevant laws, regulations, and documents related to research security and integrity include the "Policy Directions for Ensuring Research Integrity in Response to New Risks Associated with Increasing Internationalization and Openness of Research Activities" (approved by the Integrated Innovation Strategy Promotion Council in April 2021), the "Unfair Competition Prevention Act," the "Foreign Exchange and Foreign Trade Law", and " Basic Act on Cyber Security", in addition to those listed in footnote 7.

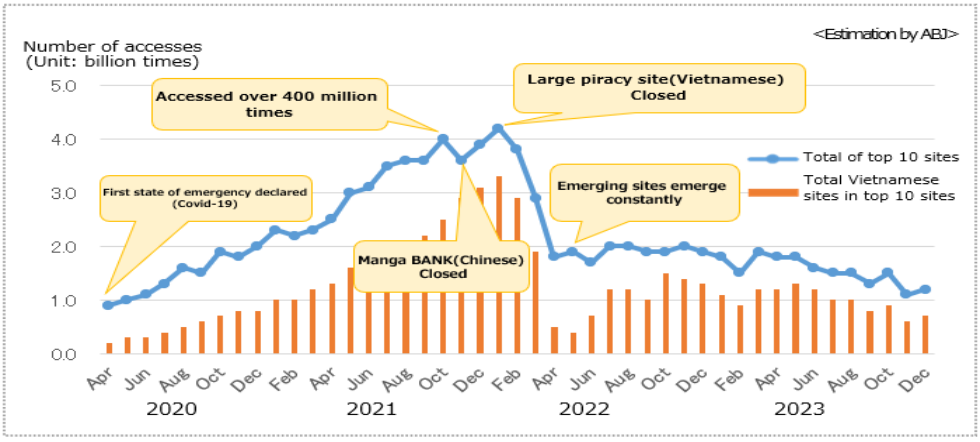
Implementation of Economic Measures, which came into effect in May 2024, efforts will be made to continuously inform, publicize, and provide information to promote understanding of the system among businesses, including the concept of compensation for losses.

(short term, mid term) (Cabinet Office [Director of Policy Planning (Economic and Security Affairs)], JPO)

(2) Strengthening measures against piracy and counterfeit products

(Current Situation and Challenges)

While the progress of digitization and networking has provided opportunities for Japan's attractive content, such as manga, animation, games, and movies, to be widely disseminated around the world, the high appeal of such content has also led to an increase in infringements of copyrights across borders.

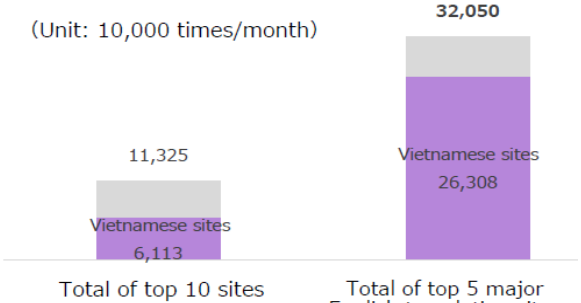


(Source) Compiled by Cabinet Office, Secretariat of Intellectual Property Strategy Headquarters, based on ABJ research (general incorporated association)

Figure 13: Monthly accesses to top pirated manga and other pirated sites for Japan

According to the situation of foreign pirate sites of manga and other products in Japan, the number of accesses to the top 10 sites for Japan has recently decreased to 120 million times per month due to the closure of large pirate sites.

On the other hand, as of November 2023, the number of accesses to the five major English-language piracy sites was approximately 320 million times per



※The total for the top 3 major Vietnamese translation sites is 213 million times/month (→ 97% of the access to the Vietnamese version is from within Vietnam)

(Source) Compiled by Cabinet Office, Secretariat of Intellectual Property Strategy Headquarters, based on ABJ research (general incorporated association)

Figure 14: Monthly accesses to piracy sites of publications including manga in November 2023

month, and that to the three major Vietnamese-language piracy sites was approximately 210 million times per month, making it an urgent issue to deal with piracy sites originating from overseas and destined for overseas.

In addition, the amount of damage caused by piracy of Japanese content (games, music, publications, and videos), including non-manga content, on the Internet is estimated to be approximately 2 trillion yen in 2022 (five times the 2019 figure)[12]. Considering that the size of the overseas market for Japanese content in 2022 will be approximately 4.7 trillion yen[13], it is obvious how serious the damage is, therefore, it is important to strengthen measures against piracy to further promote the overseas development of Japan's content in the future.

As for overseas responses, the Public Security Bureau of Jiangsu Province in China criminally expunged the operator and uploader of "B9GOOD," one of the largest pirate sites of Japanese anime, from February to March 2023, and several pirate sites of Japanese anime for local users were closed and expunged by "Operation Anime" by the Brazilian government at the same time to show results based on the criminal prosecution by Japan (CODA). On the other hand, it is expected that there will continue to be situations in which the government will be called upon to respond and provide further support, such as when cooperation from overseas enforcement agencies is not available, when there is a lack of enforcement capacity, or when the legal system in the country is inadequate.

In addition, the location of site operators, servers, domain registrations, etc., across national borders, and the emergence of services that allow anonymous operation, make it more difficult to identify site operators.

On the other hand, under such circumstances, it is necessary for the government, in cooperation with the private sector, to strengthen measures such as international cooperation and enforcement, and to promote the distribution of authorized versions, and in May of this year, in light of the above issues, the "Comprehensive Menu and Work Schedule for Countermeasures Against Online Piracy" (compiled in October 2019 and updated in April 2021) has been updated once again.

Based on the menu of measures, etc., in the future, it is important to steadily promote (1) efforts to deter user access against piracy, (2) enforcement efforts against copyright infringement, such as exposing pirate site operators, and (3) measures against the negative ecosystem of private services that enable pirate sites to operate. In this case,

[12] (general incorporated association) Based on research by the Content Overseas Distribution Accelerator (CODA)

[13] Based on "Japan and Global Media × Content Market Database 2023" (Human Media Co., Ltd.).

for instance, the private sector has been vigorously working against manga piracy through regular discussions among the publishing industry, IT industry, and experts and it is also important to organically link such private sector initiatives with the government's efforts.

Considering the above, it is necessary to promote countermeasures against piracy and counterfeit products by strengthening strict border control and enhancing efforts in cooperation with the private sector, as well as by unifying concerned government ministries.

(Direction of measures)

- Hold a working-level liaison conference between the private sector and concerned ministries to share the latest information on measures against pirated copies, and promote public-private sector initiatives based on a comprehensive menu of measures against piracy on the Internet.

(short term, mid term) (Cabinet Office [IP], NPA, MIC, Ministry of Justice, MOFA, Agency for Cultural Affairs, METI)

- Promote educational activities by concerned government ministries and related organizations so that people will not only not purchase pirated or counterfeit products, but also, in particular, will not tolerate pirated or counterfeit products containing infringing content, since viewers will unconsciously watch infringing content, which will bring benefits to the infringer so that this will become a normative consciousness among the public.

(short term, mid term) (NPA, Consumer Affairs Agency, MIC, MOF, Agency for Cultural Affairs, MAFF, JPO)

- Promote cooperation between private operators and rights holders, encourage such private operators, and support rights holders in exercising their rights so that necessary countermeasures will be taken for services provided by various private operators used to operate or access pirated sites, such as removal or suppression of search result displays of pirated works by search site operators.

(short term, mid term) (MIC, Agency for Cultural Affairs, METI, Cabinet Office [IP])

- Continue to monitor the actual amount of damage caused by piracy of Japanese content on the Internet (including consideration of whether the amount of damage can be calculated by type, such as whether the distribution is to a destination outside Japan [including distribution to Japan] or exclusively within the country concerned).

(short term, mid term) (Cabinet Office [IP], METI, MOFA, NPA)

- Strengthen international cooperation by using the World Intellectual Property Organization (WIPO), bilateral consultations and other frameworks, and international conferences to encourage the strengthening of measures against piracy. In addition to actively lobbying foreign public security authorities and promoting international investigative cooperation, etc., toward the detection of operators of overseas pirate sites, efforts will be made to strengthen international enforcement, including the implementation of digital forensic investigations in cooperation with private sector operators.

  (short term, mid term) (Cabinet Office [IP], NPA, MIC, Ministry of Justice, MOFA, Agency for Cultural Affairs, METI)

- Enhance efforts to support the exercise of rights by domestic rights holders against cross-border copyright infringement or other violations on the Internet.

  (short term, mid term) (Agency for Cultural Affairs)

- Based on the amendment of the Provider Liability Limitation Law (May 2024) to oblige large-scale platform operators to speed up the removal of illegal and harmful information on the Internet and to make their operational status transparent[14], we will promote effective measures for platform operators, such as clarifying what kind of information is distributed as a violation of laws and regulations and infringement of rights, as well as their appropriate operation, through institutional development such as ministerial ordinances and guidelines.

  (short term, mid term) (MIC)

- In response to the growing sophistication and diversification of overseas pirate sites that distribute Japanese content to local people overseas[15], the government and private sector will work together to promote a sound ecosystem, including raising awareness in local languages through overseas diplomatic establishments and other means, studying ways to provide incentives for providing information on pirate sites, and promoting the distribution of legitimate versions of Japanese

[14] The Act the Limitation of Liability for Damages of Specified Telecommunications Service Providers and the Right to Demand Disclosure of Identification Information of the Sender (Act No. 137 of 2001.) The Act on the Partial Revision of the Act the Limitation of Liability for Damages of Specified Telecommunications Service Providers and the Right to Demand Disclosure of Identification Information of the Sender (Act No. 25 of 2024) was promulgated in May 2024, incorporating the contents described in the main text and changing the title to "Act on the Infringement of Rights, etc. arising from the Information Distribution via Specified Telecommunications" (abbreviated name: Act on Dealing with Information Distribution Platforms).

[15] In the early days, many pirate sites were operated by Japanese operators for the domestic market, however, the number of pirate sites operated by foreign operators for the domestic market or by foreign operators for foreign markets is increasing (in both cases, Japanese content is being illegally distributed, and so on).

content in overseas markets.

(short term, mid term) (Cabinet Office [IP], MIC, MOFA, Agency for Cultural Affairs, METI)

- Encourage the Content Delivery Network (CDN)[16] service providers to stop providing services to pirate sites and take other necessary measures to ensure that the services of various private operators used to operate pirate sites are taken.

(short term, mid term)(MIC, Cabinet Office [IP], Concerned government ministries)

- In order to cope with the increasing inflow of counterfeit products and piracy due to the development of cross-border e-commerce, based on the revised Trademark Act, Design Act, and Customs Act, which came into effect in October 2022, counterfeit products brought into Japan by overseas businesses by mail, etc. are subject to control by customs, and strict border control against counterfeit products and pirated copies is being implemented. In addition, efforts will continue to be made to provide adequate publicity, etc. to prevent unforeseen damage to bona fide importers. Furthermore, considerations will also be made for other intellectual property rights, as necessary.

(short term, mid term)(MOF, JPO, Agency for Cultural Affairs）

- In order to prevent the distribution of counterfeit products of Japanese brand-name agricultural, forestry, fisheries, and food products overseas, measures against infringement of unauthorized use will be promoted through the creation of a framework for mutual protection of GIs with foreign countries, investigation of overseas EC sites, and operation of a consultation service for information on suspected counterfeit products of agricultural, forestry, fisheries, and food products.

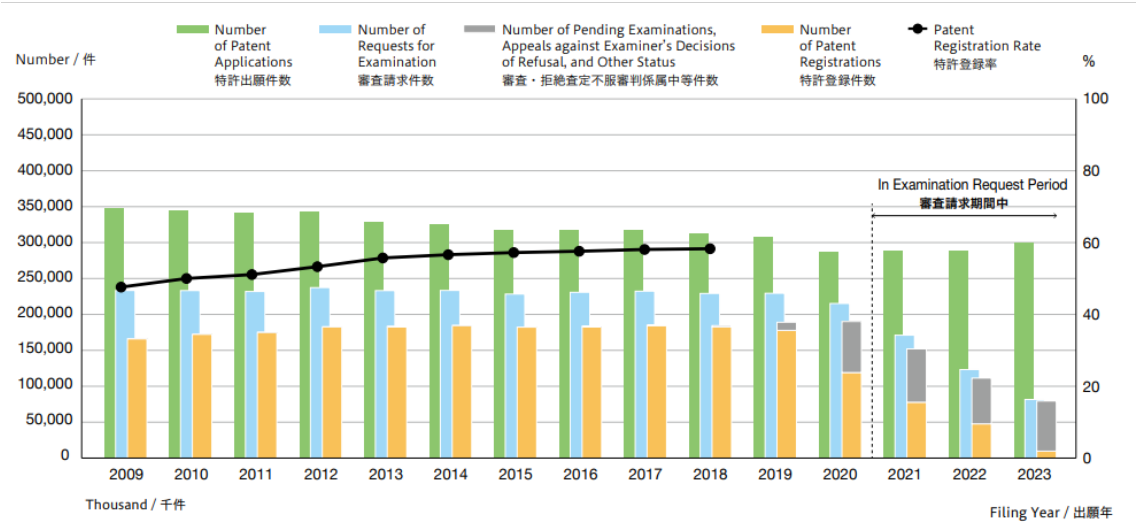
(short term, mid term)(MAFF, MOFA, JPO）

[16] CDN stands for Content Delivery Network, a network that duplicates and stores website content and delivers it to end users via optimal routes. This can speed up the display speed of websites and disperse the concentration of access.

(3) Strengthening the industrial property rights system and operation

(Current Situation and Challenges)

<Patent>



(Source) JPO “JPO Status Report 2024” (JPO)

Figure 15: Number of patent registrations, etc. by year of application

According to the number of patent registrations in Japan over the past 15 years, the number of patent registrations has been around 170,000, and the ratio of the number of patent registrations to the number of patent applications (patent registration rate) has been on the increase. These trends indicate that applicants have been more selective in their patent applications and that a shift from quantity to quality is steadily progressing in the intellectual property strategies of companies and others.

Based on this, to improve Japan's industrial competitiveness, it is essential to promote the creation of further innovations by quickly granting patents to innovative technologies through high-quality examinations. Therefore, since FY2014, Japan has been aiming to achieve "the world's fastest and utmost quality patent examinations", and has set the goals of achieving the "period from examination request to patent grant (TP)" and the "period from examination request to first notice of examination results (FA)" within an average of 14 months and 10 months, respectively, by the end of FY2023, making efforts to achieve the "world’s fastest and utmost quality patent examination" in Japan.

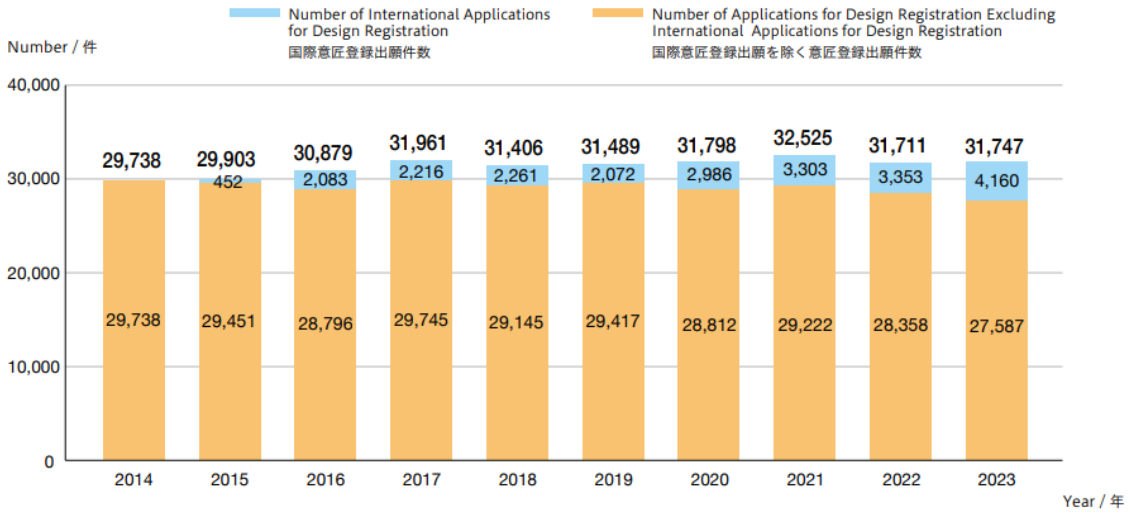
On the other hand, looking back over the last 10 years, the workload required for examination has continued to increase due to the increase in foreign-language patent documents requiring prior art searches and the sophistication and complexity of

inventions resulting from the penetration of AI technology and other factors, thus requiring prompt and appropriate protection for innovative technologies by Japanese companies in the future.

Therefore, as future efforts for patent examination, it is necessary to steadily implement various measures including maintaining the speed (STP14) by improving the resilience of patent examination, further improving the quality, supporting the creation of innovation in response to environmental changes, and promoting IP diplomacy, with the basic policy of taking various support measures for the creation of innovation based on the fastest and utmost quality patent examination in the world.

To achieve this, it is required to develop a robust examination system and realize a stable examination system in the long term by supporting the improvement of the quality and productivity of examination while utilizing AI technology and promoting each patent examiner to become proficient in multiple technical fields.

<Design>



(Source) JPO "JPO Status Report 2024" (JPO)

Figure 16: Number of design registration applications

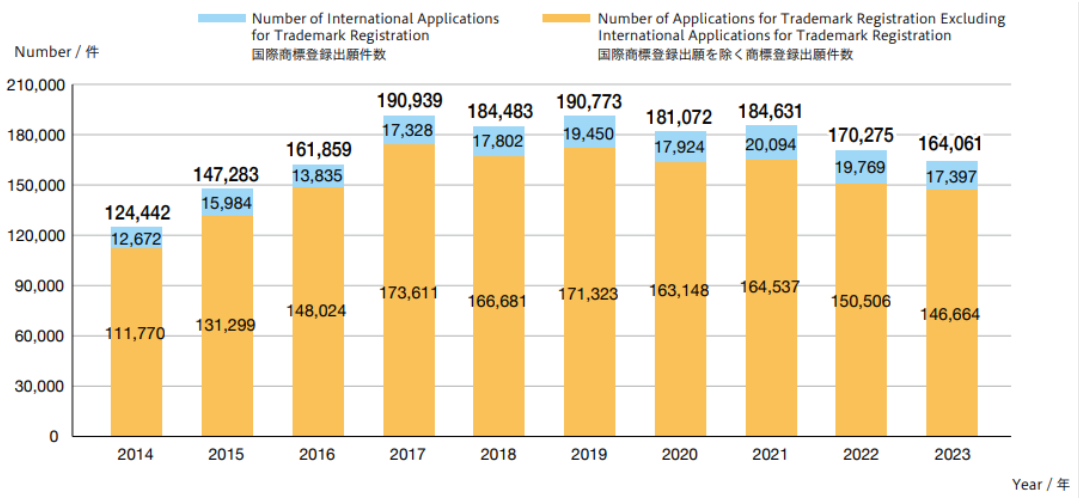
The number of applications for design registration in Japan has remained almost unchanged, with a slight increase or decrease, and in 2023, the number of applications was 31,747, up 0.1% from the previous year. The reason for the sluggish growth in the number of applications is that while the number of applications from overseas companies is on the rise, the number of applications from Japanese companies is on the decline due to a decrease in the number of products developed and so on. Consequently, it is required that the importance of design and the strategic use of design rights be

better known to the public, as well as to respond in accordance with the needs of users.

With regard to design examination, the burden of examination is increasing year by year due to the increase in the number of applications for international design registration and applications for design registration of images, which are difficult to examine and judge, as well as the expansion of the scope of investigation due to the increase in foreign design publications, including those from China, and the diversification of methods of design publication with the increased use of SNS, EC sites, etc., while the examiner personnel is strictly limited.

Under these circumstances, in FY2021, the JPO has established five pillars, including the prompt design examinations and further improvement of the quality of examinations, and it is required to continue its efforts to create an environment that facilitates the timely acquisition of stable design rights through high quality examinations

<Trademark>



(Source) JPO "JPO Status Report 2024" (JPO)

Figure 17: Number of trademark registration applications

The number of applications for trademark registration in Japan has been on a downward trend in the last two years due to the normalization of that in the fields where it had temporarily increased with the COVID pandemic (e.g., sanitary masks) and a decrease in the number of applications from China and other major countries, resulting in 164,061 applications in 2023, a decrease of 3.6% from the previous year. In the long term, however, the number of trademark registration applications is expected to remain at a high level given the increasing need to protect new business models and the

importance of the asset value that brands possess.

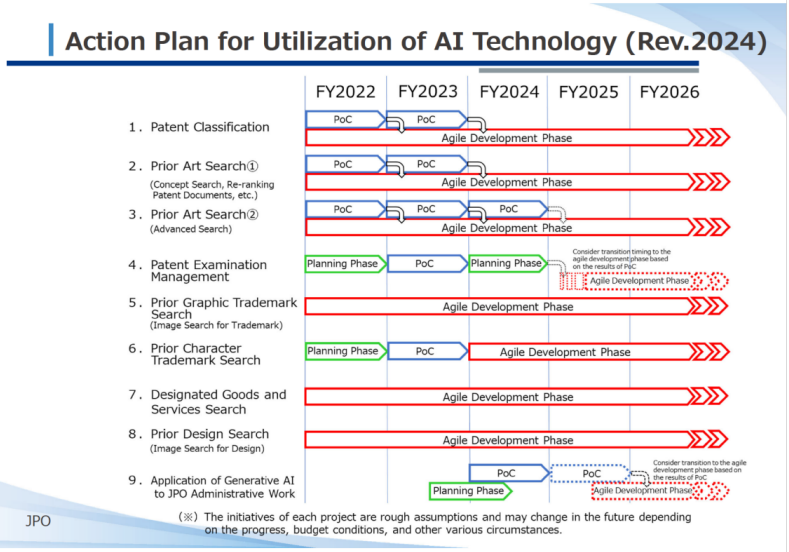
Under these circumstances, toward achieving the government target of 6.5 months for FA and 8 months for TP by the end of FY2022 for trademark examination, initiatives have been made to improve the efficiency of the examination process by promoting applications free from reasons for refusal and to enhance the examination system by increasing the number of trademark examiners and utilizing the cross-referencing investigation of trademark refusal reasons and other means. As a result, the examination period has been shortened and the government target has been achieved.

In recent years, there has been an increase in the number of applications for three-dimensional trademarks to protect the exteriors and interiors of stores and other facilities, as well as trademark applications involving new goods and services in connection with the creation of new business models such as virtual spaces. Furthermore, with the enforcement of the revised Trademark Law of 2023, a new examination procedure will be applied from April 1, 2024, onward to applications that claim the application of the consent system or applications that include the name of another person, thus increasing the examination burden year by year.

To maintain and improve the quality of the examination while keeping the examination period in line with user needs, it will be required to further enhance the efficiency of the examination process and the examination system for trademark applications.

<Innovation in the Industrial Property Right System>

Based on the progress of AI technology, utilization of AI technology is being promoted to enhance the advancement and efficiency of patent administrative work and to improve the efficiency and quality of work through trial offerings to examiners. The JPO has published the "Action Plan for Utilization of Artificial Intelligence (AI) Technology (revised in FY2024)" (May 20, 2024) as a plan for future initiatives, and steady implementation of the plan is required.



(Source) JPO website, "Action Plan for Utilization of Artificial Intelligence (AI) Technology at the Japan Patent Office, FY2024 Revised Version

Figure 18: Action Plan for the Application of Artificial Intelligence (AI) Technology(Revised version for FY2024)

In addition, the creation of innovation through the utilization of AI technology in each process of creation, protection, and utilization of inventions (e.g., development and utilization of AI services to support applications and rights acquisition, including examination of patentability) should also be considered based on the state of progress of AI technology.

(Direction of measures)

- To maintain the speed of patent examination even as the number of applications for AI-related technologies increases rapidly, based on the discussions at the "Study Group on Intellectual Property Rights in the AI Era," the examination system will be improved so that the "examination period from the request for examination to the grant of a patent" (standard examination period) will remain "within 14 months on average" in FY2033, by taking measures such as replacing examiner personnel and improving examiners' abilities including their proficiency in multiple technical fields.

  (short term, mid term) (JPO)

- To further improve the quality of patent examination, improvements in measures based on co-creation with users and thorough streamlining of the patent examination process, including the utilization of AI technology, will be

considered and necessary measures will be taken to promote patent examination innovation.

(short term, mid term) (JPO)

- Regarding design examination, which is a burden for early-stage examination, the current system does not provide early-stage examination for startups, and does not meet the needs for early rights acquisition for fundraising and other purposes. Given this situation, the necessary examination system will be developed to meet the needs for early examination for startups. In addition, the importance of design and the strategic use of design rights will continue to be reinforced.

(short term, mid term) (JPO)

- With the number of applications for trademark registration remaining at a high level, in FY2024, we will promote applications free from reasons for refusal and improve the efficiency of the examination process and the examination system by promoting applications free from reasons for refusal and utilizing the cross-referencing investigation of trademark rejection reasons, with the goal of reducing the "examination period until grant of right" and "period until notification of first examination" to an average of 7 to 9 months and 5.5 to 7.5 months respectively, while maintaining the quality of trademark examination.

(short term, mid term) (JPO)

- In order to support the global expansion of Japanese companies in emerging markets, which are expected to expand further in the future, by providing training to IP human resources in emerging countries, including Japanese examiners, patent attorneys, and other experts as lecturers, while also utilizing online lectures, we will support the establishment of IP systems in emerging countries, and promote the diffusion and penetration of Japanese examination standards and practices.

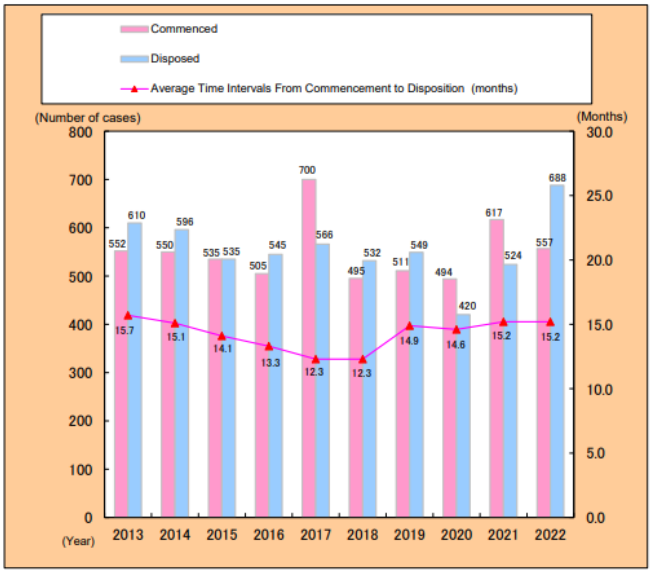
(short term, mid term) (JPO)

- As DX in business activities progresses, with the development of generative AI technology and the diversification of business due to the expansion of transactions in the virtual space, new challenges are arising in the industrial property rights system. In addition, further improvement of the convenience of administrative procedures is required. Considering the above, we will examine how the industrial property rights system should be appropriate for the DX era.

(short term, mid term) (JPO)

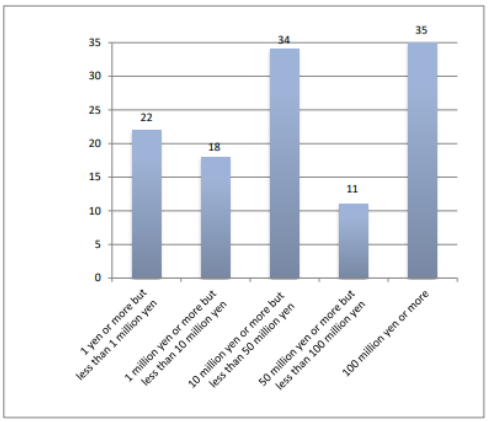
(4) Infrastructure development for IP dispute resolution

(Current Situation and Challenges)



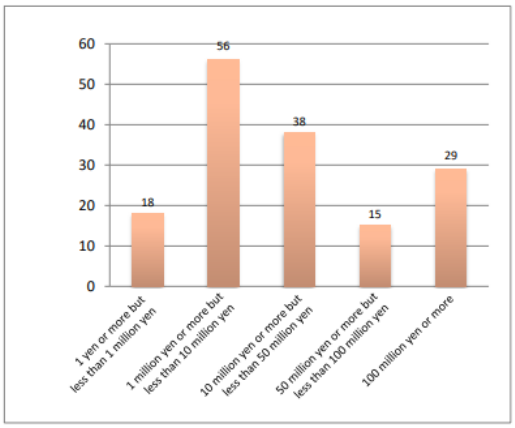
(Source) Intellectual Property High Court HP “Statistics” (“Number of new and existing IPR-related civil cases and average trial period [first instance of district courts nationwide]”)

Figure 19: Number of new/existing IPR-related civil cases and average



※Amounts related to attendant claims and court costs are not included.

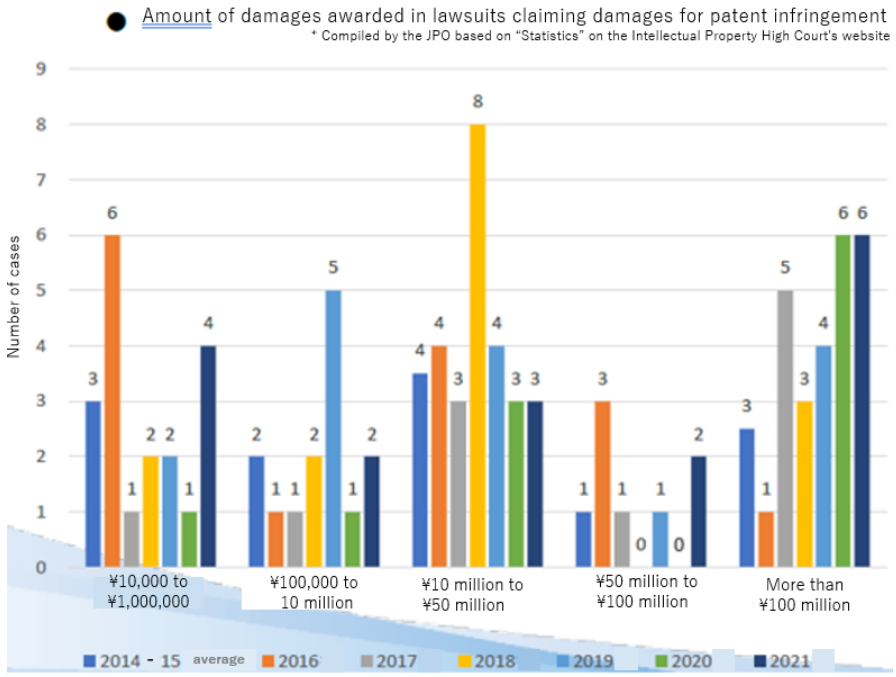
Figure 20: Amounts Accepted in Judgments



※Amounts related to court costs and settlement costs are not included.

Figure 21: Amounts promised to be paid in settlement

(Source) Intellectual Property High Court HP "Statistics" ("Statistics on Litigation Concerning Patent Infringement [Tokyo District Court and Osaka District Court, 2014 - 2022]")



(Source) Compiled by the JPO based on "Statistics" on the Intellectual Property High Court's website

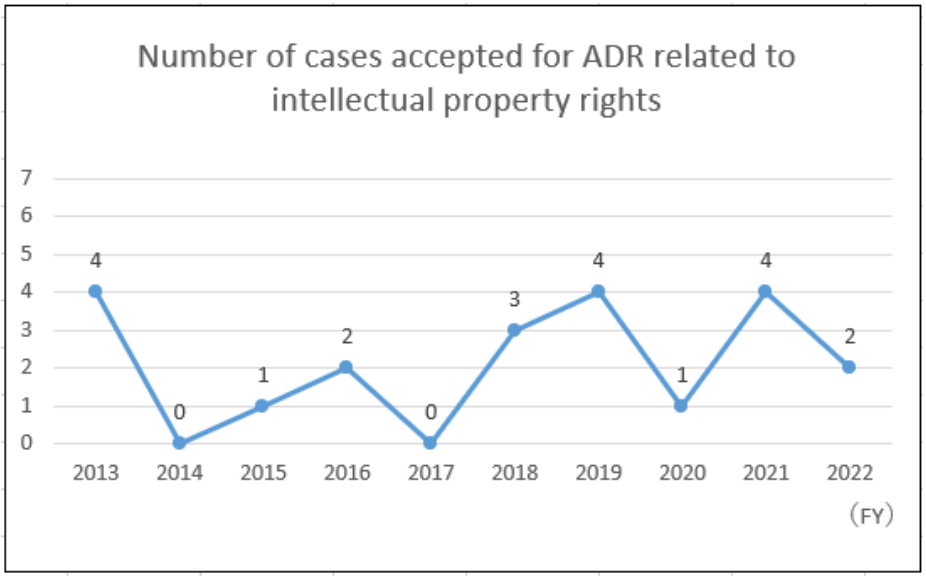
Figure 22: Amount of damages awarded in lawsuits claiming damages for patent infringement

According to the trend in the number of newly received civil cases related to intellectual property rights, the number of first instance cases in district courts nationwide has been increasing and decreasing, while the number of cases in the first instance trial has remained at around 500 to 700 (Fig. 19). In the cases of patent infringement lawsuits, the amount of money more than 100 million yen awarded in judgments and the amount promised to be paid in settlements were approximately 29% and 19%, respectively, indicating that higher amounts were awarded in judgments than in settlements (Fig. 20 and Fig. 21).

This is due to the fact that the 2019 amendment (Article 102 of the Patent Act) revised the method of calculating damages, allowing the portion of the infringing product sold by the infringer that exceeds the right holder's ability to manufacture and sell, etc., to be deemed as licensed to the infringer and added to the number of damages. Following the revision of the Act, there has been an increase in the number of cases in which courts have awarded high damages (Figure 22).

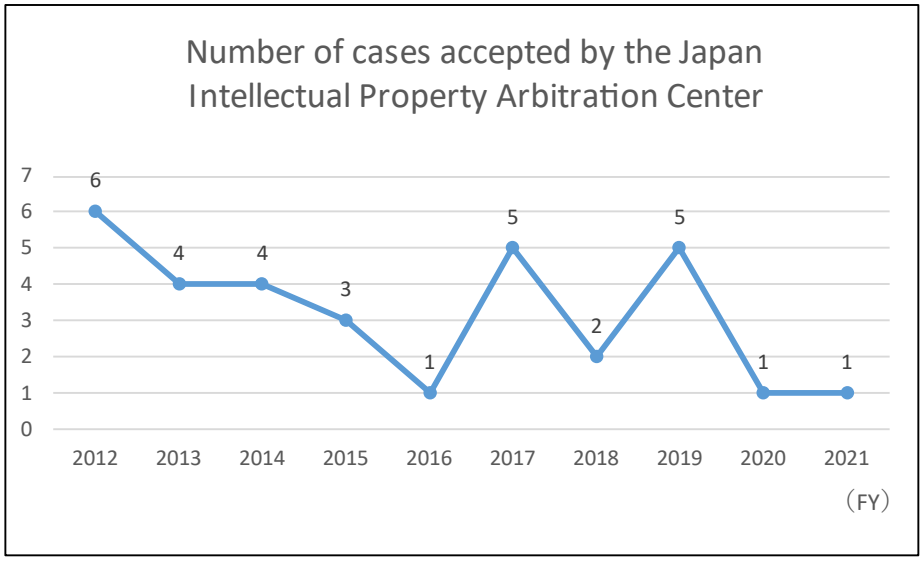
Furthermore, companies with global business operations increasingly face the risk of being involved in IP disputes, and as IP disputes become more globalized, the measures to resolve them are also becoming more complex. To ensure the appropriate protection and utilization of IP, it is essential to develop an infrastructure for the resolution of IP disputes.

While efforts have been made to develop an infrastructure for IP dispute resolution, there are still calls for enhancement of the damages system and other measures to provide appropriate relief to those whose rights have been infringed and to deter infringement. In the future, it is necessary to consider infrastructure development based on specific needs.



(Source) Compiled by Cabinet Office, Secretariat of Intellectual Property Strategy Headquarters, based on the Arbitration ADR Statistical Yearly Report (Japan Federation of Bar Associations)

Figure 23: Number of cases accepted for ADR related to intellectual property rights



(Source) Compiled by Cabinet Office, Secretariat of Intellectual Property Strategy Headquarters, based on the number of cases handled by certified dispute resolution service providers (Ministry of Justice)

Figure 24: Number of cases accepted by the Japan Intellectual Property Arbitration Center

As a means of resolving IP disputes, the use of the alternative dispute resolution

procedure (ADR) may be effective in addition to litigation. As for the use of ADR in the private sector, in IP-related cases, for instance, the number of ADR cases accepted by the Japan Federation of Bar Associations "ADR (Alternative Dispute Resolution) Center" (per year) and by the Japan Intellectual Property Arbitration Center has remained at around several cases (Figure 23 and Figure 24). On the other hand, the Tokyo District Court and Osaka District Court began operating specialized mediation to resolve disputes related to intellectual property rights in 2019, and further expansion of its use is expected in the future.

In this regard, Online Dispute Resolution (ODR), in which ADR is conducted online, is also an effective means from the perspective of improving accessibility, and other factors. For the social implementation of ODR, we conducted the "ODR Demonstration Project" to provide a one-stop service from legal consultation to ADR on a single digital platform, and to analyze and verify its effectiveness, issues, and countermeasures. For the social implementation of ODR, we conducted the "ODR Demonstration Project" to provide a one-stop service from legal consultation to ADR on a single digital platform, and to analyze and verify its effectiveness, issues, and countermeasures. Based on the results of this project, further verification of issues will be conducted as well as further expansion and revitalization of ADR and ODR.

International arbitration offers several advantages, including the ease of enforcement in foreign countries under treaties such as the New York Convention, the ability to select professional and neutral arbitrators, and the protection of trade secrets through its basically private nature, it has become a global standard for dispute resolution in international commercial transactions, however, its use in Japan has been sluggish. The state of the legal system of the target country is a serious concern for the parties in selecting the place of arbitration, therefore, the Arbitration Law has been revised to revitalize international arbitration, and arbitration legislation has been developed in line with the latest international standards.

In addition, in order to consider more effective measures to revitalize international arbitration in the future, the "Practical Study Group for Steadily Promoting the Use of International Arbitration in Japan" was established in July 2023, followed by the publication of a report in January 2024, outlining future directions. Based on these considerations, the guidelines compiled in 2018 were revised and new guidelines were formulated in May 2024 as an indication of measures to revitalize international arbitration, which the government should focus on in the future.

As opportunities for overseas transactions and investment by Japanese companies increase, global IP disputes are also likely to increase. Further promotion of measures

related to infrastructure development for the revitalization of ADR/ODR and international arbitration, human resource development, and environmental improvements such as public relations and awareness-raising is required.

In recent years, as IoT technologies have become increasingly pervasive, the standard essential patents, which are indispensable to implement standards such as communications have an increasing impact on global competition.

Amidst these circumstances, the global leadership battle over the formation of rules for dispute resolution of the standard essential patent has intensified in recent years. Under these circumstances, the Chinese courts have frequently issued anti-suit injunctions, which are recognized in Anglo-American law as a means of dealing with duplicate litigation, as a means of prohibiting the pursuit of judicial remedies outside of China, and China is taking a stronger stance toward resolving disputes related to the standard essential patent.

In this regard, there is an opinion that the principle of territoriality is adopted as a legal principle in intellectual property law, and from the viewpoint of protecting the "right to a fair trial" under the Constitution, a counterclaim should be filed in the country where the patent was registered as the forum.

In February 2022, the European Commission issued a request to China for consultations under the WTO Agreement, and a panel was established in January 2023, thus the situation will need to be closely monitored.

In addition, negotiations on licensing of the standard essential patent have become important in various fields. To facilitate the negotiation of licensing of the standard essential patent, the Ministry of Economy, Trade and Industry published the "Good Faith Negotiation Guidelines for Standard Essential Patent Licenses" in 2022, and the Japan Patent Office has revised the "Guide to Licensing Negotiations involving Standard Essential Patents" and continues to promote its dissemination. While taking these details into consideration, it is important to deepen discussions on improving transparency of essentiality and ensuring transparency in setting license consideration, as well as to ensure that the burden of consideration for licensing is discussed and addressed by the parties concerned in the supply chain.

(Direction of measures)

- Based on the revised Arbitration Law and other laws that meet the latest international standards, which came into effect in April 2024, and with the aim of creating an environment in which Japan can use international arbitration as a means of fair and equitable resolution of global legal disputes, including

intellectual property disputes, and based on the policy presented at the liaison conference of concerned government ministries, further efforts will be made to develop Japan-based arbitration personnel and to raise public awareness of arbitration in Japan.

(short term, mid term) (Ministry of Justice, Concerned government ministries)

- We will hold international conferences on IP-related disputes with judicial officials in the Asian region and hold follow-up seminars to improve the dispute resolution capacity of the Asian region as a whole, as well as hold international conferences with judicial officials in Western countries to promote international cooperation in IP dispute resolution and provide information on IP dispute resolution to legal professionals and private companies in Japan.

(short term, mid term) (Ministry of Justice, JPO)

- ODR, which uses digital technology to conduct ADR online, will be promoted to provide various means of dispute resolution to those who have problems with intellectual property and other issues, and further verification of issues will be conducted based on the results of the ODR demonstration experiment, and other efforts. In addition, the Ministry will further expand and revitalize ADR and ODR by promoting public awareness and publicity of ADR and ODR, and by promoting cooperation and strengthening of certified ADR service providers and related organizations.

(short term, mid term) (Ministry of Justice)

- Regarding efforts to translate laws and regulations into foreign languages, by utilizing AI translation and introducing a faster and more efficient work scheme based on this, the provision of high-quality English translations will be expanded and accelerated, leading to the active overseas dissemination of English translations of laws and regulations related to intellectual property fields.

(short term, mid term) (Ministry of Justice)

- To support the development and operation of legal systems for the enforcement of IP rights in emerging countries and to establish effective judicial procedures, we will support the development of IP judicial human resources by providing training to judicial officials in emerging countries.

(short term, mid term) (Ministry of Justice, MOFA)

- To facilitate licensing negotiations for the standard essential patent, we will continue to disseminate the "Guide to Licensing Negotiations Involving Standard Essential Patents," which was revised in 2022.

(short term, mid term) (JPO)

・ To cope with the increasing inflow of counterfeit products and piracy due to the development of cross-border e-commerce, the revised Trademark Act, Design Act, and Customs Act, which came into effect in October 2022, make counterfeit products brought into Japan by overseas businesses by mail, etc. subject to control by customs. Therefore, strict border control against counterfeit products and piracy will be implemented. In addition, efforts will continue to be made to provide adequate publicity or other means to prevent unforeseen damage to bona fide importers. In addition, other intellectual property rights will also be examined as necessary.

(short term, mid term) (MOF, JPO, Agency for Cultural Affairs) [reprinted]

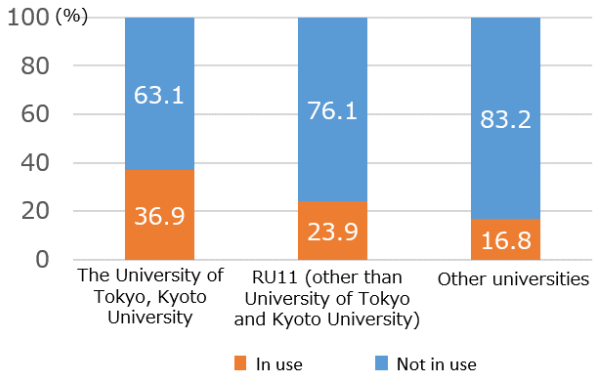
3. Utilization of Intellectual Property

(1) Promoting social implementation through industry-academia collaboration

(Current Situation and Challenges)

For startups in the innovation function, intellectual property, including patents, is an important element that directly affects the success or failure of their business, and it is no exaggeration to say that the success or failure of an intellectual property strategy determines the creation and development of startups. To form a startup ecosystem, it is necessary to utilize the intellectual property as the result of outstanding, cutting-edge university research by startups, creating an environment in which they can speedily and agilely commercialize this intellectual property.

However, intellectual property as a result of university research is not fully utilized, as shown in Figure 25. It is considered that the reason for this is various factors, including the lack of IP management with an eye toward commercialization at universities, the lack of IP creation and rights creation with an eye toward commercialization, and the lack of a system and budget to maximize opportunities for social implementation of research results.



(Source) Compiled by Cabinet Office, Secretariat of Intellectual Property Strategy Headquarters, based on "Status of Industry-University Collaboration at Universities, etc. in FY2020" by MEXT

Figure 25: Utilization of university-owned patents

Regarding research results jointly created by a university and a joint research partner, patents on such research results are often shared between the university and the joint research partner. In such cases, depending on the content of the contract, the university may not be able to license the research results to anyone other than the joint research partner, in accordance with Article 73 of the Patent Act.

In light of the above situation, the Cabinet Office, Ministry of Education, Culture,

Sports, Science and Technology (MEXT), and Ministry of Economy, Trade and Industry (METI) formulated and published the "University Intellectual Property Governance Guidelines" in March 2023 to maximize opportunities for social implementation of IP created by universities and to achieve a virtuous cycle of funds, which are positioned as an annex of the "Guidelines for Industry-Academia-Government Collaboration to Strengthen Joint Research " (hereinafter referred to as "Guidelines for Industry-academia-government collaborations").

【University Intellectual Property Governance Guidelines】

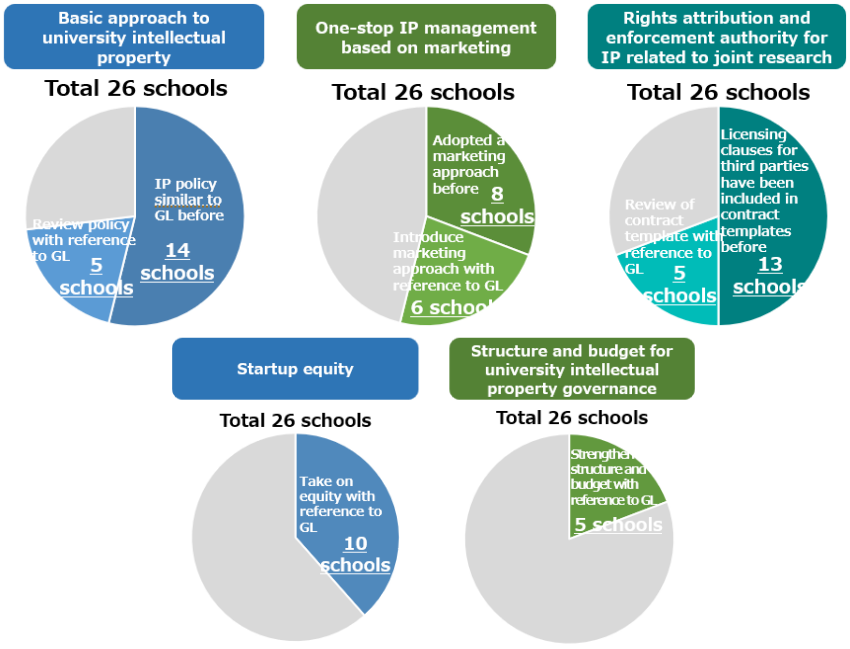
The "University Intellectual Property Governance Guidelines" indicate, among the many missions of universities, the rights attribution and enforcement authority of IP rights related to joint research results and the use of startup share options as licensing compensation, which are considered necessary to maximize opportunities for social implementation of IP created by universities and to achieve a virtuous cycle of funding. The aim is to disseminate these guidelines to target universities nationwide and improve university intellectual property governance through collaboration with Universities for International Research Excellence and the Program for Forming Japan's Peak Research Universities. The Guidelines provide for the following.

① Basic Approach to University Intellectual Property
② Integrated IP management based on marketing
③ Rights attribution and enforcement authority for intellectual property related to joint research
④ Patent Quality Control
⑤ Shares and share options of startups (equity)
⑥ University intellectual property governance structure and budget

<Effects and Challenges of the "University Intellectual Property Governance Guidelines">

To disseminate the "University Intellectual Property Governance Guidelines" to target universities nationwide and improve university IP governance, the Cabinet Office, Ministry of Education, Culture, Sports, Science and Technology, and Ministry of Economy, Trade and Industry conducted lectures and panel discussions on the "University Intellectual Property Governance Guidelines" at various academic conferences and events related to industry-academia collaboration, at conferences where people involved in industry-academia collaboration and intellectual property gather.

The Cabinet Office also exchanged opinions with universities across Japan (26 universities in total), including the Research University 11 (RU11) and those selected in FY2023 for the Program for Forming Japan's Peak Research Universities, as well as with intellectual property-related organizations in the industrial and legal sectors and some companies, to confirm the penetration of the " University Intellectual Property Governance Guidelines," to identify the effects of formulating the Guidelines, and to identify issues related to the content of the Guidelines. Based on the results of these opinion exchanges, Figures 26 and 27 show the effects of the "University Intellectual Property Governance Guidelines" and Figure 28 shows the issues related to the "University Intellectual Property Governance Guidelines".



(Source) Compiled based on a survey by Cabinet Office, Secretariat of Intellectual Property Strategy Headquarters

Figure 26: Effectiveness of "University Intellectual Property Governance Guidelines"

	Specific cases of effects at each university
Basic Approach to University Intellectual Property	・ The University's IP policy was reviewed/a review was initiated to maximize opportunities for social implementation of the university's research results. ・ The ecosystem concept raised by the "University Intellectual Property Governance Guidelines" permeated the university and became the basis for the concept of not only the IP strategy but also the industry-academia collaboration strategy.
Marketing-based IP management	・ Strengthening of the marketing system for intellectual property related to the university's research results was initiated.
Rights attribution and enforcement authority for intellectual property related to joint research	・ The template of the joint research contract was reviewed/initiated to be reviewed. ・ Succeeded in establishing startups based on the results of joint research, while maintaining good relationships with research partners. ・ While maintaining good relationships with joint research partners, licensing to third parties in non-business areas of the joint research partners was successfully achieved.
Equity in startups	・ The operation was established on the premise of building a win-win relationship between universities and startups. ・ Succeeded in concluding a contract with a university-launched startup with a good relationship.
University IP governance structure and budget	・ The university's IP governance structure has been strengthened and reorganized/reorganization has been initiated. ・ The "University Intellectual Property Governance Guideline" was used as a negotiating material within the university with regard to the IP system and budget.

(Source) Compiled based on a survey by Cabinet Office, Secretariat of Intellectual Property Strategy Headquarters

Figure 27: Effectiveness of "University Intellectual Property Governance Guidelines" (detail)

Although it has been only one year since the "University Intellectual Property Governance Guidelines" were released, as shown in Figures 26 and 27, numerous universities have started to review their IP governance with reference to the "University Intellectual Property Governance Guidelines," and concrete effects have begun to

emerge for each of the items. It appears that the "University Intellectual Property Governance Guidelines" have been having a certain effect toward maximizing opportunities for social implementation of intellectual property related to university research results and realizing a virtuous cycle of funds.

On the other hand, through the exchange of opinions, some issues in promoting efforts in accordance with the "University Intellectual Property Governance Guidelines" became apparent. For instance, some of the opinions stated that it is difficult to understand the "University Intellectual Property Governance Guidelines" accurately. There are also some opinions that rigid contract negotiations that deviate from the purpose and intent of the "University Intellectual Property Governance Guidelines" (e.g., not allowing any changes from the template of the contract) are occasionally observed.

Additionally, there are some opinions that good cases of startup establishment in Japan and their success factors should be shared, as some cases of successful startup establishment based on joint research results have started to emerge while maintaining good relationships with the joint research partners. As one of the success factors, there is an opinion that it is effective to distinguish between licensing to university-launched startups and licensing to other general companies (including competitors).

Including these, Chart 28 shows the details of the opinions and requests regarding the "University Intellectual Property Governance Guidelines" that became apparent from the exchange of opinions.

	Opinions and requests
Overall	・ Continued verification of the effects of the "University Intellectual Property Governance Guideline" (Opinion source: universities, companies)
	・ Development of explanatory materials and explanatory videos to ensure an accurate understanding of the purpose and intent of the " University Intellectual Property Governance Guidelines" (opinions source: universities, companies)
Marketing-based IP management	・ Provide support, including introductions to companies (including overseas companies) that can lead to social implementation of research results (opinion source: universities, researchers)
Rights attribution and enforcement authority for intellectual property related to joint research	・ Sharing of good cases and their success factors for implementing the principles of the "University Intellectual Property Governance Guidelines", and discussion of other necessary measures. (Opinion source: universities, researchers, companies)
	・ Reduction of cases of rigid contract negotiations that deviate from the purpose of the " University Intellectual Property Governance Guidelines" (opinion source: companies)
Equity in startups	・ Publicize the measures to be taken by the "University Intellectual Property Governance Guideline" and other measures. (Opinion source: universities, researchers)
University IP governance structure and budget	・ Consideration of means of dealing with shortages of human resources and budgets at each university (Opinion source: universities)

(Source) Compiled based on a survey by Cabinet Office, Secretariat of Intellectual Property Strategy Headquarters

Figure 28: Challenges related to “University Intellectual Property Governance Guideline"

<Strengthening Support for Overseas Applications by Universities >

Although it is necessary to formulate a budget plan based on necessary costs to maximize opportunities for social implementation of university research results and to create a virtuous cycle of funds, overseas applications, in particular, require a large number of costs, including application and maintenance costs, translation costs, and local agent costs, thus making it difficult for universities to secure funds for such overseas applications in reality.

In the ranking of the world's universities in terms of the number of published PCT international patent applications (Figure 29), 11 U.S., 10 Chinese, and five Korean universities are ranked in the top 30, while only two Japanese universities are ranked in the top 30.

Moreover, in the ranking of the number of U.S. patents granted by universities around the world [17], 20 Chinese and seven Korean universities are ranked in the rankings, while only five Japanese universities are ranked in the rankings.

Compared to universities in major countries, Japanese universities are lagging behind in global IP strategies.

Order	University name	Number
1	University of California (The U.S.)	552
2	Zhejiang University (China)	309
3	Soochow University (China)	303
4	Stanford University (The U.S.)	217
5	University of Texas System (The U.S.)	187
6	Tsinghua University (China)	174
7	Massachusetts Institute of Technology (The U.S.)	161
8	John Hopkins University (The U.S.)	160
8	Seoul National University (South Korea)	160
10	Kangnam University (South Korea)	149
11	Yonsei University (South Korea)	148
12	Korea University (South Korea)	147
13	National University of Singapore (Singapore)	138
14	Hanyang University (China)	128
15	Jiangsu University (China)	125
16	Nanyang Technological University (Singapore)	119
17	University of Tokyo	118
18	Shenzhen University (China)	116
19	Korea advanced Institute of Science and Technology (South Korea)	112
20	South China University of Technology (China)	110
21	University of Michigan (The U.S.)	109
22	The University of Arizona (The U.S.)	108
23	Southeast University (China)	99
23	University of Florida (The U.S.)	99
25	Shandong University (China)	98
26	Northwestern University (The U.S.)	96
27	University of Osaka	95
28	Cornell University (The U.S.)	90
29	Shanghai Jiao Tong University (China)	88
29	Harvard University (The U.S.)	88

(Source) JPO “Patent Administration Annual Report 2023”.
*The number of applications is the number of applications published internationally in 2022. The number of applications is based on the name of the first applicant listed

Figure 29: Domestic and foreign universities ranked in the top 30 number of published PCT international applications (2022)

Considering these circumstances, the Japan Science and Technology Agency (JST) has been providing partial support for the cost of PCT international patent applications and patent applications to various countries filed by universities and other institutions

[17](Source) Top 100 Worldwide Universities Granted U.S. Utility Patents in 2023（National Academy of Inventors）

as part of its Intellectual Property Utilization Support Program (support for obtaining patent rights). To support patents that lead to the commercialization of research results of universities by startups originating from universities, the support target has been expanded from FY2023 to include the portion to be borne by universities, etc. for PCT international applications and patent applications to various countries that are based on joint applications by startups originating from universities and SMEs.

In addition, in order to further promote the acquisition of rights overseas by startups, universities and other organizations, the JPO is reviewing its existing program to subsidize the costs of foreign applications and intermediate procedures (patent examination requests and responses to notices of reasons for refusal), expanding the period during which subsidies are provided for eligible foreign applications, and making it possible to provide subsidies across fiscal years; the JPO is also launching a new, more comprehensive program in FY2024.

< Employee inventions at universities>

Regarding the handling of employee inventions at universities, at present, inventions resulting from research conducted at universities using research funds provided by universities or publicly funded by universities, or research conducted using the facilities of universities, are regarded as maximum employee inventions, and within the scope of such inventions, each university, etc. determines the right to acquire and succeed to them based on its own policy.

On the other hand, the Cabinet Office has exchanged opinions with university researchers regarding the handling of intellectual property when a researcher transfers and retires, and the following opinions were raised.

In the future, the Cabinet Office will further exchange opinions not only with researchers but also with universities and companies, etc., to analyze and organize issues and measures to be taken.

【Examples of opinions from university researchers, etc.】

- Unsure how to deal with handling patents when a researcher transfers and retires.
- It is difficult to continue research after retirement if the transfer of rights is delayed at the time of retirement. It is desirable to present the concept and options to researchers in advance.
- It may be difficult to implement the research results in society after the researcher transfers and retires.
- It is desirable that university research results be handled in such a way that research activities and social implementation can proceed smoothly even after a researcher transfers or retires.

(Direction of measures)

- Continue to promote activities to disseminate the " University Intellectual Property Governance Guidelines" to eligible universities nationwide through explanations at conferences and meetings related to industry-academia collaboration as well as to improve university intellectual property governance.

  (short term, mid term) (Cabinet Office [IP], MEXT, METI)
- Conduct an exchange of opinions on the "University Intellectual Property Governance Guidelines" and analyze and organize the implementation status, issues and countermeasures for intellectual property management based on the Guidelines, with reference to feedback received from the discussions.

  (short term, mid term) (Cabinet Office [IP], MEXT)
- Promote the collection of good cases toward the implementation of the principles of the "University Intellectual Property Governance Guidelines" and publish the results of the collection.

  (short term, mid term) (Cabinet Office [IP], MEXT)
- Through the newly established fund for the creation of new university-launched industries at Japan Science and Technology Agency (JST), support for international patent applications will also be strengthened as fundamental reinforcement of university-launched startup creation is promoted.

  (short term, mid term) (MEXT)

・ In order to support the establishment of international intellectual property strategies by SMEs, startup companies, and universities, we will promote the acquisition of rights in foreign countries by subsidizing intermediate procedures such as foreign application fees, examination request fees, and responses to notices of rejection reasons, as well as providing subsidies for countermeasures against infringement of intellectual property rights in foreign countries, thereby leading to the global acquisition, commercialization, and exercise of intellectual property rights.

(short term, mid term) (JPO)

・ In the university evaluation and national funding system, consider various evaluations such as incorporation of license income into evaluation items.

(short term, mid term) (Cabinet Office [Science and Technology, Health and Medical Care], MEXT, METI)

・ Through sustainable collaboration between universities and business companies/startups, work to disseminate and establish the "OI Model Agreement (University Edition)," which has as its value axis the maximization of the total sum of social value through a virtuous cycle of social implementation of "knowledge" and creation of new "knowledge. Furthermore, we will continue to disseminate the "Guidelines for Business Collaboration with Startups and Investment in Startups".

(short term, mid term) (FTC, JPO)

・ Although university IP governance is improving with the "University Intellectual Property Governance Guidelines," there is concern that information and other support on IP by industry-university collaboration headquarters has not reached researchers who create research results at universities. Considering these current conditions, we will examine the actual situation and investigate ways to provide researchers with the information they need to know in order to properly protect their IP.

(short term, mid term) (JPO)

・ The iAca Project (intellectual property support project for social implementation of research results of universities and other institutions), which is a developmental integration of the IP strategy designer dispatch project and the industry-academia collaboration/startup advisor project, will be implemented to dispatch "IP strategy producers," who are experts in intellectual property management, to universities and other institutions. This project will realize seamless support from the initial stage of the research stage, from the discovery

of seeds and support for the formulation of exit strategies to the support of industry-academia collaborative activities for the commercialization of outstanding seeds, including the creation of startups.

(short term, mid term) (JPO)

- The database is provided in a searchable form in the open patent information database, and private businesses are informed that they can obtain open patent information of companies, universities, research institutes, and other organizations collectively. In addition, we will inform the registrants that we have prepared and published a manual that includes tips on how to efficiently register patents in the database and to improve the possibility of using the database, as well as examples of how to use the database. Furthermore, through matching projects that utilize information on patents with the intention of opening up to the public, we will support the commercialization of licensed patents to open up to the public.

(short term, mid term) (JPO)

(2) Promoting the strategic use of standards

(Current Situation and Challenges)

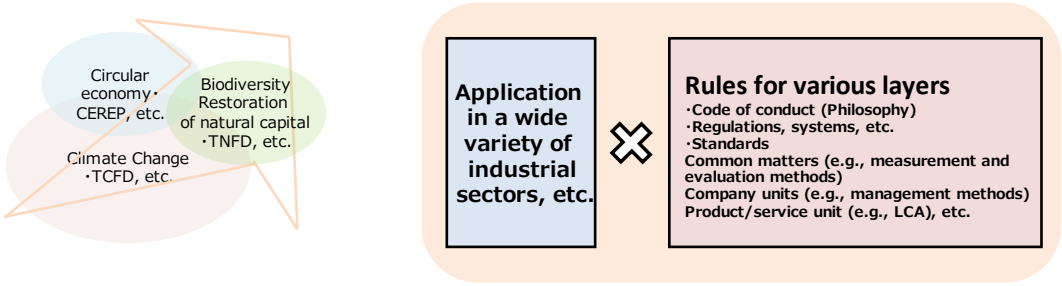
<Activation of international rule formation >

Currently, worldwide, there is remarkable progress in the penetration of values that emphasize the resolution of social issues, the transition to a digital society and economy, the development of advanced technologies, and the formation of new international rules (e.g., norms, institutions, and standards) in light of these factors. The existing markets are also changing drastically, and new markets are being created one after another, resulting in the active formation of rules in various areas (e.g., industry, society, and technology), and having a significant impact on private-sector economic activities.

Among other things, the global influence of rules related to societal values involves the influence of the stakeholders behind them, which is very powerful. For instance, international rules that emphasize sustainability (environmental measures) will bring about a game changer in market competition, affecting a wide range of industries and supply chains, as exemplified by the shift to electric vehicles. The targets of rulemaking have also expanded from climate change to circular economy and biodiversity/natural capital restoration (nature positive), leading to a cascade of rulemaking in various industrial domains and other areas (see Figure 30).

Therefore, both private companies and governments are facing a situation in which their own international competitiveness is directly related to how they anticipate the

formation of international rules that will become the root of game-changing market competition as well as chokepoints (key points). In particular, it is an effective means of securing a competitive advantage in new markets (blue ocean) with a high rate of return.



(Source) Compiled based on a survey by Cabinet Office, Secretariat of Intellectual Property Strategy Headquarters

Figure 30: Extension of environmental rule formation and its linkage to a wide range of industrial sectors (image)

< Expanding influence of international standards >

Among international rules, international standards have a very expanding influence. Particularly, there are many international fora for international standardization in the private sector in addition to the most well-known International Organization for Standardization (ISO) (see Figure 31).

International standards are not only in a position to define the state of the market and rules in more detail but also provide a great deal of room for private entities to formulate their own rules. For the private sector, it is a very effective means of setting market rules that give them a competitive advantage in their business. The rules formed by government entities (e.g., treaties and agreements, international regulations and systems, foreign regulations and systems) are tied to the rules, enforcing compliance with them, possibly having a fatal market regulation effect.

	Government agencies (private sector may be included)	Private agencies (representative organizations of the countries concerned)	Private agencies (business organizations, academic institutions, etc.)
General fields		ISO	
Electrical & Electronics		IEC	IEEE
Telecommunications	ITU	3GPP	IEEE、W3C、IETF
Agriculture		ISO and IEC coverage available	AgGateway
Food	Codex		
Medical products	ICH (including private sector)		
Medical equipment	IMDRF		ASTM、IEEE
Marine affairs	IMO、IALA (including private sector)		
Airline	ICAO		RTCA、EUROCAE、SAE、ASTM
Environment			WRI、TCFD、TNFD

*The name of each organization is shown as an example (other organizations may exist)

(Source) Compiled based on a survey by Cabinet Office, Secretariat of Intellectual Property Strategy Headquarters

Figure 31: Cases of international organizations and associations involved in international standardization

<Competition among major countries for international standards>

It is often pointed out that Western companies take for granted the use of international standards as a means of doing business as a management and business strategy, and utilize them proactively and strategically. Major countries are also promoting strategic policies that strongly support the strategic use of international standards by their own private companies (international standards strategy) and strengthen their capacity bases as national strategies, in a competitive manner, so that they can be used to strengthen their own international competitiveness.

In recent years, between 2021 and 2023, China, the EU, and the U.S. have successively announced comprehensive national standards strategies (national standards strategies) (see Figure 32). The strategy is characterized by the fact that it is strongly aware of the need to ensure economic security by strengthening the nation's international competitiveness, proceeding in an integrated manner with policies such as industrial policy and innovation policy. China has set a goal of harmonizing at least 85% of Chinese standards with international standards by 2025 and will strengthen various initiatives. EU will strengthen its standardization system, international standardization, and standards education in Europe. The United States will strengthen international standardization by identifying priority fundamental technologies and applications to ensure the competitiveness of critical and emerging technologies essential for national security.

(Source) Compiled based on a survey by Cabinet Office, Secretariat of Intellectual Property Strategy Headquarters

Figure 32: National standards strategies in China, the EU, and the U.S.

In Japan, the national standards strategy has not been developed for a long time since the "International Standards Comprehensive Strategy" published by the Intellectual Property Strategy Headquarters in December 2006. Based on the current situation, and from the perspective of economic security, it is necessary to further strengthen the government's promotion system as a basis for promoting the strategic use of international standards by industry, academia, and government throughout the country, and to reorganize and implement the national standards strategy, including priority

areas and measures to be addressed.

<Ecosystem supporting strategic activities>

Three major challenges can be identified when preparing a national standards strategy for Japan.

The first challenge is to change the behavior of industry, academia, and government. Japan has continuously taken measures to strengthen its international standards strategy, however, unlike major countries, it is thought that awareness of the importance of this strategy has not yet spread sufficiently, nor is there sufficient strategic thinking that should accompany it. In particular, it has been pointed out that private companies, unlike their counterparts in Europe and the U.S., remain generally uninvolved in international rule formation and international standardization as a management or business strategy.

For this reason, international standardization tends to focus exclusively on technical standards (e.g., technical specifications, test and measurement methods, evaluation methods), and international standardization as a business tool tends to become a self-objective. Therefore, there is a risk that international standardization may not be implemented effectively. Governments and government-affiliated organizations that support the private sector may also fall into a similar situation regarding the effective use of international standards in industrial and innovation policies.

In a wide range of areas and policies, both the public and private sectors are required to reform their awareness that strategic use of international rule formation and international standardization is an essential prerequisite for Japan to compete in the international market. Therefore, it is necessary to improve conceptualization and skills to enhance strategic thinking, and to pursue not only individual technical standards but also certification and linkages with regulations to increase the effectiveness of standards, as well as the formation of higher-level rules that may overrule technical standards in parallel, to effectively use international standards and international rules, in industry, academia, and government, respectively, and to strengthen measures to promote behavioral change.

The second challenge is to strengthen resources (e.g., human resources, funds, structures) to invest in an international standards strategy, which is also a consequence of the first behavior change challenge and needs to be addressed in the same context.

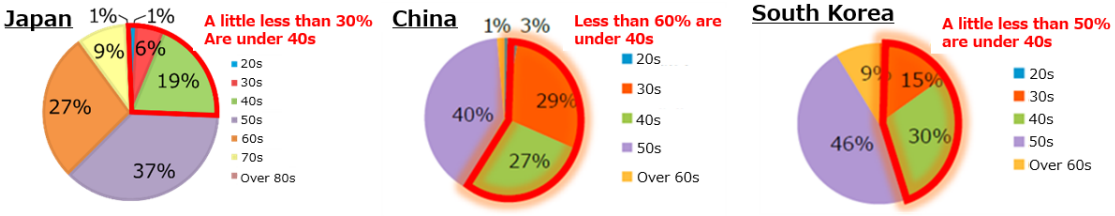


Figure 33: Age structure of individuals involved in international standardization activities [18]

In the private sector in particular, it has been pointed out that personnel involved in international standardization activities are aging (refer to Figure 33) and shrinking, and that the number of personnel dispatched to international conferences and the funds invested in them tend to be reduced. If this trend continues, it will become increasingly difficult to respond to the increased activity of international rule formation and the deepening of the quality and expansion of the quantity of international standardization. To reverse this trend, measures, including the promotion of behavioral changes in industry, academia, and government, are required to be strengthened. Furthermore, to promote continued participation in international community forums and to secure key positions, the government needs to strengthen its support and efforts.

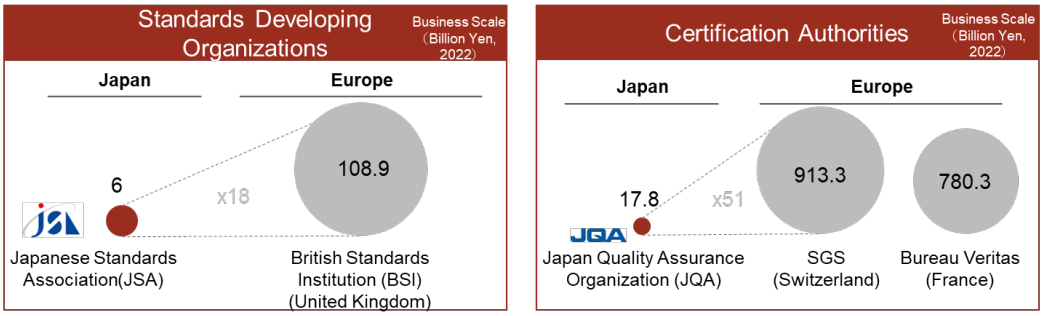
The third challenge is to strengthen the support infrastructure that facilitates business activities based on international standards strategies for private companies.

As a support infrastructure for the entire business process (formulation of business strategies including international standardization strategies, international standardization, use of international standards in business development, etc.) in which private companies strive to capture and expand international markets, the ecosystem broadly composed of external organizations (standards developing organizations, certification authorities, government-affiliated organizations [e.g., R&D organizations], academia, management strategy consulting firms, etc.), external human resources with excellent expertise, as well as government, unlike in Europe and the U.S., is not sufficiently developed and does not appear to be functioning autonomously.

The reasons for this include: ① the business scale and structure of external organizations, particularly standards developing organizations and certification authorities, are much smaller than those in Europe and the United States (see Figure

[18] The graph for Japan is based on the range of those identified among ISO/IEC chairmen, international secretaries, conveners, members of national council committees, etc. (as of the end of March 2023). The graphs for China and Korea are based on estimates by Japanese participants regarding the age of those who are considered to play the most central roles in some TCs in ISO/IEC (conducted in 2015).

34); ②the support services provided by external organizations for international standardization and certification have not been activated as a business due partly to behavioral changes in the private sector, the demand side; and ③the market for external human resources with high mobility, career steps, and excellent compensation levels is not sufficiently developed, as in Europe and the United States. These issues, including the first and second, are considered to be correlated.



Business size
■Standards development organization (Standardization organization) : Japanese Standards Association (JSA) is 1/18 of British Standards Institution (BSI)
■Certification authority : Japan Quality Assurance Organization (JQA) is 1/51 of Swiss SGS

(Source) Compiled by Cabinet Office, Secretariat of Intellectual Property Strategy Headquarters, based on data published by each organization

Figure 34: International Comparison of Business Scale of Standards Developing Organizations and Certification Authorities

In addition, among the private sector, the government's need for support is to take the initiative in establishing a forum for industry, academia, and government to strategically study and share areas and measures that should be addressed in the future in light of social and economic changes.

In recent years, Japanese industry has become increasingly aware of the need for strategic international rule formation and international standards strategies as an effective means of creating markets and improving market competitiveness, requiring public and private sector responses to these issues[19].

Therefore, comprehensive efforts should be made to develop and strengthen the ecosystem that will serve as the foundation for support for the private sector's international standards strategy, along with addressing the issues of behavioral change

[19] (general incorporated association) On February 20, 2024, the Japan Economic Federation compiled a proposal on the state of international standardization strategies, including specific issues and necessary actions by the public and private sectors as opinions of the industrial sector.

and input resources in the private sector, as part of the promotion of the national standards strategy.

(Direction of measures)

- For the aim of creating new markets and strengthening international competitiveness, etc., efforts by industry, academia, and government to strategically utilize international standards (international standards strategy), the Intellectual Property Strategy Headquarters will strengthen the system to comprehensively promote such efforts under the overall control of the government overall.

  In addition, a network of experts who provide advisory on international standards strategy will be developed.

  Furthermore, a system will be established to monitor international trends and respond flexibly to areas and themes that require the promotion of international standardization strategies from an overall and comprehensive perspective, through collaboration and sharing of responsibilities among concerned ministries.

  (short term) (Cabinet Office [IP, Science and Technology], MIC, MOFA, MEXT, MHLW, MAFF, METI, MLIT, MOE, Concerned government ministries)

- From the viewpoints of economic security, environmental rules, advanced technology, etc., and the large impact on Japanese industry and society, representative areas (strategic areas) that strategically promote the use of international standards should be established, and a system should be developed in which experts promote international standards strategies or provide support as advisors.

  In addition, concerned ministries will further develop and strengthen the system for promoting the international standards strategy (including a system of overall responsibility).

  (short term) (Cabinet Office [IP, Science and Technology], MIC, MOFA, MEXT, MHLW, MAFF, METI, MLIT, MOE, Concerned government ministries)

- Regarding Japan's comprehensive standards strategy (National Standards Strategy), based on the preceding national standards strategies of the EU, China, and the U.S.; a review of the "Comprehensive Strategy for International Standards" formulated by the Intellectual Property Strategy Headquarters in

December 2006; the June 2023 report of the Japanese Industrial Standards Committee of the Ministry of Economy, Trade and Industry; and the February 2024 proposal of the Japan Economic Federation (general incorporated association), we will formulate a strategy by around spring of 2025 and strengthen our efforts such as strategic areas, promotion of behavioral changes in the private sector, human resource development, and the development of an ecosystem.

(short term, mid term) (Cabinet Office [IP, Science and Technology], MIC, MOFA, MEXT, MHLW, MAFF, METI, MLIT, MOE, Concerned government ministries)

・ Under the "Task Force for Promotion of Standards Utilization," which is composed of key concerned ministries promoting the international standards strategy, the international standards strategy will be promoted in cooperation with concerned ministries in the following areas and in an integrated manner with industrial policy and other relevant policies.

- Areas related to economic security, environmental rules, and advanced technologies (e.g., quantum technology, AI, fusion energy)
- Telecommunications (Beyond 5G), hydrogen and fuel ammonia, medical/healthcare, agriculture, forestry, fisheries, and food, mobility, data integration platform, resilience

Build and strengthen partnerships with foreign governments and international organizations necessary to promote international standard strategies.

Furthermore, we will provide necessary support and reinforcement for important measures taken by concerned government ministries for the promotion of international standard strategies.

(short term, mid term)(Cabinet Office [IP, Science and Technology], MIC, MOFA, MEXT, MHLW, MAFF, METI, MLIT, MOE, Concerned government ministries)

・ The public-private council established under the "Law for Promoting Comprehensive Economic Measures for Ensuring Security" (including councils to be established thereafter) will examine international standardization and its support measures as necessary, based on the status of individual projects, discussions in the council, and other matters.

(short term, mid term) (Cabinet Office [Director general for policy planning (State Minister in Charge of Economic Security)], [IP])

(short term, mid term)

・ To achieve early social implementation of science, technology, and innovation,

etc., a mechanism to ensure the promotion of international standardization strategies by the private sector in government-supported research and development projects will be widely disseminated.

Specifically, a clear presentation of the social implementation strategy, international competition strategy, and international standard strategy to private sectors, and mechanisms for project management and follow-up, etc. that require management commitment to initiatives to achieve these strategies, will be introduced.

We will continue to promote efforts, including trial operations, and expand the scope of introduction at concerned government ministries, with the following R&D projects as leading examples. In addition, the know-how obtained in the process of implementation will be horizontally expanded beyond the following R&D projects by utilizing the systems and operations related to technology evaluation in concerned government ministries.

- Green Innovation Fund Project
- Innovative Information and Communication Technology (Beyond 5G(6G)) Fund Project
- Post-5G Information and Communication System Infrastructure Enhancement Research and Development Project
- Strategic Innovation Promotion Program (SIP) Phase 3 Project
- Economic Security Important Technology Development Program Project
- Bio Manufacturing Revolution Promotion Project
- R&D projects by the New Energy and Industrial Technology Development Organization (NEDO), a national research and development agency

(short term, mid term)(Cabinet Office (IP, science and technology, Director General for Policy Planning [Minister of State for Economic Security]), MIC, METI, Concerned government ministries）

・ The Act on Strengthening Industrial Competitiveness, which was revised in the 2024 ordinary national Diet session, establishes a certification system for joint research and development plans between private companies and universities that promote the Open & Close strategy, such as the integrated use of intellectual property and standards. This system aims to promote the spread of the Open & Close strategy among private companies, universities, and academia in Japan, and to enhance profitability and competitiveness by promoting the commercialization of R&D results.

(short term, mid term)(METI, JPO, Concerned government ministries）

・ To strengthen standardization and rule formation efforts in the management strategies of private companies, we will make such efforts visible through the following.

1) Based on the relevant descriptions in the "Value Co-Creation Guidance" and "Guidelines for Intellectual Property and Intangible Asset Governance", private companies should explain their initiatives as management strategies to investors, and investors should encourage private companies to strengthen their engagement with the initiatives of private companies.

2) Encourage private companies to explain their efforts through integrated reports.

3) Develop and improve the " indicators on market-making capacity". In addition, by sharing good cases of standardization and rule formation efforts and promoting the establishment of Chief Standardization Officers (CSOs) in the private sector, we will promote understanding of the importance of market-making power and standardization strategies among the private sector and investors, and encourage behavioral change.

(short term, mid term) (METI)

・ In the area of standards development, continue to strengthen support for collaboration, particularly among different industries, training of young human resources, and collaboration with SMEs and startups.

Promote the discovery of new business opportunities for standardization in the service sector.

With regard to collaboration with academia, disseminate information on standardization at various academic conferences, demonstrate educational programs and so on.

To strengthen cooperation between industry and the certification industry (accreditation body, certification body), establish opportunities for discussion between the two and create initiatives to create model cases of cooperation.

(short term, mid term) (METI)

・ The following efforts will be made to develop and secure standardization human resources.

1) Establish a one-stop searchable database of Japan's standardization human resources and promote the use of a wide range of human resources, including academia and patent attorneys.

2) To increase the number of human resources for standard development, human resources for standardization strategies, and young human resources,

support them through training programs and other initiatives.

3) Strengthen support for SMEs working on the open and close strategy in cooperation with the National Center for Industrial Property Information and Training (INPIT).

(short term, mid term) (METI)

・ Based on the "Strategy of Quantum Future Industry Development" and "Promotion Measures for the Development of Quantum Industries" for the practical application and industrialization of quantum technology, we will promote intellectual property and standardization of quantum computers, quantum cryptography communications, quantum sensors, with a view to future computers, communication systems, sensing systems.

Furthermore, Japan will establish a system and mechanism to lead the formation of international rules for quantum technology, including the development of a public-private system and support for standardization activities by the private sector.

(short term, mid term)(Cabinet Office [science and technology], MIC, MEXT, METI)

・ The following efforts will be implemented to promote the digitalization of government and industry.

1) Promote the development of the "Digital Society Promotion Standard Guidelines" for the development and management of government information systems, unification and standardization of core business and other systems of local governments, and efforts toward standardization of data, including the Government Interoperability Framework (GIF).

2) To promote the development of data-related standards and norms from the perspective of the formation of a digital society for the entire country, Information-technology Promotion Agency, Japan (IPA) submitted the revision bill of the Basic Act on the Formation of Digital Society, etc. to the ordinary National Diet in 2024, which adds the duties related to data standardization to the existing duties of information processing promotion, and also makes IPA under the joint jurisdiction with the Digital Agency. Considering the strengthening of these systems, we will examine the standards and norms related to data and systems necessary for DX promotion and digital regulatory reform in the administrative, quasi-public, and industrial sectors.

(short term, mid term) (Digital Agency, Concerned government ministries)

・ In order to promote the establishment of Japan-originated technologies for the next-generation information and communications infrastructure Beyond 5G (6G), which is expected to be introduced in the 2030s, and to promote their social implementation and overseas deployment to strengthen international competitiveness and ensure economic security, the National Institute of Information and Communications Technology (NICT) will support R&D on key technologies for Beyond 5G (6G) by the private sector and other organizations.

(short term, mid term) (MIC)

・ For the aim of strategically promoting intellectual property and standardization activities related to Beyond 5G (6G) under the management strategy of private companies, various activities will be developed in the "Beyond 5G New Business Strategy Center" established in the Ministry of Internal Affairs and Communications through collaboration and cooperation among industry, academia, and government.

In addition, to promote international standardization activities from the early stages of R&D, international joint research will be conducted with national and regional research institutions that are strategic partners reliable. and capable of generating synergies.

(short term, mid term) (MIC)

・ For the strategic use of international standards in the fields of agriculture, forestry, fisheries, and food products, concerned government ministries will cooperate and collaborate with related independent administrative agencies to promote international standardization activities. Additionally, to ensure that international standardization needs are appropriately realized, a system for liaison, information sharing, and consultation through collaboration among relevant regional organizations will be steadily operated.

(short term, mid term) (MAFF, METI)

・ While promoting the digitization of trade procedures using trade platforms (Trade DX) for the objective of reducing trade costs and building a robust supply chain, to promote data linkage based on international standards, we will continue to apply to UN CEFACT (United Nations Center for Trade Facilitation and e-Business), which defines international standards in the field of trade and will continue to apply to CEFACT in FY2023 for revision of international standards.

(short term, mid term) (METI)

・ With regard to smart cities, based on trends in intellectual property and standardization by other countries and efforts to strategically and internationally

utilize international standards, promote the utilization of relevant international standards and proposals on an individual and specific basis in cooperation with domestic and foreign standards experts.

In addition, international standards will be actively utilized in promoting overseas development through the "Smart City supported by Japan ASEAN Mutual Partnership (Smart JAMP)," a partnership of concerned government ministries.

(short term, mid term) (Cabinet Office[science and technology], METI, MLIT, Concerned government ministries)

・ As the formation of environmental rules tends to progress and expand and increasingly define the nature of economic activities of private companies, the following efforts will be made considering the significant progress in rules regarding the restoration of natural capital (nature positive) in a manner that encompasses climate change countermeasures, circular economy, and biodiversity elements.

- Development of a center for the formation of environmental rules

  Based on trends related to the formation of environmental rules (e.g., trends in the EU and other governments, nongovernmental organizations, and important business sectors, technology trends), establish a foundation for strategic response, including consideration of response strategies and development of human resources for rule formation in the private sector and other sectors.

- Strengthen international standardization activities related to natural capital

  Strengthen Japan-led international standardization activities on natural capital restoration (e.g., assessment of industrial location and drought risk) in the TNFD (Task Force on Nature-related Financial Disclosure) and SBTN (Science Based Targets Network).

(short term, mid term) (MOE, Concerned government ministries)

(3) Realizing a digital archive society and improving data distribution and utilization environment

(Current Situation and Challenges)

The promotion of digital archives is a critical issue. Digital archives convey society's knowledge and records of cultural and historical resources to the future, and can serve as a foundation for the creation of new content as well as are expected to be utilized in various fields such as education, research, tourism, regional revitalization, disaster

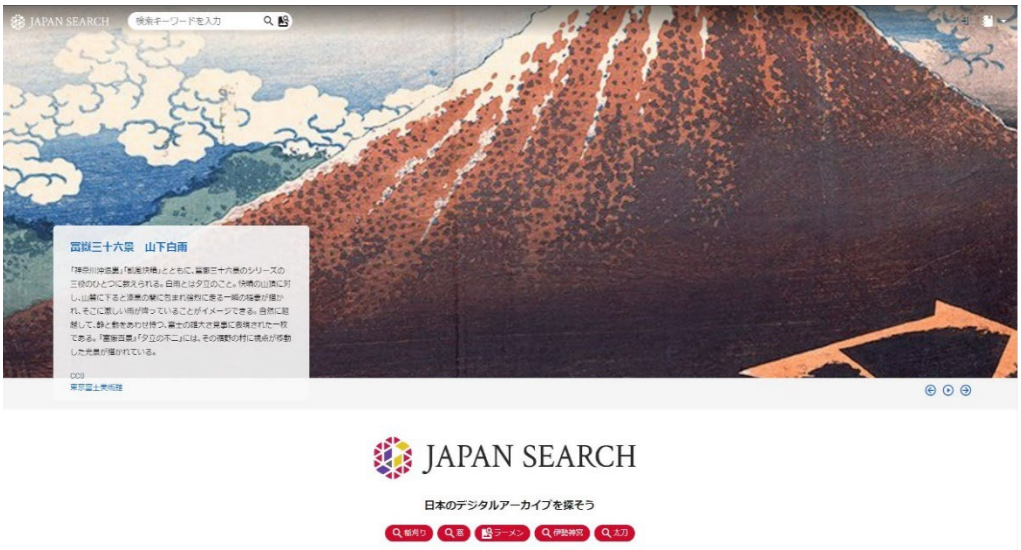
prevention, health care, and business.

In addition, digitalization, which is rapidly advancing and becoming more sophisticated around the world, has great potential to promote innovation and simultaneously bring about economic development and solutions to social issues. Data is a source of wisdom, value, and competitiveness as well as being positioned as a trump card for solving social issues in Japan, a country with advanced issues.

In Japan, based on the "Comprehensive Data Strategy" (June 18, 2021)[20] and the "Priority Policy Program for Realizing Digital Society" (approved by the Cabinet Office on December 24, 2021; revised in June 2022 and June 2023) (hereinafter referred to as the "Priority Policy Program"), It is necessary to continue to steadily promote each policy based on the Priority Policy Program in cooperation with concerned government ministries, centering on the Digital Agency, while taking into account trends in data distribution and utilization both domestically and internationally.

<Realization of Digital Archive Society>

The government is working to promote digital archives with the aim of realizing a "digital archive society" in which digital archives are used on a daily basis to support diverse creative activities. In collaboration with archival institutions in various fields and concerned ministries, the "Digital Archive Japan" system has been established, and "Japan Search" was officially opened to the public in 2020.



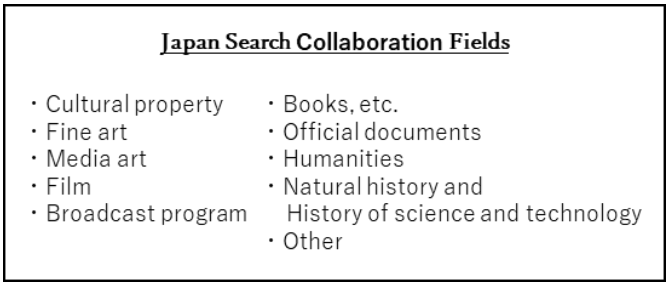
(Source) https://jpsearch.go.jp/

Figure 35: Japan Search (Top page)

[20] It was approved by the Cabinet Office as an annex to the Priority Policy Program and integrated into the Priority Policy Program in June 2023.

Japan Search was established as a platform for searching, browsing, and utilizing metadata of content in various fields owned by the government, such as cultural properties, art, books. Under the framework of the "Japan Search Strategic Policy 2021-2025,"[21] efforts are being made to build and share digital archives and promote their utilization.

The COVID-19 pandemic also provided an opportunity to reaffirm the role of the digital archive. The acceleration of online access due to the COVID-19 pandemic and the demand for nest eggs has increased the need for access to archived digital materials and other resources via the Internet and the use of past content.



(Source) Digital Archive Strategy Roundtable (1st session), Document 2: "Past efforts to promote digital archives and the way forward"

Figure 36: Japan Search Collaboration Fields

Amid the accelerating digital shift in the distribution of commercial content, including music, videos, and books, the importance of digitally archiving content in society as a whole is expanding every day, as more diverse UGC (User Generated Contents) are created and disseminated.

Furthermore, with the recent rapid development of generative AI technology and its multimodal nature, there is also a growing demand for high-quality, well-managed data sets that link diverse archives enabling cross-utilization.

Considering these changes in the environment surrounding digital archives, it is necessary to further enhance the existing efforts based on "Japan Search," a platform for the utilization of digital archives, to realize a richly creative society in which digital archives are integrated into daily life, and to promote the revitalization of new value creation through the full utilization of archived content assets.

At this point, however, Japan Search is mainly working with libraries, museums, art galleries, research institutes, and other cultural and academic institutions that are affiliated with the national government or independent administrative agencies, and collaborations with local governments and private businesses, for example, are limited to a small portion of the total. For this reason, the contents that can be searched by Japan Search are mainly cultural assets and academic materials held by these institutions that

[21] By the Digital Archive Japan Promotion Committee and Working-Level, Study Committee "Japan Search Strategic Policy 2021-2025" (September 2021), "Japan Search Action Plan 2021-2025" (April 2022), and "Japan Search Action Plan 2021-2025" (July 2022), " "Work schedule in various fields for the implementation of 'Japan Search Strategic Policy 2021-2025' " (September 2022).

are available for public access and use, thus limiting the linkage with so-called bone digital and commercial contents. Regarding Japan Search, compared to Europeana, the digital platform for cultural heritage in the EU, the number of contents accessible is limited.

Given these circumstances, in addition to further enhancement of existing archiving efforts for cultural assets and academic materials, it is required to consider the expansion of archives for a variety of digital contents, including ways to collaborate with the private sector.

	Europeana (Europe)	Japan Search (Japan)
Release Date	August 25, 2020	August 25, 2020
Number of metadata items	approx. 57.9 million (as of April 2024)	approx. 29.7 million (as of April 2024)
[Of these, those that can access the content]	[Almost all]	[Approx. 8.5 million *Limited public data (3.2 million) included]

(Source) Compiled by Cabinet Office, Secretariat of Intellectual Property Strategy Headquarters, based on a survey by National Diet Library

Figure 37: Comparison between Europeana and Japan search

In addition, it is also important for the realization of a digital archive society not only to expand digital archives, but also to open various archive assets and promote their utilization for secondary use/secondary creation and so on.

For instance, it is necessary to ensure that there are no cases where an entire work cannot be used because a part of the rights handling has not been completed. Therefore, it is required to enhance the infrastructure for the smooth utilization of archived content through appropriate coordination of content information and rights information, including the establishment of conditions related to the utilization of secondary use and secondary creation, and the coordination of the cross-disciplinary rights information retrieval system and Japan Search for the search of copyright holders and others.

In addition, as mentioned above, there is an extremely wide range of content to be archived, and the methods for its utilization can also be diverse. Therefore, it is also necessary to support "connectors" to strengthen cooperation with Japan Search, including archiving institutions and regions that promote archiving, as well as "users" of digital archives by disclosing cases of utilization of digital archives, and to support "broadeners" who take actions to increase the number of users in the community.

Additionally, valuable content assets in Japan, such as animated cartoon videos, original drawings, and manga original drawings, are being dispersed and lost due to age-related deterioration, as well as the difficulty for management entities to maintain and dispose of them, deteriorating recording media, and other factors. Therefore, it is

required to collect and preserve these content assets as soon as possible as well as to develop human resources and raise public awareness about digital archives.

In consideration of these current conditions and issues surrounding digital archives, the government launched the " Roundtable on Digital Archive Strategy" and the "Study Group on Promotion of Digital Archives" this February 2024. It is positioned as a new promotion structure of "Digital Archive Japan" and is expected to steer the future digital archive strategy, including consideration of the digital archive promotion plan after FY2026.

It is expected that concerned government ministries and archive institutions will promote their efforts in cooperation with the public and private sectors toward the realization of the digital archive society, while prioritizing the digital archive measures.

<Improvement of data distribution and utilization environment>

① Rules for handling data

With the development of digital technology, the importance, diversity, and capacity of "data" have grown explosively, however, in Japan, the environment has not been sufficiently developed in all aspects, including generation, collection, and utilization. On the other hand, in other countries, efforts to effectively generate, collect, and utilize data are being actively promoted, and platforms and laws are being developed[22].

Under these circumstances, given that Japan needs to implement data handling rules to dispel concerns and worries of observers about data distribution on platforms to promote data utilization and create new value, in March 2022, the "Guidance for Platform Data Handling Rules Ver. 1.0" (hereinafter referred to as the "Rule Implementation Guidance") was released to provide perspectives and procedures to be followed when implementing data handling rules.

[22] For example, the European Data Act published in February 2022 entered into force in January 2024 (to be applied in September 2025). Meanwhile, the Digital Service Act (DSA) came into full force in February 2024, and the Digital Market Act (DMA) became fully operational in March 2024.

(Source) Compiled by Cabinet Office, Secretariat of Intellectual Property Strategy Headquarters, based on "Research and Study on Trends in R&D and Digital Utilization of the Latest Information and Communications Technologies in Japan and Overseas" (2023) by MIC

Figure 38: Reasons for resistance to providing personal data when using services

In the quasi-public sector, the Digital Agency is working with concerned ministries to build platforms and data integration platforms and implement rules [23].

- Regarding Smart City, initiatives related to Smart City are underway in concerned government ministries (Cabinet Office, Digital Agency, Ministry of Internal Affairs and Communications, Ministry of Economy, Trade and Industry, and Ministry of Land, Infrastructure, Transport and Tourism), as well as in a part of Comprehensive Strategy for the Vision for a Digital Garden City Nation, Digital Implementation Type TYPE2/3, are implemented, through reference to the Smart City Reference Architecture, a common architecture, and the Rule Implementation Guidance, to ensure proper handling of security and personal information, introducing a integration platform and implementing technologies[24].
- In the area of disaster prevention, information sharing rules among disaster prevention-related organizations using the new comprehensive disaster prevention

[23] In the priority policy program, the rule implementation guidance is referenced to promote appropriate rule implementation in the data integration platform in the priority areas and in the data integration platform to be constructed in the for the time being, the data integration platform in the digital implementation type TYPE2/3 of the Comprehensive Strategy for the Vision for a Digital Garden City Nation.

[24] The Smart City Reference Architecture will be revised in the future to clarify that the rule implementation guidance is referenced.

information system (SOBO-WEB), which began operating in April 2024, are being organized with reference to guidance on rule implementation, etc. Furthermore, consideration is being given to promoting data distribution in the disaster prevention field, including linking with the data integration platform that is currently being designed and constructed.

- Regarding medical care, a common infrastructure has been developed to share necessary information among the entities concerned so that the Individual Number Card can be used as a beneficiary card for various medical expense subsidies, and as an inoculation ticket and medical examination ticket for vaccinations, maternity and infant health checkups, and in some local public entities, prior efforts have been initiated.

In education, in order to promote the use and analysis of education data while ensuring the proper handling of security and personal information, "Considerations for the Use of Education Data", "Ministry of Education, Culture, Sports, Science and Technology - Education Data Standards" and "Learning e-Portal Standard Model" have been formulated and revised as needed[25], as well as the development and utilization of the "MEXT CBT System (MEXCBT: Mecbit)" and "MEXT Web Survey System (EduSurvey)" as fundamental tools that can be used in common.

In the future, the phase of specific rule implementation will begin, and it will be required to identify risks in data transactions conducted on each platform and to set appropriate rules according to the risks.

The more the nature and characteristics of data, methods of utilization, and stakeholders involved are identified, the easier it will be to identify risks and set appropriate rules. Therefore, it is necessary to promote efforts to implement appropriate rules by utilizing rule implementation guidance for each individual field.

② Research data

In the Integrated Innovation Strategy Promotion Council, the government formulated the “Fundamental Principles for the Management and Utilization of Research Data Supported by Public Funds” (April 2021), which stipulates measures to be taken for the management and utilization regarding research data funded by public funds.

The following are specific initiatives:

[25] In March 2024, " Precautions for the Use of Educational Data (2nd Edition)", " Ministry of Education, Culture, Sports, Science and Technology - Education Data Standards 4.0" and "Learning e-Portal Standard Model Ver. 4.00" were released.

- At universities, Inter-University Research Institutes, National Research and Development Institutes, and other organizations that conduct R&D formulate data policies, and include research data in institutional repositories.
- For all new applications for publicly solicited research funds, a system will be introduced whereby researchers and research project managers will create a data management plan (DMP) after identifying the research data to be managed, thus providing systematic metadata.

  The above efforts will be promoted.

At present, these efforts are being promoted at each institution, resulting in 26 national universities, 4 Inter-University Research Institutes, and 24 national research and development institutes having already formulated their data policies regarding data policy (as of the end of March 2024). The introduction of DMPs and a system to provide metadata linked to DMPs for new publicly solicited research funds has progressed during the Strategic Innovation Creation Program (SIP) Phase 3, and the introduction rate in the competitive research funding system is 78% (including some already introduced) (as of March 31, 2024). Concerned government ministries and related organizations must continue to promote the introduction of these systems[26].

In promoting initiatives for research data, the Science Council of Japan presented in December 2022 the matters to be considered for the promotion of data-driven science in the future, as well as its ideas on specific measures for data sharing[27]. Based on these proposals, the Cabinet Office will further promote initiatives for the management and utilization of research data.

③ limited provision data

The rules concerning limited provision data were established by the 2018 amendment of the Unfair Competition Prevention Act (Act No. 47 of 1993). At the time of the establishment of the system, it was assumed that big data shared with others was not confidential, thus, before the 2023 Amendment Act, “big data not under confidential control” was the only protected data. However, in recent years, there has been a corporate practice of providing others with big data even if it is under the company's own confidential management. Therefore, the Law was amended in June 2023 to expand the scope to include “confidential big data,” thereby enabling information

[26] The former initiative is to be implemented by FY2025, and the latter by FY2023. In particular, regarding the latter initiative, we will continue to promote the introduction of a mechanism to provide metadata in systems that have not yet been introduced.

[27] "Responses to deliberations on the promotion of research DX - especially from the perspective of promoting open science and data utilization -"

management integrated with trade secrets.

Following the revision of the law, the Ministry of Economy, Trade and Industry (METI) revised the "Guidelines for Limited Provision Data" in February 2024, following a review by the Industrial Structure Council, Intellectual Property Committee, Subcommittee on Prevention of Unfair Competition, as well as holding briefing sessions for business associations and others, in an effort to disseminate the system and raise awareness.

(Direction of measures)

<Realization of digital archive society>

- The "Digital Archive Strategy Roundtable" and the "Study Group on Digital Archive Promotion," which are the new promotion structure of Digital Archive Japan, will study the promotion plan after FY2026, set the achievement target under the cooperation of concerned government ministries, and comprehensively promote digital archive initiatives such as digitization of contents.
  (short term, mid term) (Cabinet Office (IP), National Diet Library[28], Concerned government ministries)
- Under the medium- and long-term achievement goals set forth under the new promotion framework of Digital Archive Japan, further expansion of digital archives and promotion of the utilization of digital archives will be promoted in each field. While taking into account the significance of digital archives in each field, efforts will be made to digitize and preserve content, including bone digital content media, promoting openness to allow free secondary use of such content. For those that can, further utilization of digitally archived content will be promoted, such as by utilizing it for online distribution or by seeking to monetize it through overseas development. Promotion of digitization of materials at the National Diet Library and expansion of Internet transmission of out-of-print and other materials will be pursued.
  (short term, mid term) (Cabinet Office, Digital Agency, MIC, MEXT, METI, MLIT, National Diet Library)
- The National Center for Media Arts (tentative name) will support the digital archiving of cultural heritage, preservation and utilization of media arts works such as manga, animation, games, and performing arts works, as well as the

[28] Although the National Diet Library is an institution belonging to the legislative branch, policies related to digital archives require a national effort, and the Library plays an important role in this effort therefore, for the sake of convenience, the Library's projects related to this plan are listed in the section for which it is in charge.

development of a center with the following functions: 1) collection, preservation, and digitization of works related to manga, animation, special effects, and games, intermediate products such as original drawings, and information related to these works. In addition to promoting the digital archiving of culture and art, the center will also create a place to disseminate contents in cooperation with Japan Search, by promoting efforts to develop a center with the following functions: ① collection, preservation, and digitization, ② research, ③ human resource development and education, ④ information dissemination to domestic and international audiences, ⑤ exhibition and utilization, and ⑥ promote digital Archives of culture and art, including promotion of efforts to develop centers with functions for dissemination and exchange, and create a place to disseminate contents in cooperation with Japan Search to promote mutual inducement of users.

(short term, mid term) (MEXT)

- In Japan Search, a platform that allows users to search, browse, and utilize information on a wide variety of Japanese content, we will establish a collection policy to enable comprehensive navigation of various digital information resources, expanding the number of collaborators and further enhancing cooperation with archival institutions.

(short term, mid term)(Cabinet Office, National Diet Library, Concerned government ministries)

- In various fields and themes such as education, academia/research, tourism, and regional revitalization, strengthen publicity and promotion of the utilization model using Japan Search's collaborative contents, expand opportunities for utilization, and strengthen overseas transmission by promoting multilingualization and exchanges with overseas archival institutions through cooperation with concerned ministries. In addition, to promote the efficient use of digital contents held by Japan Search cooperative archive institutions, we will promote an easy-to-understand display of the conditions for the secondary use of those contents by each institution.

(short term, mid term)(Cabinet Office, National Diet Library, Concerned government ministries)

- Regarding the linkage between the cross-disciplinary rights information retrieval system for Copyrights and Japan Search, enable necessary linkage such as providing part of the content metadata related to digital archives held by Japan Search's partner archive organizations to the cross-disciplinary rights information retrieval system, we will examine and take necessary measures under the new

promotion structure of Digital Archive Japan.

(short term, mid term)(Cabinet Office, National Diet Library, Concerned government ministries）

<Improvement of data distribution and utilization environment>

- In the data integration platform in priority fields and the data integration platform to be constructed in the comprehensive strategy for the vision for a Comprehensive Strategy for the Vision for a Digital Garden City Nation (For the time being, the data integration platform in the digital implementation type TYPE2/3 of the Comprehensive Strategy for the Vision for a Digital Garden City Nation)[29] , etc., the appropriate rule implementation will be promoted with reference to the rule implementation guidance. In addition, surveys will be conducted on the actual status of data integration platform usage, best practices and utilization methods, and reference status of rule implementation guidance, and the results will be provided to promote further utilization of the rule implementation guidance and implementation of data handling rules.

  (short term, mid term)(Digital Agency, Concerned government ministries)

- In order to manage and utilize research data obtained with public funds, institutions that conduct R&D, such as universities, Inter-University Research Institutes, and National Research and Development Institutes, will formulate data policies and promote the inclusion of research data in their institutional repositories. At the same time, in order to make research data accessible on research data infrastructure system, metadata should be added to research data. Furthermore, the horizontal development of precedents, issues and so on will be promoted.

(short term, mid term)（MEXT, Cabinet Office [science and technology], Concerned government ministries）

- In newly publicly solicited research funds, we will steadily promote efforts to introduce a data management plan (DMP) and a mechanism to assign metadata in conjunction with the DMP. Therefore, we will promote the implementation of advanced data management introduced in the moonshot R&D program as a leading initiative, and develop the knowledge and use cases obtained.

  (short term, mid term) (Cabinet Office [science and technology], MEXT, Concerned government ministries）

[29] Based on the survey on the status regarding the reference of such guidelines conducted for some of the organizations that have adopted the Comprehensive Strategy for the Vision for a Digital Garden City Nation grant, we will continue to promote the use of such guidelines.

- To accelerate the standardization of data in government information systems, we will investigate the implementation status and needs of data standards, review the Government Interoperability Framework (GIF), a reference model for data standardization, as well as promote its use in government information systems.

  (short term, mid term)(Digital Agency)

- The government will support the construction of data integration platforms by promoting the free provision of brokers and advice on the use of brokers in the data integration platform. In addition, to promote data integration among multiple services (fields) while avoiding duplicate investment in platforms with the same functions, prefectures will develop a vision for joint use of the data integration platform with the support of the national government.

  (short term, mid term) (Digital Agency)

- Based on past efforts to develop Open APIs, standardize data formats, and establish handling rules for data usage privileges, etc., for data related to agricultural machinery, from FY2024 onward, we will continue to develop handling rules such as standardization of data formats, link data obtained from different types and manufacturers of equipment, and conduct demonstrations. Furthermore, the development and utilization of the Open API will be promoted through support for the development and functional enhancement of service entities by developing new services that utilize the Open API that has been implemented and opened to the public.

  (short term, mid term) (MAFF)

- According to the work schedule for the data health reform formulated in June 2021, we have been promoting efforts related to each policy, and in FY2023, we expanded the system to check medical information nationwide (surgical information based on receipts) and the system to view personal health checkup information (employer health checkup information). In FY2024 and beyond, we will continue to steadily promote initiatives related to each of the data health reform measures.

  (short term, mid term)(MHLW)

- By involving information banks in data integration in Smart City, we will demonstrate use cases to solve regional issues through the safe and secure distribution of sensitive personal information in the health and medical fields, verifying the issues in the certification guidelines.

  Regarding the use of PDS (Personal Data Store), a demonstration will be conducted in the field of education, and a study will be conducted toward the use

of personal data in the field of education.

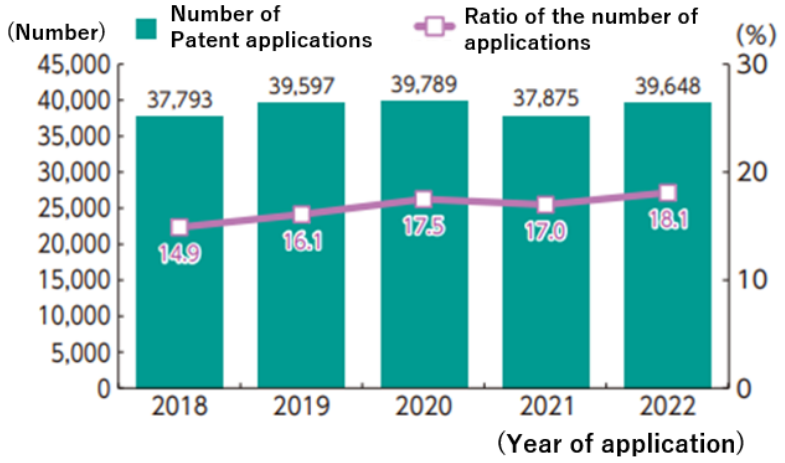
(short term, mid term)(MIC, METI)

(4) Enhancement of IP utilization in SMEs/regional /agriculture, forestry, and fisheries sectors

(Current Situation and challenges)

<IP utilization support for SMEs/Regional areas>

Small and medium-sized enterprises (SMEs), which account for 99.7% of all enterprises, are the driving force behind Japan's economy overall and play a major role in creating jobs and revitalizing regional area. In addition, medium-sized enterprises with high growth potential are expected to play a leading role in regional economies, and given the fact that Japan's leading large enterprises once developed their business as SMEs, their existence is crucial to the innovation ecosystem in Japan as a source of innovation.



(Source) JPO website, “Annual Report 2023”.

Figure 39: Number of patent applications filed by SMEs

However, due to a lack of information, knowledge, and human resources related to intellectual property, as well as a lack of funds, intellectual property activities have not been fully implemented. Although the ratio of the number of applications by SMEs to total applications has increased in recent years, the number of applications by SMEs themselves has remained unchanged (Figure 39).

For SMEs and start-ups, which have fewer management resources than large companies, intellectual property such as technology, know-how, ideas, design, and brands are important management resources, but they face challenges in fundraising using intellectual property due to insufficient awareness of these resources, thus

causing issues.

Under these circumstances, concerned government ministries and organizations are working to improve the “earning power” of the region by strengthening and enhancing intellectual property support for SMEs and startups with growth aspirations in the region[30].

The Japan Patent Office (JPO) provides to financial institutions the “Intellectual Property Business Assessment Report,” which evaluates the overall business of SMEs utilizing IP, and the “Intellectual Property Business Proposal,” which summarizes solutions to management issues based on the IP of SMEs. In addition, the JPO has prepared guidelines and templates for the use of IP evaluation that contribute to business viability evaluation of financial institutions, thereby promoting the use of IP by SMEs through IP finance.

Furthermore, the management design sheet, a tool for accurately evaluating the role of IP in a company's value creation mechanism and designing management, is useful for business feasibility evaluations by financial institutions to expand and accelerate business succession of SMEs and financing for IP by financial institutions. Therefore, we will continue to promote the use of the management design sheet at Yorozu Support Centers nationwide.

In addition, as stated in 1.(2), a “Act on the Promotion of Cash Flow-Based Lending” has been submitted to the 2024 ordinary National Diet, and it is important to aim for early passage of this bill toward facilitating financing for startups and other businesses with limited tangible assets.

To revitalize regional economies, the Regional Intellectual Property Strategy Headquarters, which has been established throughout Japan, provides IP support in accordance with the actual conditions of each region. The JPO has announced the “Third Action Plan for Regional Intellectual Property Revitalization” for the three years through FY2025 and has set forth three basic policies: “strengthening target-oriented support practices and promoting value creation in the region,” “creating synergy between central and regional IP support for SMEs,” and “setting and sharing KPI and utilizing them in support measures" to support the creation of models of IP management for SMEs.

In March 2023, a joint declaration was made by the JPO, INPIT, the Japan Patent

[30] There is an opinion that support should be provided to companies that are expected to be profitable in the medium term, even if they are in the red in the short term, through proactive upfront investment. In this regard, for example, the SME Revitalization Councils established in each prefecture provide support to SMEs that have profitable businesses but are facing financial problems.

Attorneys Association, and the Japan Chamber of Commerce to establish an “IP Management Support Network". It is therefore essential to maximize the use of not only the Intellectual Property Comprehensive Support Desk, but also other support organizations. In the future, it is necessary to promote the acquisition and use of intellectual property in each region, creating an environment that enables innovation to be created and to widely publicize and disseminate such efforts, including startups.

Furthermore, with the revision of the INPIT Law, INPIT has newly added advisory and support services for SMEs and advisory services for “specific new demand development businesses” newly established under the revised Act on Strengthening Industrial Competitiveness. In the future, it will be required to review the content of its services and consider necessary measures (such as enhancement of support measures.)

The Small and Medium Enterprise Agency is promoting measures related to the “Declaration of Partnership Building,” and is working toward coexistence and new partnerships throughout the supply chain and compliance with desirable business practices with subcontractors (“Promotion Standards”), aiming to increase added value throughout the supply chain as well as coexistence and co-prosperity between large and small enterprises. In 2023, to improve the effectiveness of the declaration of partnership building, a survey on the status of efforts, including questions on “intellectual property transactions,” was conducted for both declared companies and subcontractors, and the survey results were fed back to the representatives of the declared companies. Continued efforts are required to ensure thorough implementation of the guidelines on intellectual property transactions.

(Direction of measures)

- Based on the “Third Action Plan for Regional Intellectual Property Revitalization,” support will be provided to create cases that can serve as models for intellectual property management in SMEs. In addition, through the IP management support network of regional support organizations, mainly Regional Bureaus of Economy, Trade and Industry, JPO, INPIT, Regional chapters of the Japan Patent Attorneys Association, and local chambers of commerce and industry, the network of related organizations will be strengthened to provide IP management support, including in the agricultural and fishery fields, in accordance with corporate management issues, thereby improving the effectiveness of the measures.

  (short term, mid term) (JPO)

- To strengthen and enhance IP management support and to improve the earning

power of the region, efforts will be made to create regions (IP management support model regions) that aim to promote sustainable IP utilization through strengthening cooperation among regional support networks and creating innovation in regional companies.

(short term, mid term) (JPO)

- To help SMEs grow sustainably based on management strategies that utilize intellectual property, increase their own corporate value, as well as have their increased corporate value evaluated appropriately by financial institutions, SMEs and financial institutions cooperate to develop a future vision, analyze the current situation, then establish management strategies that include the perspectives of intellectual property and intangible assets.

(short term, mid term) (JPO)

- We will work to build an ecosystem for the diffusion and practice of value design management by further expanding the use of the Management Design Sheet to startups and SMEs.

(short term, mid term) (Cabinet Office [IP], JPO)

- At the Yorozu Support Center, management design sheets will be prepared to support the examination of long-term visions, and will be utilized in responding to management consultations.

(short term, mid term) (Small and Medium Enterprise Agency, Cabinet Office [IP])

- The JPO will serve as a hub to enhance cooperation among support organizations such as INPIT and JETRO, and strengthen support for intellectual property issues faced by SMEs when they expand overseas, through introducing their businesses in various awareness-raising activities and holding joint seminars.

(short term, mid term)(JPO)

- Through the Declaration of Partnership Building, seek compliance with the Guidelines for Intellectual Property Transactions, and encourage the dissemination and use of contract templates. Furthermore, Intellectual Property G- Men, which specializes in dealing with IP-related transaction issues, will identify the actual status of transactions related to intellectual property, and an “IP Transaction Advisory Board” will be held to provide guidance and advice to the parent company and take other necessary measures.

(short term, mid term) (Small and Medium Enterprise Agency, Cabinet Office[Director general for policy planning (in charge of economic and fiscal management)])

(Current Situation and Challenges)

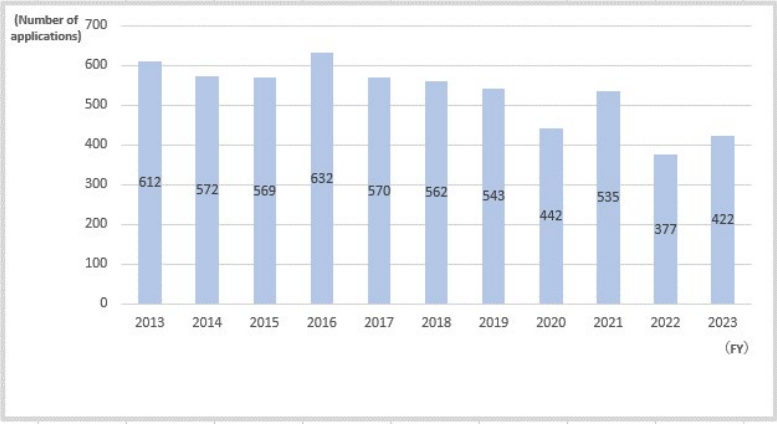
< Strengthening the utilization of intellectual property in the field of agriculture, forestry, and fisheries>

① Current situation of intellectual property in the fields of agriculture, forestry and fisheries

Japan's agricultural, forestry, fisheries, and food products have characteristics and strengths unprecedented in other countries and have captured overseas markets through “intellectual property” such as the technology and know-how to produce high-quality, high-value-added products and Japan's food culture and traditional culture.

The expansion of demand in overseas markets will lead to the distribution of counterfeit Japanese brand products overseas, the overseas outflow of quality breeds developed in Japan, and the illegal exportation of Wagyu genetic resources overseas, which will damage the interests and rights of local agricultural, forestry, and fishery businesses and R&D institutions that have made efforts, causing the loss of powerful overseas markets. To address these issues, in recent years, based on the “Ministry of Agriculture, Forestry and Fisheries' Intellectual Property Strategy 2025,” which sets forth a comprehensive strategy for intellectual property in the fields of agriculture, forestry, fisheries, and food industry, the following measures and others have been implemented to create a system suited to the global era: Protection of the value of livestock genetic resources as intellectual property and strengthening of distribution through the enforcement of the “Act on Prevention of Unfair Competition Regarding Livestock Genetic Resources”, Promotion of restrictions on the export of registered varieties overseas and the licensing system for self-propagation by breeders under the Plant Variety Protection and Seed Act, Support for overseas variety registration and other matters.

② Protection of Breeder's Rights



(Source) Compiled by MAFF

Figure 40: Number of applications for variety registration bred in Japan

As for applied varieties bred in Japan, the trend in the number of applications for variety registration over the past 10 years shows some fluctuation from year to year, yet an overall declining trend, as shown in Chart 40.

Under these circumstances, the overseas outflow of superior varieties of fruit trees has become apparent, but there are limits to the proper management of registered varieties and thorough measures against infringement by the main holders of these breeders' rights such as public institutions. In addition, due to the low license fee income from new varieties in Japan, it is difficult to invest in variety development.

Therefore, in March 2023, the National Agriculture and Food Research Organization (NARO), in cooperation with related organizations, launched an initiative for a Breeder's Right Management Organization to manage intellectual property rights on behalf of holders of breeder's rights exclusively and to respond to infringements by licensing and monitoring infringements, based on the wishes of the holder of the breeder's right. Furthermore, the "Guidelines for Overseas Licensing" were formulated in December 2023 to effectively deter unauthorized cultivation of Japanese varieties, while promoting strategic overseas licensing that contributes to the promotion of domestic agriculture and exports.

In addition, the increase in online transactions following the COVID-19 pandemic has led to the expansion of anonymous transactions and the handling of seedlings by non-farmers, which are difficult for rights holders to grasp and manage, thus leading to a new risk of outflows. To this end, the Ministry of Agriculture, Forestry and Fisheries (MAFF) has been examining how to manage and utilize superior varieties since March 2024.

③ Dissemination of geographical indication (GI) protection system

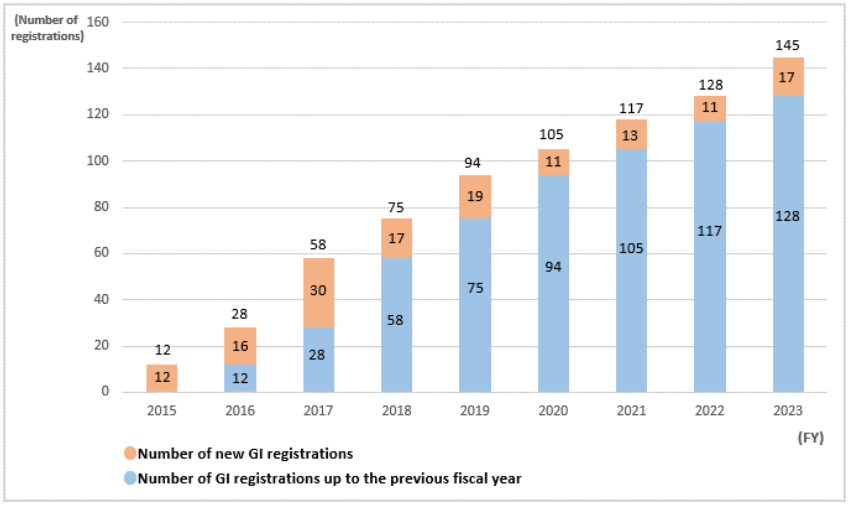
The Geographical indication (GI) protection system protects as regional intellectual property the names of products with characteristics such as quality and social reputation that have been nurtured over many years in the natural, humanistic, and social factors and environments unique to the region. Through this system, the potential attractiveness and strength of the product, such as its quality, manufacturing method, reputation, and story, which are linked to the region, become visible, and are used as a tool to facilitate explanations and proofs in transactions as well as to gain the trust of consumers.

In the past, GI products tended to be small-scale, local, traditional vegetables that are easy to prove their quality difference from other products and easy to unify in the region, with only a few well-known, processed, and export-oriented products and limited opportunities to be seen in the market, thus raising GI recognition and value has been a challenge.

Therefore, the operation of the GI system had been revised as follows, effective November 2022, with the aim of further boosting income, regional vitality, and export promotion.

- ○ Expand the scope of registration for a variety of products, from traditional products that should be protected in the region to processed products and foreign-oriented products, while reducing the burden on the region before and after the application for registration.
- ○ Strengthen strategic promotions to increase the visibility of the GI in the market, enhancing the recognition and value of the GI.

In addition, expert advice is available free of charge at the “Geographical Indication Protection Consultation Office” (GI Support Desk), which has been set up as a centralized support desk to provide consultation to production areas concerning applications for registration.



(Source) Compiled by Cabinet Office, Secretariat of Intellectual Property Strategy Headquarters, based on the "List of Registered Products" on the website of MAFF

Figure 41: Number of registered GIs (domestic products)

The number of registrations has been increasing year by year, particularly in 2024, with 17 registrations, relatively high number in recent years, reaching 145 registrations for domestic products as of the end of March 2024 (Figure 41).

It is necessary to continue to steadily promote various efforts to promote the use of the GI system.

④ Review of the Basic Law on Food, Agriculture and Rural Areas

The Ministry of Agriculture, Forestry and Fisheries of Japan (MAFF) clarified its stance on intellectual property in the Basic Law on Food, Agriculture, and Rural Areas," which was revised in the 2024 Ordinary National Diet by adding "sustainable development of agriculture by improving productivity and adding value" as a basic principle and listing "adding value to agricultural products (protection and utilization of intellectual property)" as one of its basic measures.

To strengthen international competitiveness and increase added value in the agriculture, forestry, fisheries, and food sectors, it is necessary to continue to make efforts toward the strategic creation, protection, and utilization of intellectual property.

(Direction of measures)

- To support the study of educational programs and trial seminars for strengthening IP management capabilities in the entire agriculture and food industry, and promote the development and securing of expert personnel who can

provide advice on on-site initiatives and raise the IP awareness of all people involved in the agriculture and food industry. In addition, coordinate awards to companies and others that have effectively utilized intellectual property, aiming to improve the ability to protect and utilize intellectual property in the agriculture and food sectors through horizontal deployment of good practices.

(short term, mid term) (MAFF)

- For the protection and utilization of Japan's new plant varieties overseas, support for overseas acquisition of breeder's rights and handling of infringements, prevention of the taking out of infringing seeds and seedlings through cooperation with customs authorities, promoting appropriate management of registered varieties by holders of breeder's rights.

(short term, mid term) (MAFF)

- Promote efforts of breeders' rights management organizations to effectively respond to infringement by registering and licensing varieties overseas on behalf of holders of breeder's rights. As part of this effort, in addition to the early incorporation of such agencies, in accordance with the overseas licensing guidelines, we will encourage efforts to realize a cycle in which royalty income from overseas is invested in the development of new varieties, and licenses that contribute to export promotion by establishing a model for year-round supply in export destination countries.

(short term, mid term) (MAFF)

- To ensure the effectiveness of strategic overseas licensing, we will thoroughly manage the trade of quality varieties and cultivation techniques in Japan under our feet. In particular, in order to respond to new risks of outflow, such as recent changes in the actual transaction situation, including the increased handling of nursery stock by non-farmers due to the increase in online transactions, we will enhance the system to strictly control the production and transactions of nursery stock of quality varieties, as well as promote the development of intellectual property human resources, including improving awareness and management skills of nursery stock dealers. Furthermore, a comprehensive review will be conducted to improve the effectiveness of management and exercise by the holder of the breeder's right, including the development of an institutional framework.

(short term, mid term) (MAFF)

- In order to properly protect Japanese varieties overseas, through the activities of the East Asian Plant Variety Protection Forum, established on Japan's initiative, we will promote the development of variety protection systems and accession to

the International Convention for the Protection of New Varieties of Plants (UPOV) in East Asian countries and other countries with insufficient variety protection systems, while working on cooperation in the examination and standardization of application forms

(short term, mid term) (MAFF)

- To protect and utilize Japanese new plant varieties overseas, promote international harmonization of examination criteria so that characteristic survey data on Japanese variety registrations can be used overseas while Japanese varieties can be registered appropriately and promptly. In particular, to contribute to the early registration of fruit tree varieties, the National Agriculture and Food Research Organization's Germplasm Management Center will gradually develop a system for conducting characteristic surveys of fruit trees in line with international standards as well as investigate international technological developments contributing to the utilization of genetic information, which is increasingly being used overseas, in order to improve the efficiency of variety registration examination.

(short term, mid term) (MAFF)

- To further contribute to the improvement of income and regional vitality of those involved in the agriculture, forestry, and fisheries industries, as well as to the promotion of exports, we will promote the recognition of the GI protection system, cooperation with the food industry and other industries, and registration of various products, including processed products and products for export.

(short term, mid term) (MAFF)

- To prevent the distribution of counterfeit products of Japanese brand-name agricultural, forestry, fisheries, and food products overseas, measures against infringement of unauthorized use should be promoted through the creation of a framework for mutual protection of GIs with foreign countries, investigation of overseas EC sites, and operation of the consultation service for information on suspected counterfeit products of agricultural, forestry, fisheries, and food products.

(short term, mid term) (MAFF, MOFA, JPO)【reprinted】

- To promote the utilization of the GI protection system, we will support efforts to expand GI market exposure by establishing a consistent support system from GI application to post-registration, and by expanding sales channels for GI products.

(short term, mid term) (MAFF)

・ Based on the "Act on the Improvement of Livestock Genetic Resources" and the "Act on the Prevention of Unfair Competition in the Utilization of Livestock Genetic Resources," the following efforts will be promoted to protect the value of livestock genetic resources as intellectual property and to further optimize the distribution management.

1) Regarding the dissemination of the template for contracts to be concluded when transferring Wagyu genetic resources, since dissemination to livestock genetic resources producers is now well established, we will continue to work on dissemination to downstream persons involved to prevent unfair competition and promote protection of its value as intellectual property.
2) In addition to continuing to conduct on-site inspections of the national livestock artificial insemination center throughout Japan, we will ensure thorough legal compliance and promote proper distribution management by holding training sessions for livestock artificial insemination specialists and other personnel.
3) Promote computerization by operating and enhancing the functions of the national system to reduce administrative work for prefectures associated with reports from the National livestock artificial insemination center, and to consolidate information.

(short term, mid term) (MAFF)

・ For strategic utilization of international standards in the agriculture, forestry, fisheries, and food sectors, concerned government ministries will cooperate and collaborate with related incorporated administrative agencies, etc., to promote standardization activities. Furthermore, a system for liaison, information sharing, and consultation through cooperation among relevant regional organizations will be steadily operated to ensure that standardization needs are appropriately realized.

(short term, mid term) (MAFF, METI)

・ In FY2020, the "Guidelines on open APIs Development in the Agricultural Sector" were formulated to realize data linkage beyond the boundaries of manufacturers and systems for agricultural machinery, and open APIs for agricultural machinery such as tractors and combine harvesters were developed to obtain location information and working hours. Additionally, for data items that contribute to farming in grain dryers, horticultural equipment, and disease and pest forecasting information, we standardized data formats and established rules for handling data, such as data usage privileges. Furthermore, to enable farmers

to use data on location information and working hours obtained by agricultural machinery other than the systems provided by the manufacturers of the agricultural machinery they are currently using, farmers who install tractors, combine harvesters, and rice transplanters through subsidies provided by the Ministry of Agriculture, Forestry and Fisheries from FY2022 onward are required to select manufacturers who have developed open APIs.

From FY2024 onward, we will continue to formulate handling rules such as data format standardization, conduct verification of linkage of data acquired from devices of different types and manufacturers, as well as promote the development and utilization of open APIs through support for the development and functional enhancement of service entities by developing new services that utilize the open APIs that have been implemented and released to the public.

(short term, mid term) (MAFF)

- To promote intellectual property management for effective social implementation of the results, focusing on public research institutes, etc., in order to improve the international competitiveness of Japan's agriculture. To disseminate and raise awareness of IP management, consultation services by IP experts and seminars on the protection and utilization of IP in agriculture, forestry, and fisheries research will be provided, while focused support activities will be provided to public research institutions that are trying to strengthen more practical IP management.

(short term, mid term) (MAFF)

4. Strategic Development of Highly Skilled Intellectual Property Human Resources

The key to all aspects of Japan's intellectual property ecosystem is the human resources that support it. The Cabinet Office has published the “Development of Human Resources for Intellectual Property” (January 2006) and the “Plan for the Development of Human Capital for Intellectual Property” (January 2012), taking concrete measures to address priority issues related to the development of human resources for intellectual property.

When referring to intellectual property human resources, the “Development of Human Resources for Intellectual Property” proposed a classification of human resources into “intellectual property specialists,” “human resources for intellectual property creation and management,” and “human resources in the supportive sectors” according to the degree of expertise (Figure 42), and has been examining measures for human resource development.

Classification	Case
Intellectual property specialists	Human resources directly involved in the protection and utilization of intellectual property (e.g., intellectual property staff in companies, patent attorneys, attorneys at law, intellectual property-related business staff, industry-academia collaborators, intellectual property staff in government and public organizations)
Human Resources for Intellectual Property Creation and Management	Human resources to create intellectual property Human resources for management utilizing intellectual property and others (e.g., researchers and engineers such as from companies, universities, and public institutions, corporate managers and executives, content creators, producers of content business, and persons engaged in standardization)
Human resources in the supportive sectors	Human Resources expected to possess general knowledge of intellectual property Human resources expected to create intellectual property in the future and others

(Source) Adapted from “Development of Human Resources for Intellectual Property” by the Specialist Committee on the Intellectual Creation Cycle

Figure 42: Diversity of intellectual property human resources

Even after the release of the “Development of Human Resources for Intellectual

Property," the economic environment surrounding Japan has changed significantly with the advancement of globalization and digitalization, and the need for human resources to create, protect, and utilize intellectual property such as original wisdom, technology, and content has increased more than ever to maintain international competitiveness in the fierce national and corporate competition that cannot be replaced by AI technology. Furthermore, human resource development needs to be viewed as a process for building irreplaceable assets in a company, which requires a more continuous investment of funds, not just a mere expense.

Therefore, it is necessary to consider measures for the strategic development and activities of highly skilled IP human resources, considering the changes in the economic environment and the circumstances surrounding IP to date.

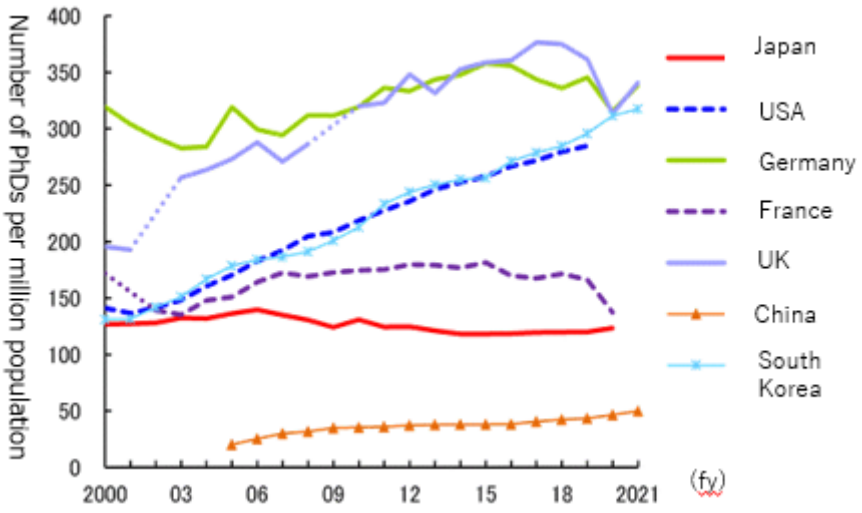
(1) Human resource Development and Mobilization of human resources in R&D (Current situation and challenges)

In building an IP ecosystem for innovation creation and promotion, it is necessary to activate the "intellectual creation cycle" and promote a virtuous cycle, thus strategically developing and utilizing highly skilled IP human resources to support this cycle is an important element.

In particular, the activities of researchers with original ideas and competitiveness, as represented by PhD holders, are indispensable for the creation of intellectual property. However, the situation in Japan is becoming more severe than in other major countries, due in part to the relative decline in the population ratio of PhD holders in Japan[31] and the rate of advancement to higher education [32] in recent years (Figure 43 and Figure 44).

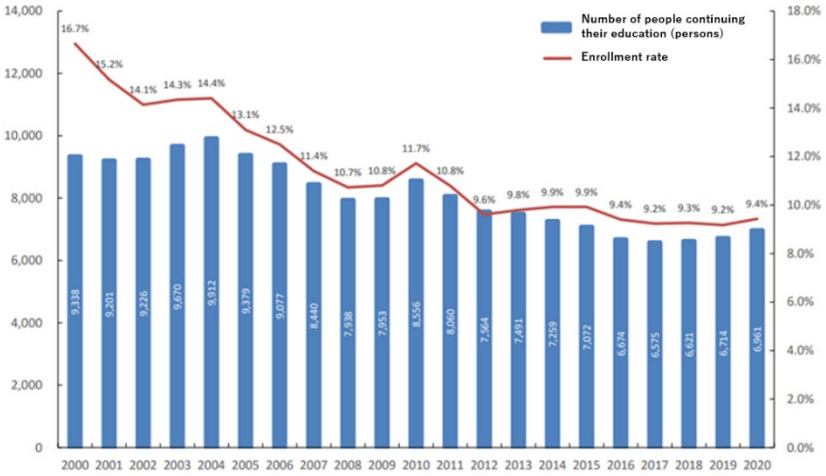
One of the reasons for this situation is the limited opportunities for doctoral human resources to play an active role in Japan. For instance, according to the results of a survey conducted by Japan Business Federation ("Results of Questionnaire on the Development and Career Advancement of Doctoral Students and Women in Science and Engineering," released on February 20, 2024), 20% of member companies in all industries employ more than 200 doctoral candidates in science fields, while nearly 50% of the companies responded "49 or fewer".

[31] https://www.nistep.go.jp/sti_indicator/2023/RM328_34.html
[32] https://www.mext.go.jp/content/20211201-mxt_kiban03-000014622_4.pdf



(Source) National Institute of Science and Technology Policy, "Science and Technology Indicators 2023"

Figure 43: PhDs per million population (doctoral human resources)



(Source) Excerpts from the 91st document (April 28, 2021) of the Committee on Human Resources, Council for Science, Technology and Science, MEXT

Figure 44: Number and percentage of master's degree graduates continuing on to higher education

The government has formulated the "6th Science, Technology, and Innovation Basic Plan" in 2021, which indicates that "an environment will be created in which all outstanding doctoral human resources who wish to do so can obtain regular jobs in various fields, including academia, industry, and government, and develop the prospects of being active as leaders," encouraging efforts in various fields to realize diverse career paths for doctoral human resources.

The Ministry of Education, Culture, Sports, Science and Technology (MEXT) has

taken various measures to support doctoral students, such as the support for improving the treatment of doctoral students and securing the research environment (SPRING) and enhancing support for research assistants (RA), and each university also provides individual support for students including tuition fee exemption systems. When soliciting applications for competitive research grants, the program also includes a section on "improvement of treatment of doctoral students" requiring consideration for the enhancement of financial support for doctoral students[33].

On March 26, 2024, the Ministry of Education, Culture, Sports, Science and Technology (MEXT) announced the "Get a PhD - Doctoral Human Resources Action Plan" with the major goal of raising the number of doctoral degree holders per one million population to the world's top level by 2040 (approximately three times the number of doctoral degree holders in FY2020). In this way, Japan will promote initiatives aimed at realizing a society in which doctoral students are active in various fields of endeavor, not only in academia.

The Minister of Education, Culture, Sports, Science and Technology has presented a "Request for cooperation from companies to promote the success of doctoral students" to industry, encouraging the improvement of the current situation surrounding doctoral students through proactive efforts by industry.

[33] Grant-in-Aid for Scientific Research 2025 - Grants-in-Aid for Scientific Research - Announcement of Application (Research on Innovative Areas for Academic Purposes [A and B], Grant-in-Aid for Special Research Promotion)https://www.mext.go.jp/content/20240412-mxt_gakjokik-000035186__01.pdf

[Request for cooperation from companies to promote the success of doctoral students]

① Expand recruitment of doctoral human resources and improve their compensation
② Promote evaluation of overseas study experience in the recruitment process for Ph.
③ Promote internships for doctoral students
④ Promote the utilization of corporate tax credits associated with the employment of Ph.
⑤ Promote the utilization of the proxy repayment system for scholarships by companies and other entities
⑥ Support for employees to obtain Ph.
⑦ Select and provide information on role models of doctoral human resources who are active in companies

In 2023, the Ministry of Economy, Trade and Industry (METI) introduced a system that allows a tax credit of 20% of the personnel expenses of highly skilled research human resources under certain conditions when such personnel are employed to conduct experimental research to encourage efforts on the part of industry[34]. In addition, measures to support the employment and development of highly skilled human resources are being enhanced, such as strengthening the wage increase promotion system and promoting a system that increases the tax credit rate by 5% on the condition that education and training expenses increase by 10% or more compared to the previous fiscal year (for SMEs, the tax credit rate is increased by 10% for an increase of 5% or more compared to the previous fiscal year)[35].

The National Personnel Authority (NPA) has taken steps to recruit highly skilled human resources and revised the salary system in 2022, including revising the starting salary standards for doctoral graduates and others[36].

Similarly, in February 2023, the Japan Business Federation released a proposal for the further advancement of doctoral degree holders in the industry ("Proposal for the

[34] https://www.meti.go.jp/policy/tech_promotion/tax/R5gaiyou.pdf#page=22
[35] The additional education and training expense requirement is applicable only when the amount of education and training expenses for the applicable fiscal year is 0.05% or more of the amount of salaries and wages paid to all employees for the applicable fiscal year.
[36] https://www.jinji.go.jp/kouho_houdo/kisya/2211/kisokukaisei221118.html

Development and Career Advancement of Doctoral Students and Women in Science and Engineering"[37]), encouraging companies to change their behavior toward highly specialized human resources[38].

The proposal suggests concrete measures to be taken by companies and industry-academia collaboration, including clarification of the type of human resources sought, enhancement of internships and year-round hiring, appropriate compensation, and promotion and support of employees' postgraduate study, thus promoting a proactive response. At the same time, the proposal also includes measures to be taken by universities and the government, such as financial support for doctoral students and promotion and dissemination of job-based research internships, in addition to other measures to be taken through industry-university collaboration.

As a result of these efforts, the number of students enrolled in doctoral programs reached a record high of approximately 75,800 in 2023. Furthermore, the development of a wide range of career paths for doctoral degree holders, including opportunities in industry, is also being promoted, and through the implementation of corporate internships, exchange meetings with corporate researchers, the introduction of a mentoring system, and other efforts at each university, both the number and rate of employment in 2023 increased, reaching 11,000 and 70.2%, respectively, with the employment rate reaching a record high.

In this way, the efforts of the government, universities, and industry are underway to create an environment in which doctoral human resources can easily foresee their career paths to eliminate uncertainty about their future, and to ensure that financial and employment support functions organically, thereby creating an environment in which doctoral human resources can play a more active role as pillars of innovation in Japan, thus leading to the expansion of the high-level human resources class, such as an increase in the number of doctoral degree holders.

In the future, it is expected that doctoral human resources will play an even more active role through smooth communication and cooperation among the various entities, including the enhancement of the recruitment of doctoral human resources.

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[37] https://www.keidanren.or.jp/policy/2024/014.html

[38] Furthermore, in the "Industry-University Council on the Future of Recruitment and University Education FY2023 Report" (released on April 23, 2024), Japan Economic Federation (general incorporated association) summarized its study on the expansion of financial support for doctoral students (first and second terms), graduate school education, the expansion of financial support for doctoral students, improvements in recruitment and selection, the enhancement of human resource mobility between companies and universities, as well as the realization of high-quality internships, in order to promote the success of doctoral students and enhance graduate school education. https://www.keidanren.or.jp/policy/2024/036.html

(Direction of measures)

- Toward the realization of a society in which doctoral students are active in various fields of society, in addition to improving the treatment of doctoral students and expanding employment in industry, with the aim of increasing the number of doctoral degree holders in Japan, guidance and guidelines (tentative) for the active roles of doctoral students in private companies, transparency of the status of doctoral students' active roles, career support system for doctoral students, job-based research internships, etc., in cooperation with industries will be discussed.

  (short term, mid term) (METI, MEXT)

- Long-term paid internship (job-based research internship), in which industry and the university collaborate to provide graduate school education and cultivate practical skills supported by research capabilities in the doctoral program, has been implemented since FY2021. As an initiative that contributes to the establishment of diverse career paths for a wide range of doctoral human resources, we will promote this system so that it will be actively utilized in industries and universities.

  (short term, mid term) (MEXT)

- As a means of improving the treatment of doctoral students and securing the research environment (SPRING), support universities that have the ability and motivation to provide both financial support (equivalent to living expenses and research expenses) for excellent and ambitious doctoral students to devote themselves to research and career path development (e.g., research internships at companies) for doctoral human resources to be engaged in a wide range of activities, including in industries.

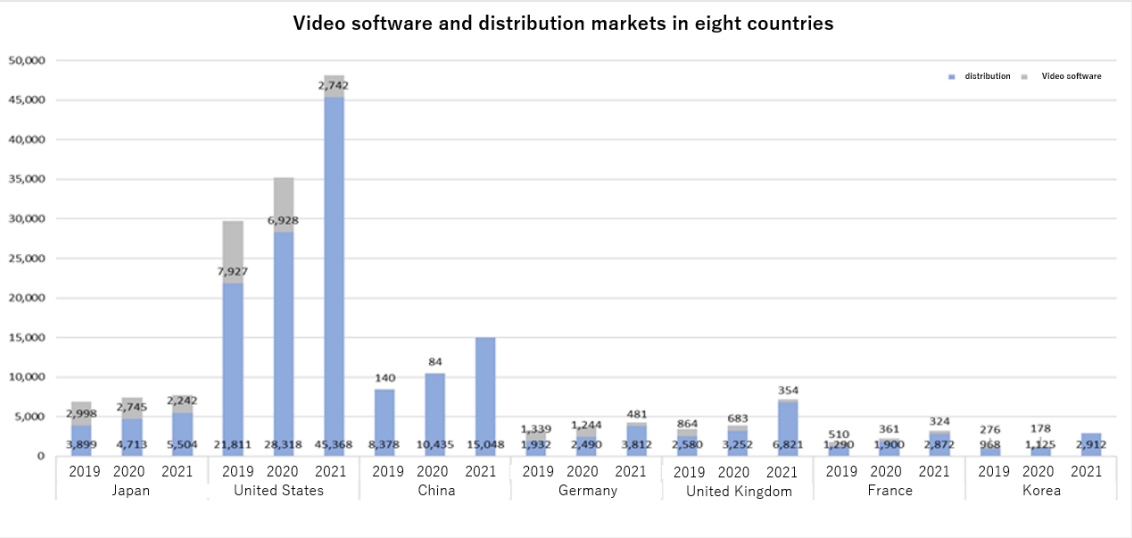
  (short term, mid term) (MEXT)

(2) Developing human resources in content development and utilization

(Current situation and challenges)

The software market, particularly video and music, is declining worldwide, while distribution is growing, with content provision through distribution platforms becoming the mainstream.

(Unit: Billions of yen)

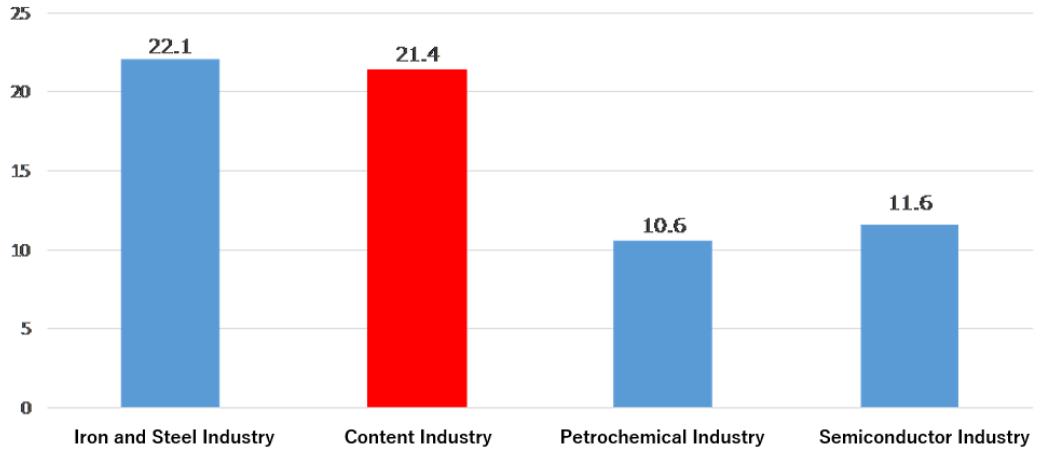


(Source) Compiled by Cabinet Office, Secretariat of Intellectual Property Strategy Headquarters, based on “Japan and Global Media × Content Market Database 2023" (Human Media Co., Ltd.)

Figure 45: Global video software and distribution markets and trends

Japan's content industry needs to respond to these changes by reforming its business model and promoting structural reform of the industry at large, so that they can accurately grasp market needs and provide services.

To achieve this goal, it is essential to develop human resources involved in content development and utilization, and “innovation” is also important in the field of content. In other words, human resources capable of driving the creation of new IP, reform of production methods and processes, and the creation of new business models are required.



（Note1）Data for the content industry are dated 2020, and data for the others are dated 2019.

（Note2）Content industry is the sum of video/audio production and distribution + newspapers + publishing + broadcasting (* excludes games and online advertising)

(Source) Compiled by the Cabinet Office, Secretariat of Intellectual Property Strategy Headquarters, based on the following materials, respectively

Iron and Steel Industry: METI 2022 "Survey of Economic Structure (Survey of Manufacturing Establishments), Statistical Tables by Industry"

Content Industry: MIC/METI 2021 "2020 Economic Structure Survey (*Otsu* Survey [surveys of national and local government offices])"
METI 2021 "Basic Survey on Information and Communication Industry"

Petrochemical industry: METI 2022 "Survey of Economic Structure (Survey of Manufacturing Establishments), Statistical Tables by Industry"

Semiconductor Industry: METI 2022 "Survey of Economic Structure (Manufacturing Establishments) Statistical Table by Industry"

Figure 46: Comparison of the number of workers/employees between the content industry and other industries in Japan

To this end, it is necessary to establish a framework for the development of different talents/creators, including sending them overseas, and to work on the training of digital creators who can use the most advanced digital technology.

In addition, it is required to strengthen the development of practical producers, including study abroad programs, and to visualize the skills required in each field, such as games, animation, manga, live-action, music, performing arts, and art, as well as to provide learning opportunities through higher education that correspond to these skills. At the same time, it is necessary for the content industry to actively work on securing and improving treatment and compensation commensurate with skills.

Furthermore, to strengthen the human resources that support the content industry, it is necessary to create a production environment that is comparable to that of other countries and regions, and to develop an attractive working environment for skilled personnel. In this regard, it is indisputable that in addition to promoting digitalization and digital transformation based on international standards, it is also necessary to

promote measures such as correcting the chronic overworking of workers and ensuring thorough compliance.

With regard to the development of human resources for content development and utilization, it is required to develop human resources, including creators and producers, according to their required roles, and to develop an environment in the content industry to accept and nurture such human resources as well as to promote the measures in a multilayered manner. In addition, creators and producers are not limited to Japanese nationals, but it is also important to proactively utilize non-Japanese nationals[39].

(Direction of measures)

- To support the challenges of young creators and artists with a view to overseas development and to strengthen the nurturing system, the program provides flexible support over multiple years for integrated activities such as planning, negotiation, production, presentation, and overseas development of works and performances by the next generation of creators, particularly in the fields of games, animation, manga, live action, music, performing arts, and art.

  (short term, mid term) (Agency for Cultural Affairs)

- To strengthen the competitiveness of the content industry, we will support efforts to discover and nurture creators (including digital creators) and expand opportunities for them to play an active role. In addition, we will also develop human resources (including those who study abroad) based on cutting-edge technological trends and other factors, including the improvement of the skills of staff involved in production, the acquisition of production technology and know-how[40], in the production and distribution of content for overseas development, the development of production and management personnel, including the financing and management of content for overseas markets, and the development of personnel to promote the digital transformation of the content industry.

  (short term, mid term) (Agency for Cultural Affairs, METI, MIC, Concerned government ministries)

- To revitalize content creation and distribution through innovation and promotion of the use of the latest digital technologies in content creation and distribution, support startups, and other entities that provide services for content creation and distribution using the latest technologies, and provide business

[39] In this regard, for instance, in the video field, such as animation and live-action, there is an opinion that Japan should aim to become a production hub for global platform video content in Japan, which is expected to attract excellent human resources from both Japan and abroad.

[40] For broadcast content, the company is considering support for acquiring expertise in production technologies including 4K technology.

support for creators.

(short term, mid term)(METI, Concerned government ministries)

- In order to develop appropriate human resources in the content industry, the public and private sectors will work together to examine the actual situation regarding the mismatch of human resources and skills required in each genre, as clarified by the industry, as well as the appropriate measures to be taken for improvement. Furthermore, in response to the needs of industries, we will support efforts to strengthen human resource development to support the content industry at universities and other institutions of higher education and other institutions.

(short term, mid term)(METI,MEXT, Agency for Cultural Affairs, Concerned government ministries)

- Support freelance creators, etc., by providing a "copyright contract drafting support system" that offers a standard template for contracts and a "copyright contract manual that anyone can use" for those not necessarily familiar with copyright to support contracts related to the use of copyrighted materials.

(short term, mid term)(Agency for Cultural Affairs)

- To establish appropriate contractual relationships in the field of culture and the arts, disseminate and raise awareness of the guidelines[41], including the template for contract documents, published in July 2022, while making progress in improving the business environment for persons involved in culture and the arts, including freelance artists, through specific efforts such as holding training sessions and establishing a consultation service.

(short term, mid term)(Agency for Cultural Affairs)

- To ensure proper transactions in the content industry, the guidelines related to the Subcontract Act[42] (e.g., advertising, broadcast content, animation production work) will be reviewed as necessary, along with the Act on the Proper Treatment of Transactions between Freelance Businesses and Other Businesses[43], which will go into effect in the fall of 2024, making them widely known and ensuring compliance with them. In particular, as for the film industry, we will closely monitor the progress and effects of the "Japanese Film Production Appropriateness Approval System" (eiteki) and other mechanisms that are being undertaken by the private sector. In addition, for broadcast content, the

[41] "Guidelines for the Development of Appropriate Contractual Relationships in the Cultural and Arts Sector".
[42] Act against Delay in Payment of Subcontract Proceeds, Etc. to Subcontractors (Act No. 120 of 1956).
[43] Act on the Proper Conduct of Transactions Pertaining to Specified Fiduciary Business Operators (Act No. 25 of 2023).

guidelines[44] will be revised and the necessary transaction and production environment will be established to ensure that appropriate compensation returns are made to creators. While considering the onsite ecosystem, these efforts will be effective and improve the working environment and compensation and treatment of excellent human resources so that they will be willing to work there.

(short term, mid term) (Cabinet secretariat, FTC,MHLW, MIC, METI)

- To ensure appropriate earnings for creators, we will strengthen the system of consultation services that provide individualized support by lawyers and other experts on issues related to contract creation and other matters when creators develop their businesses.

(short term, mid term) (Agency for Cultural Affairs)

- To develop transaction environments that maximize the creativity of individual creators, surveys will be conducted to ascertain the actual status of transactions among performers and entertainment agencies and production companies in the fields of music and broadcast programs, as well as their relationships with business associations, record companies, and broadcasting companies. Based on the results of the survey, guidelines will be formulated to clarify specific ideas under the antitrust law and competition policy perspectives regarding the prevention of abuse of a superior bargaining position and other matters.

(short term, mid term) (FTC)

(3) Strengthening human resource foundations that support intellectual property utilization

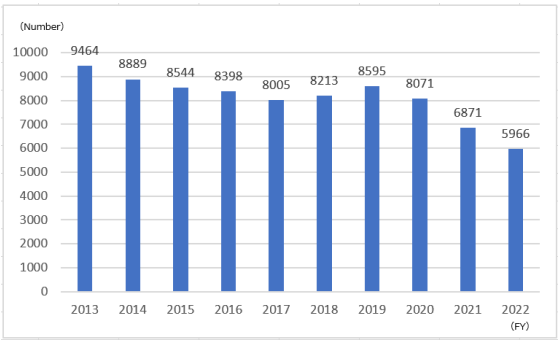
① Expansion of the base

(Current situation and challenges)

When promoting the social implementation of innovations, it is indisputably important to broaden the base of human resources who will be responsible for such innovations.

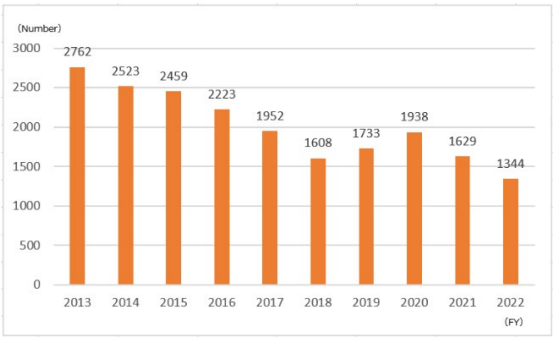
On the other hand, looking at the number of applications filed by individuals, it is apparent that while the number of trademark applications has increased over the past decade, the number of patents, utility model, and design applications has either decreased or remained unchanged. In addition, the number of applicants and successful applicants for patent attorneys, who are supporters of Intellectual Property applications , has been on a downward trend in recent years. These trends indicate that the number of people who will become involved in intellectual property will continue to shrink in the future, thus requiring proactive measures to expand the base of the profession.

[44] "Guidelines for Appropriate Production Transactions of Broadcasting Content."



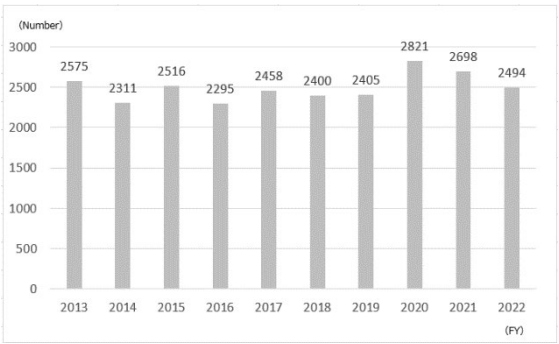
(Source) JPO website “Annual Report 2023"

Figure 47: Number of applications filed by individuals (patents)



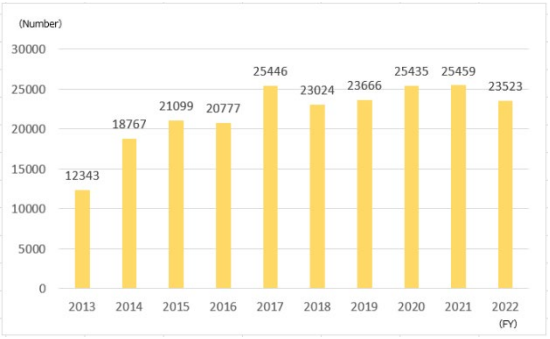
(Source) JPO website “Annual Report 2023"

Figure 48: Number of applications filed by individuals (utility models)



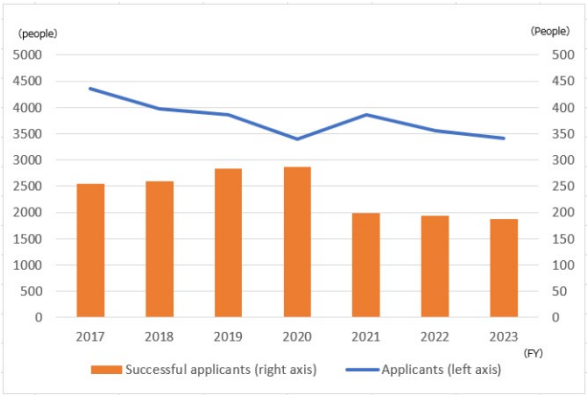
(Source) JPO website “Annual Report 2023"

Figure 49: Number of applications filed by individuals (design)



(Source) JPO website “Annual Report 2023"

Figure 50: Number of applications filed by individuals (trademarks)



(Source) Compiled by Cabinet Office, Secretariat of Intellectual Property Strategy Headquarters, based on "Patent Attorney Examination Statistics" on the JPO website

Figure 51: Number of applicants and finalists for the patent attorney examination

As a basic starting point toward this goal, it is required to enhance the educational environment to generate interest in intellectual property and to foster and develop related knowledge and experience.

The government has held an "Intellectual Property Creation Education Promotion Consortium" to promote "intellectual property creation education," and in March 2021, compiled a concrete action plan for those involved in intellectual property creation education to tackle the issue. As a result, at present, the region-led regional consortiums are playing a proactive role while disseminating and practicing intellectual property creation education.

For instance, in the Chugoku region, educational institutions, companies, and prefectures in the region have been actively engaged in visiting lectures, workshops, and support activities for elementary, junior high, and high school students. At universities, Yamaguchi University, which was certified by the Ministry of Education, Culture, Sports, Science and Technology (MEXT) as an "Education- Related Shared Use Bases" related to intellectual property education, has been developing intellectual property education curricula at other universities, and Osaka Institute of Technology has published "Reference Standards for Organizing Curricula in Intellectual Property Studies" in February 2022 for the purpose of reference when organizing curricula in "Intellectual Property Studies".

Additionally, there is the Intellectual Property Human Resource Skill Standards (revised in 2017) as an index that systematizes the practical skills related to intellectual property, and the Intellectual Property Management Skills Test, a national examination

based on the Intellectual Property Human Resource Skill Standards, is utilized in the development of intellectual property human resources at companies and other organizations.

Furthermore, as other efforts, the Ministry of Education, Culture, Sports, Science and Technology (MEXT), the Japan Patent Attorneys Association (JPO), and INPIT have jointly sponsored the "Patent Contest and Design Patent Contest" every year to improve the intellectual property mindset of students and other students. INPIT fosters the intellectual property mindset of students at vocational high schools and technical colleges in all aspects of the creation, protection, and utilization of intellectual property through its "Intellectual Property Power Development School Support Program," while the Industrial Property Cooperation Center of Japan (IPCC) seeks to raise the awareness of students aiming to acquire knowledge and skills related to patent information through its "Student Course in Patent Search Competitions as well as the Japan Institute of Invention and Innovation (JIII) strives to nurture the creativity of students through the "Invention Exhibition for Students and Children" and the "Dream of Future Science Art Exhibition".

In addition to the above efforts, through further dissemination and practice of IP creation education and similar activities, more students with a broad interest in IP will be attracted, which should lead to the expansion of the base of the IP field.

(Direction of measures)

- By sharing the curriculum and introduction process of intellectual property education at universities certified as "Education-Related Shared Use Bases" regarding intellectual property education with universities that are considering the introduction of intellectual property education, we will promote the smooth introduction of intellectual property education into the curricula at those universities.

  (short term, mid term) (Cabinet Office [IP], MEXT)

- Support for the dissemination and promotion of intellectual property creation education in regional consortiums that serve as centers for regional cooperation linking educational sites and local communities.

  (short term, mid term) (Cabinet Office [IP])

- To raise awareness of intellectual property among companies and schools, we will encourage the acquisition of intellectual property-related qualifications, such as the Intellectual Property Management Skills Test.

  (short term, mid term) (Cabinet Office [IP)], JPO)

- To enable users to learn the basics of the copyright system, the copyright Q&A collection will be renewed for effective dissemination and awareness-raising.

(short term, mid term) (Agency for Cultural Affairs)

- While utilizing mechanisms such as the next-generation science and technology challenge program and unexplored projects to discover and foster human resources with the ability to come up with original ideas, support universities that offer advanced, practical lectures and conduct research.

(short term, mid term) (MEXT, METI)

- In light of the rapid development of new digital technologies and other factors, while incorporating not only general knowledge of the copyright system but also social trends surrounding copyright and the relationship between copyright and digital technologies including Web 3.0-related technologies, we will disseminate and educate the general public about copyright through seminars and the creation of learning materials. In addition, effective dissemination and awareness-raising activities in cooperation with related organizations will be considered so that all citizens, including creators, can be aware of copyright on a daily basis.

(short term, mid term) (Agency for Cultural Affairs)

- To disseminate and practice intellectual property creation education, the "Support Program for Schools Developing Intellectual Property Capabilities," which had been implemented for vocational high schools and technical colleges, has been expanded to include regular high schools, thereby providing wider support for the development of an intellectual property mindset in all aspects of intellectual property creation, protection and utilization among students at high schools and technical colleges.

(short term, mid term) (JPO)

- We will investigate effective methods of education on intellectual property in entrepreneurship education. As part of entrepreneurship education that fosters creativity and the ability to solve problems, we will aim to provide education that enables students to acquire practical application skills in addition to intellectual property knowledge by providing education on intellectual property.

(short term, mid term) (JPO)

- Toward strengthening intellectual property management capabilities in the agricultural and food industries at large, we will support studies of educational curricula and trial seminars, develop and secure expert human resources who can provide advice on initiatives in the field, as well as promote intellectual property awareness among all persons involved in the agricultural and food industries.

Furthermore, we will coordinate efforts to award companies that make effective use of intellectual property, and aim to improve the ability to protect and utilize intellectual property in the agriculture and food sectors through the horizontal deployment of best practices.

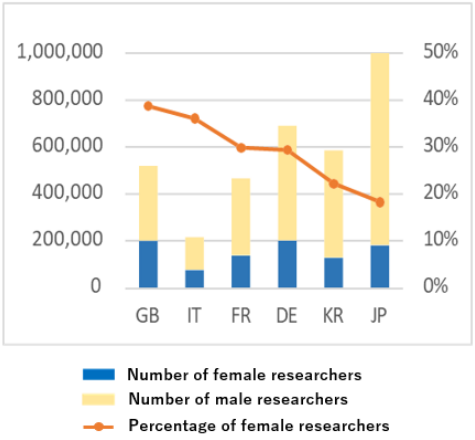
(short term, mid term) (MAFF)【reprinted】

② Diversity of human resources supporting open innovation

(Current situation and challenges)

In an environment where diversity and inclusion are attracting attention as an environment that supports human resources who create innovation, for example, the percentage of female researchers, one of the indicators of diversity, is lower in Japan than in other major countries (Figure 52).

Regarding the inclusion of diversity, a positive impact is known, as companies with above-average diversity scores (measured by six factors: gender, age, country of origin, career path, experience working in other industries, and education) in management reported a larger percentage of overall revenues[45] from innovation (Figure 53). Therefore, to realize innovation progress in Japan, it is desirable to make further progress in securing diversity and promoting inclusiveness that recognizes the values themselves.

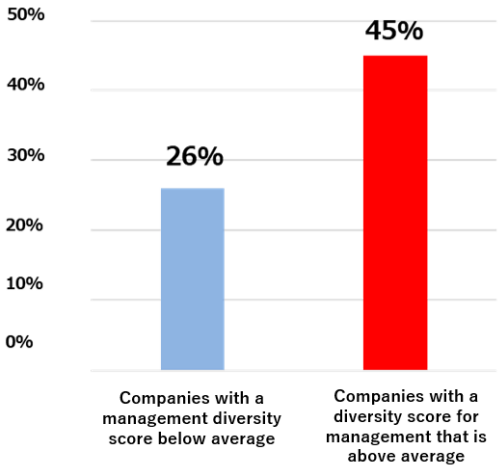


* Figures for Japan are for 2023; figures for Italy, France, Germany, and South Korea are for 2021; figures for the U.K. are estimates for 2017.

(Source) Compiled by JPO based on the 2023 Science and Technology Research Survey for Japan and the OECD Main Science and Technology Indicators for other countries

Figure 52: International comparison of the number and percentage of female researchers

[45] It refers to sales of new products and services introduced to the market within the past three years.



(Note 1) Surveyed companies of various industries and sizes in eight countries (U.S., France, Germany, China, Brazil, India, Switzerland, and Austria)
(Note 2) Measured by the average of the six elements of diversity in the Blau Index (gender, age, country of origin, career path, experience working in other industries, and educational background)

(Source) Cited from the 7th Industrial Structure Council, New Opportunities Subcommittee for Economic and Industrial Policy (held on April 12, 2022)

Figure 53: Percentage of sales from innovations in the total

Under such circumstances, efforts are being made in the industrial world from the perspective of promoting the success of diverse human resources. The Japan Economic Federation (general incorporated association), in its "Proposal for the Development and Achievement of Doctoral and Female Human Resources in Science and Engineering" (released in February 2023), positions the development and achievement of female science and engineering human resources as an urgent issue that requires concrete measures, such as further promotion of awareness of role models. In individual companies, for example, NEC is working to introduce careers for women working actively in science and engineering, and science careers for female students[46].

In addition, the JPO has prepared "Diversity & Innovation: Examples of Women's Activities as a Key to the Activation of the Intellectual Property Ecosystem" (published in May 2024), which compiles information on examples of female human resources active in the Intellectual Property Ecosystem and views of the management layer[47].

Therefore, it is necessary to take advantage of the strength of the diversity of human resources with different attributes (e.g., gender, age, nationality, values) while continuously improving the inclusiveness that allows such diverse human resources to play an active role within the organization.

(Direction of measures)

- Within FY2024, social innovators, solving social problems such as environmental issues, gender equality, and poverty issues to realize a prosperous society, especially startups and non-profit corporations that are not yet familiar

[46] https://jpn.nec.com/recruit/women-careers/index.html
https://jpn.nec.com/cybersecurity/topics/2023/PR005_ksec.html
https://wisdom.nec.com/ja/series/future/2020121101/index.html
[47] https://www.meti.go.jp/press/2024/05/20240517001/20240517001.html

with intellectual property, and diverse players such as women and youth, will receive mentoring support from a team of experts familiar with intellectual property and business to solve social problems through co-creation with others by utilizing intellectual property. In addition, related persons, and others will practice community management to continuously connect with each other and create new initiatives to solve social issues. Based on these activities, we will examine the role of intellectual property in solving social issues, as well as prepare to disseminate information to the world through Expo 2025 Osaka, Kansai, Japan.

(short term, mid term) (JPO)

- As the movement to promote diversity and inclusion is accelerating internationally, we will form a network and develop an environment to enhance diversity and inclusion, while deepening cooperation with intellectual property offices and related organizations around the world as well as domestic user organizations of intellectual property systems. In preparation for the Expo 2025 Osaka, Kansai, Japan to be held in 2025, we will prepare to disseminate information on the promotion of diversity and inclusion in intellectual property.

(short term, mid term) (JPO)

- We will investigate the impact of an environment that encompasses diverse human resources in an organization on the creation and utilization of innovations and inventions. In particular, we will collect cases from inventors belonging to a wide range of organizations within the intellectual property ecosystem in which the diversity and inclusion (e.g., the status of efforts) of the teams and workplaces that the inventors belong to had an impact on the creation of innovations and inventions, and disseminate the findings obtained.

(short term, mid term) (JPO)

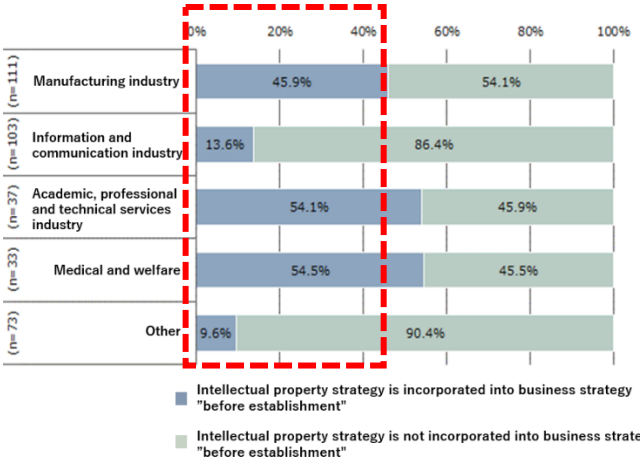
③ Intellectual property strategy support professionals

(Current situation and challenges)

With the current “Startup Development Five-Year Plan” (approved by the New Capitalism Implementation Council on November 28, 2022), human resources to support the establishment of intellectual property strategies for startups' commercialization are becoming increasingly critical.

However, in Japan, there is a lack of human resources capable of supporting startups in establishing intellectual property strategies (intellectual property strategy support professionals), and due in part to the lack of sufficient support, for example, only about half of companies have integrated intellectual property strategies into their management

strategies before the startups are established (Figure 54).



(Source) Japan Patent Office, "Research and Study Report on Intellectual Property Issues Faced by Startups" (May 2022)

Figure 54: Percentage of respondents who had an IP strategy integrated into their business strategy prior to establishment, by industry

Although appropriate evaluation of intellectual property is a prerequisite for incorporating intellectual property strategy into business strategy, it has been said that "except for some intellectual property, it is difficult to evaluate intellectual property on its own, and it is necessary to consider its business potential as a set. Additionally, it should be noted that intellectual property is selective in terms of its users"[48] and "intellectual property is one of management strategy resources and contributes to the creation of new social and economic value by being incorporated into value creation mechanisms[49].

There are also opinions that it is necessary to have a person in charge of overseeing intellectual property, like a chief intellectual property officer (CIPO), to develop human resources to build and execute an intellectual property strategy that fits with the management strategy.

Therefore, under the Intellectual Property Acceleration Program (IPAS) launched in FY2018, the JPO supports startups in developing intellectual property strategies linked to their business strategies through an "IP Mentoring Team" consisting of business experts and intellectual property experts.

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[48] Intellectual Property Policy Office, Ministry of Economy, Trade and Industry, "Report on Survey of Intellectual Property Distribution and Financing Cases ~Utilization of Invisible Management Resources~" (2007)

[49] "Task Force Report on Evaluation of Business Value of Intellectual Property ~Designing Management~" (May 2008), by the Verification, Evaluation and Planning Committee of the Intellectual Property Strategy Headquarters and others.

Based on the above, the main responses required for startups in the process of obtaining rights include deciding whether or not to request an examination after filing a patent application and communicating with patent examiners toward obtaining the rights. Assistance measures are required for those two processes and as for the former, the results of a prior art search prepared by a specific registered search organization are useful as materials for making a decision on whether or not to request an examination[50]. In case companies wish to consider management and business strategies based on IP, it is possible to grasp the trends of competitors in their business by utilizing the IP Landscape Support Project (a publicly solicited IP support project by INPIT).

For the latter, the JPO began providing push-type support at the examination stage by patent examiners in FY2024, and has been supporting individual patent applications by startups for which a request for examination has been filed. Since this policy has just started, it is desirable to continuously review the operation method based on user feedback.

Furthermore, by promoting dual jobs and side jobs, such as IP department staff of large companies working as IP officers for startups, the mobility of the labor market in the entire IP ecosystem will increase, and the gap between the supply and demand of human resources with business strategies and intellectual property strategies necessary for startups and others will be expected to be resolved. And initiatives based on the needs of the industry is expected to be considered.

(Direction of measures)

- We will promote the development of human resources necessary to support the establishment of intellectual property strategies in line with the business models of startups. Additionally, INPIT will create a skill map for intellectual property strategy support professionals and examine the improvement of training programs for intellectual property strategy support professionals by utilizing the skill map.
  (short term, mid term) (JPO)
- Through IPAS, we will enhance the establishment of appropriate intellectual property strategies. In particular, in FY2024, IPAS will be transferred to INPIT to

[50] Among registered search organizations, a person registered with the Commissioner of the Patent Office (specified registered search organization) may conduct a prior art search of a patent application at the request of the applicant or others and issue a search report describing the results of the search. If a request for examination is filed by presenting the search report issued by the specified registered search organization, the fee will be reduced.
https://www.jpo.go.jp/system/patent/gaiyo/sesaku/toroku/tokuteitouroku_01.html

increase the frequency of adoption and improve user convenience, as well as to establish a support system with increased mobility in cooperation with intellectual property strategy experts at INPIT.

(short term, mid term) (JPO)

- By dispatching patent attorneys, attorneys at law, and other intellectual property experts to venture capital firms, we will strengthen our support for startups in developing intellectual property strategies. In FY2024, the number of venture capitalists to be dispatched will be increased, leading to support for more startups.

(short term, mid term) (JPO)

- Through effective information dissemination such as video distribution on IP portal sites for startups, and by providing opportunities to connect persons involved in the startup ecosystem with persons involved in intellectual property throughout Japan, we will facilitate the ecosystem revitalization. In FY2024, we will particularly strengthen face-to-face interactions among startups and startup supporters (e.g., venture capitalists, intellectual property experts) through events and other means to further accelerate network building.

(short term, mid term) (JPO)

- To promote innovation by startups and others, push-type support will be provided by patent examiners at the examination stage to encourage the use of various support measures, as well as to support smooth and effective acquisition of rights in accordance with the business strategies of startups and others through interview examinations.

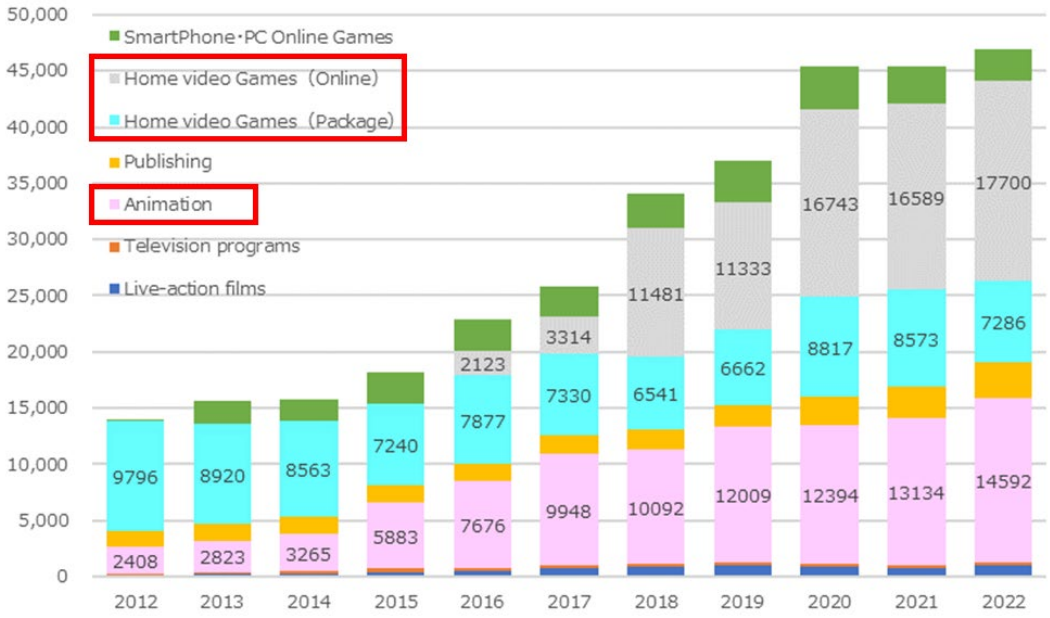
(short term, mid term) (JPO)

5. New Cool Japan Strategies and content strategies

After the "Cool Japan Strategy" (approved by the Intellectual Property Strategy Headquarters on September 3, 2019) was formulated in September 2019, the Cool Japan related fields were significantly damaged in the COVID-19 pandemic, but the government, in cooperation with related industries, has taken various support measures to ensure the survival of Cool Japan-related fields, to secure employment opportunities for people working in these fields, and to continue these activities.

Since then, with the post-COVID-19 era, including the relaxation of border measures, the environment surrounding Cool Japan has changed drastically and moved into a new phase, as described below.

- The popularity of Japanese content, especially anime and video games, has been growing significantly around the world.
- Expectations and interest in Japanese "food" are increasing among foreigners.
- Inbound travelers are diversifying and deepening their visits to Japan, with an increase in repeat visitors and longer stays.
- The importance of "Soft power" is increasing as the global security environment becomes more severe due to the confrontation between the U.S. and China.



(Source) Compiled by Cabinet Office, Secretariat of Intellectual Property Strategy Headquarters, based on "Japan and Global Media × Content Market Database 2023" (Human Media Co., Ltd.)

Figure 55: Market size of Japan's content industry overseas

The time has arrived to restart Cool Japan (rebooting), aiming for even greater heights, by seizing the tidal wave of such a changing environment.

Japan already has a large number of intellectual assets (IP) in the broad sense of the term, including content, diverse and delicious food, and nature and traditions of various regions. It is essential to establish a virtuous cycle in which these IPs are utilized to generate "innovation" while providing high "experience value" to "Japan fans" who have become multilayered and deepened, and to generate high profits to earn foreign currencies, which will then be reinvested in Japan.

To achieve this, the government determined to strengthen the international competitiveness of the content industry, develop the leaders of Cool Japan, utilize diverse human resources including foreign nationals, and promote digitalization and DX, including the use of new technologies, and formulate the "New Cool Japan Strategy" (approved by the Intellectual Property Strategy Headquarters on June 4, 2024)[51].

The "New Cool Japan Strategy" reviews the past Cool Japan Strategy efforts, identifies issues, and presents a vision and basic direction to resolve those issues and further develop Cool Japan efforts. Based on the above, an action plan was established as a set of measures to be taken in the areas of content, inbound tourism, exports of agricultural, forestry and fisheries products and food products, and the discovery and dissemination of regional attractiveness.

For more information on the current status and issues surrounding Cool Japan, as well as the vision and direction of measures to be taken, refer to the "New Cool Japan Strategy.

(1) New Cool Japan Strategies

(Current situation and challenges)

Inbound tourism is steadily recovering from the COVID-19 pandemic, with the number of foreign visitors to Japan exceeding 25 million[52] and the amount of inbound tourism spending reaching a record high of 5,306.5 billion yen (+10.2% over 2019) (all figures are for 2023). Exports of agricultural, forestry, fishery, and other products continued to expand, reaching 1,454.1 billion yen (in 2023), a record high including during the COVID-19 pandemic.

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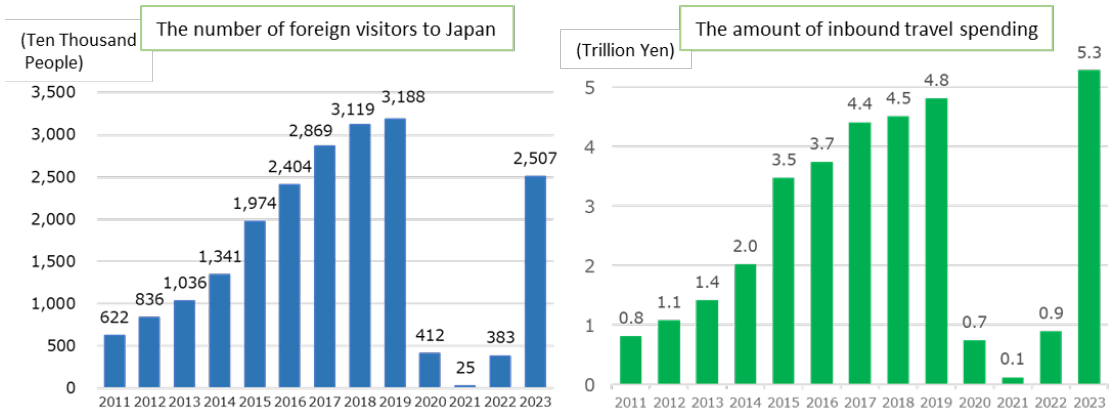
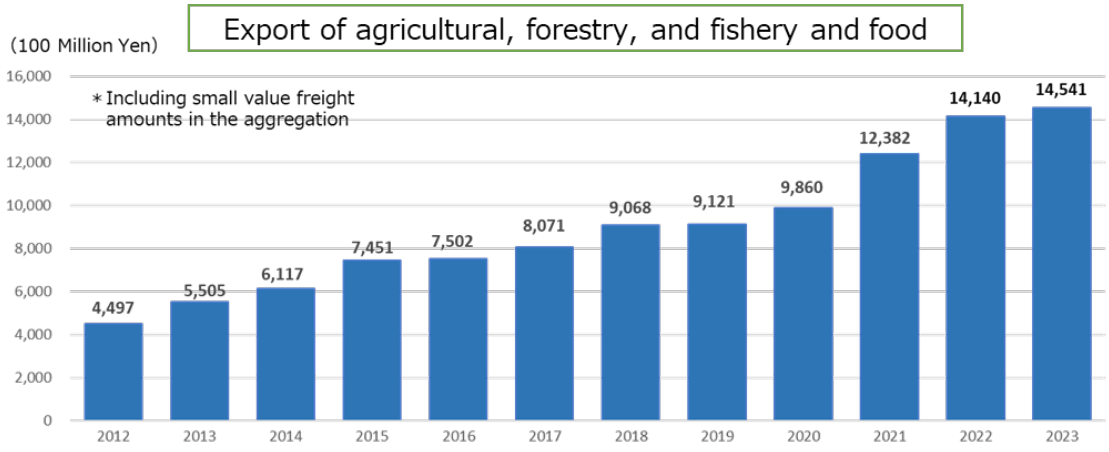
[51] It was decided by the Intellectual Property Strategic Headquarters on the same day as this Strategic Program (June 4, 2024).

[52] The number of foreign visitors to Japan in March 2024 was 3.08 million, exceeding 3 million for the first time as a single month (a new record high above pre-COVID-19 levels). The number also exceeded 3 million for two consecutive months in April of the same year at 3.04 million.



(Source) Based on "Statistics on Foreign Visitors to Japan" (Japan National Tourism Organization (JNTO)) and "Survey on Consumption Trends of Foreign Visitors to Japan" (JTA)
Compiled by Cabinet Office, Secretariat of Intellectual Property Strategy Headquarters



(Source) Based on data from MAFF (based on "Trade Statistics" [MOF])

Compiled by Cabinet Office, Secretariat of Intellectual Property Strategy Headquarters

Figure 56: Foreign visitors to Japan and foreign tourist spending, Trends in exports of agricultural, forestry, fishery, and food

Entering the Post-COVID-19 era, the environment surrounding Cool Japan has changed dramatically and is moving into a new phase. To make Cool Japan initiatives sustainable, it is critical to form an ecosystem in which high-value-added products and services are provided to generate high profits, which are then reinvested in the industry.

Therefore, we will work to produce from the perspective of foreign nationals, support SMEs that support them, foster startups, and promote the use of new technologies, as well as strengthen overseas outreach, including the use of the foreign community and strengthening of partnerships.

As for inbound tourism, we will work on the creation of value-added experiences that emphasize values such as "sustainable," "authentic," and "transformative,"

securing and training guides who can convey the attractiveness of Japan as a story, and strengthening information transmission and promotion of crossover activities using DX, cashless, anime, and manga.

In the export of agricultural, forestry and fishery products and food and other products, while promoting diversification of export destinations, we will work to expand exports by strengthening our approach to untapped local commercial channels, encouraging exports on an all-Japan basis with certified agricultural, forestry and fishery products and food export organizations at the core, forming model production areas for large-lot exports, and supporting Japanese food industry operators in forming investment projects for overseas local processing and distribution facilities and other facilities. Furthermore, we will make efforts to promote and penetrate Japanese food and food culture overall, and increase exports of agricultural, forestry and fishery products and food and other products.

With regard to design, art and other fields, we will work to improve the environment for art and design to be utilized and reinvested in local communities and companies, create case studies, and support human resource development aimed at creating and expanding opportunities for creators to play an active role.

(2) Content strategies in the digital age

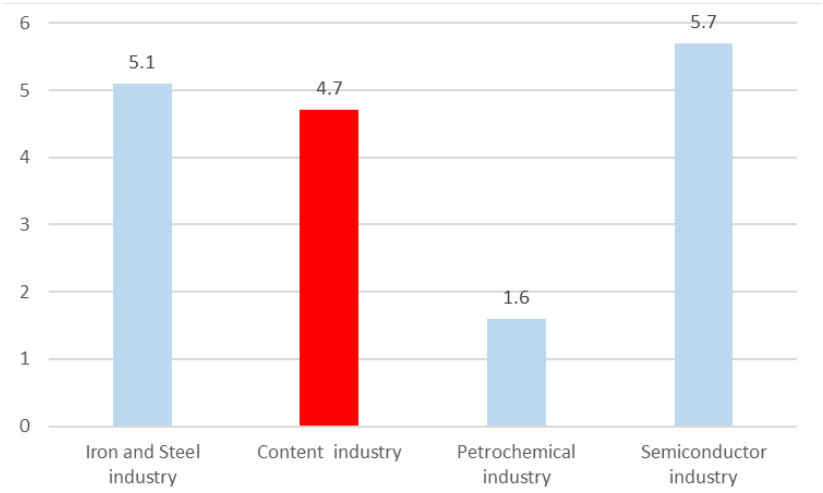
(Current situation and challenges)

The advance of digitalization is shifting people's consumption activities from goods to matters, and from real to virtual. The advance of digitalization is shifting people's consumption activities from goods to matters, and from real to virtual. Under such circumstances, the content sector has attracted particular attention as an area expected to grow and develop in the digital market and space. As major “intermediate goods” in the digital economy, content has a particularly high ripple effect as an industrial sector, as it is linked to other goods and services and functions as a gateway to lead demand to various peripheral fields.

Furthermore, by disseminating content to the world, it also plays an important role as a soft power in shaping Japan's brand power by conveying Japanese ideas, thoughts, and values, and expanding sympathy for Japanese culture.

The scale of Japan's content industry is 13.1 trillion yen (in 2022), while overseas expansion is increasing year by year, mainly in the animation and game (home-use) industries, to 4.7 trillion yen (in 2022). This is comparable to the export value of the steel industry and nearly as large as the export value of the semiconductor industry.

(trillion yen)



(Source) Compiled by Cabinet Office, Secretariat of Intellectual Property Strategy Headquarters, based on the following materials respectively

- Iron and Steel Industry: "Overview of Steel Imports and Exports" (Japan Iron and Steel Federation)
- Content industry: Japan and Global Media × Content Market Database 2023" (Human Media Co., Ltd.)
- Petrochemical industry: (exports of petrochemical products by country): Interview with Japan Petrochemical Industry Association
  Semiconductor industry: (semiconductors and other electronic components): "Trade Statistics" (MOF)

Figure 57: Scale of Overseas Expansion of Japan's Content Industry (2022)

Considering the significance of such content, the "New Cool Japan Strategy," which will be determined by the headquarters at the same time as this plan (Intellectual Property Strategic Program 2024), includes strategies related to the content industry at its core.

With the content industry as the core industry, Japan will strive to promote an ecosystem in which the cycle of creation, protection, and utilization of content is achieved in a sustainable manner through the promotion of overseas business development capabilities, response to digital business, enhancement of human resources in the content industry, measures against piracy by the public and private sectors together, and strengthening of the public-private partnership system, while implementing the PDCA cycle.

The specific direction of measures for these objectives is described in the New Cool Japan Strategy.

The following issues have already been addressed separately in this Strategic

Program: AI and intellectual property rights, strengthening measures against piracy and counterfeit products, and developing human resources in content development and utilization[53].

[53] Refer to 1 (3) above for “AI and intellectual property rights,” 2 (2) above for “strengthening measures against piracy and counterfeit products,” 3 (3) above for “Realizing a digital archive society,” and 4 (2) above for “Developing human resources in content development and utilization".