



KONICA MINOLTA

KONICA MINOLTA, INC.
Intellectual Property Report 2024

**RETHINK
WHAT'S
POSSIBLE**

Giving Shape to Ideas



Executive Vice President
&
Executive Officer
Responsible for Technologies
Toshiya Eguchi

Introduction

In our Medium-term Business Plan (2023-2025), we are pursuing three basic strategies: strengthening business profitability, structural reforms implemented to reinforce profit foundation, and reinforcement of business management system. Under these strategies, we will thoroughly implement “business selection and concentration” from fiscal 2023 to 2024, and aim to “establish a foundation for growth” in fiscal 2025.

The “establishing a foundation for growth” that we are working on to achieve sustainable growth is to create “seeds for future growth” that lead to the creation of new businesses, and to ensure that we have technologies in place to be able to grow significantly. To achieve this, it is essential to strengthen investment in and utilization of intellectual property such as patents, and we are promoting the formulation and implementation of an intellectual property strategy that is closely linked to our business strategy based on our Medium-term Business Plan. In formulating our intellectual property strategy, we set the goal of achieving the targets set for each business in our Medium-term Business Plan, and then backcast from that to draw up a story of how to utilize intellectual property to contribute to each business target, and we are incorporating these into specific intellectual property activities in each business.

In addition, in order to achieve the Medium-term Business Plan and subsequent sustainable growth, we are promoting the automation of operations, including the use of generative AI, and are actively investing in DX (Digital Transformation) so that employees can shift to high-value-added operations, aiming to transform into an organization with high productivity per capita.

In terms of intellectual property activities, our R&D engineers in each business are promoting efficiency in the creation of intellectual property by using AI and digital tools to collect and analyze intellectual property information, and the Intellectual Property Division is promoting DX by using AI technology to significantly reduce the man-hours required for foreign applications. Through these initiatives, we will improve the productivity of company-wide intellectual property activities, further improve the quality of intellectual property rights, and ultimately strengthen innovation creation.

By implementing this intellectual property strategy and promoting intellectual property DX, we will achieve the “business selection and concentration” and “establishing a foundation for growth” set out in our Medium-term Business Plan, and realize sustainable growth.

We hope that this Report will help to promote understanding of our approach to and strategy for intellectual property.

Progress of the Medium-term Intellectual Property Plan

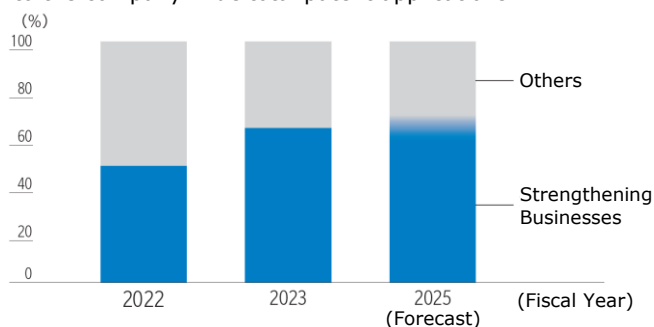
I Medium-term Intellectual Property Plan (FY2023-2025)

Under the Medium-term Business Plan (2023-2025), we have established three key policies for the Medium-term Intellectual Property Plan (FY2023-2025). Based on these policies, we are steadily promoting intellectual property activities in close collaboration with each business.

Policy 1: Implement intellectual property strategies contributing to “strengthening of business profitability”

To further promote the expansion of our strengthening businesses through business selection and concentration, we are also promoting selection and concentration in our intellectual property activities. In particular, in our strengthening businesses of Professional Print, Industry and Healthcare, we are aiming to increase the ratio of patent applications for the strengthening businesses to nearly 70% of the company’s total patent applications by fiscal 2025, and we are making steady progress towards achieving this goal (see the figure below).

Ratio of patent applications for the strengthening businesses to the company-wide total patent applications



In the Industry Business, we are strengthening business creation through value propositions from a market and customer perspective, beyond conventional product-based business units, by prioritizing resource allocation to key focus areas. In line with this approach, regarding the technological assets and specific solutions that form the basis of these value propositions, the Intellectual Property Division investigates and analyzes past patent application and the content that should be applied for in the future, proceeding with patent applications and acquisition.

Additionally, to conduct intellectual property activities with a high degree of business contribution, we set targets for the number of important patents to be created in line with each business strategy. By developing targeted application activities, especially in the strengthening businesses, we are increasing the ratio of the number of applications for important patents, which are rated highest according to the predetermined internal criteria, in the total number of applications.

For these top-rated important patents, we are also implementing measures to pay higher amounts to inventors than the usual compensation (consideration for inventions). This is intended to promote the creation of high-quality inventions, accelerate the building of patent barriers, and lead to the strengthening of business profitability.

Policy 2: Facilitate intellectual property IR activities

We held an IR Information Meeting “Konica Minolta Day” to explain our policies and strategies for sustainability management and examples of utilizing DX (Digital Transformation), as well as our intellectual property activities and intellectual property strategies that promote the Medium-term Business Plan (cf., Explanation can be found [here](#) - only in Japanese).

In addition, from the perspective of interactive communication, we held direct dialogues with institutional investors and worked to evolve and deepen intellectual property information disclosure.

Progress of the Medium-term Intellectual Property Plan

Policy 3: Strengthen human resources and intellectual property DX supporting intellectual property activities

- Human resource strategies with an eye toward medium- and long-term future

We redefined the skill sets required by the Intellectual Property Division members and clarified the career paths for becoming professionals with those skills. In addition, we formulated training and enhancement programs that lead to the development of the desired human resources we aim for, and strengthened a human resource base capable of stably fulfilling its functions over the medium- and long-term.

Professionals capable of contributing to business through the strategic utilization of intellectual property

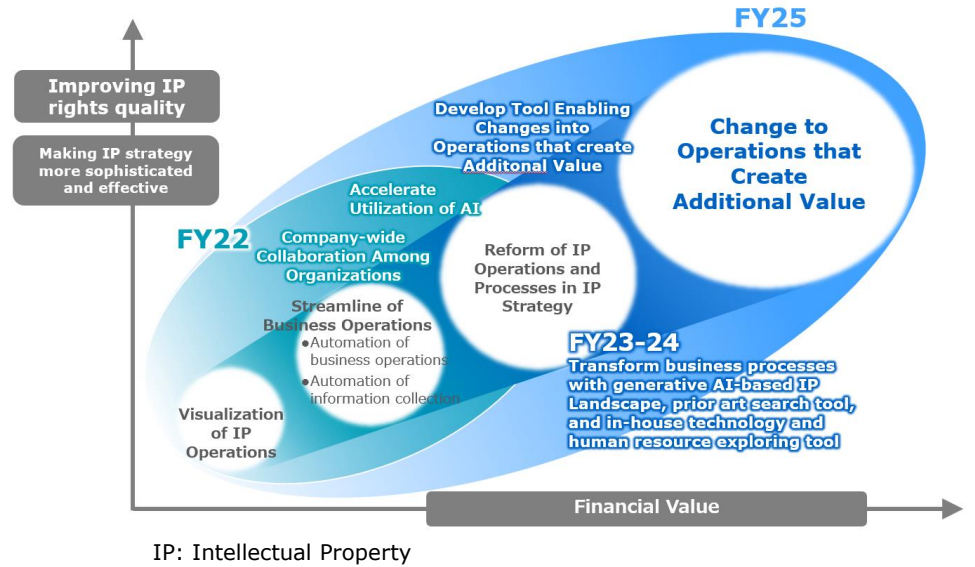


- Operational streamline and new values creation by promotion of intellectual property DX

We are promoting the automation of operations using AI, and as part of this, we are actively investing in DX to enable employees to shift to more value-added work through operational efficiency and reform.

This is no exception in intellectual property activities. After reviewing, organizing, and visualizing intellectual property operations, we are promoting the automation of these operations and the efficiency of information collection and aggregation by utilizing AI and digital tools. We are aiming to make effective use of the time created by this to further improve the quality of intellectual property rights, as well as to create new innovations in intellectual property activities (see the figure below).

We are also continuing to develop our own digital tools to further improve the efficiency of our intellectual property activities, and we have achieved improvements in the efficiency of prior art searches, the efficiency in exploring our own technology and human resource, and the reform of foreign patent applications using AI. These initiatives are explained in more detail on the next page.



Intellectual Property DX to Support Intellectual Property Activities

We are working to transform our organization into one with high productivity per person through intellectual property DX. Here, we will introduce some examples of DX that supports intellectual property activities.

1. Improving the efficiency of prior art searches

Prior art searches are essential for patent applications. However, for our R&D engineers who have few opportunities to conduct such searches, it is difficult to maintain their search skills. As a result, there are cases where prior art is not always thoroughly identified and patent applications are rejected on the grounds of the existence of prior art. To solve this problem, we developed a tool that allows prior art to be searched by just entering text, regardless of skill level, and we achieved a time reduction of approximately 85% compared to the conventional workflow.

2. Improving the efficiency of exploring our technology and human resources

Until now, it has taken time to find in-house experts on specific technologies. The technology asset visualization tool, developed as part of the intellectual property DX project, not only makes in-house technology assets visible and searchable, but also allows us to search for the in-house technical human resources who are well-versed in the assets.

This tool not only enables efficient access to in-house experts on specific technologies but also facilitates team building for the creation of new businesses, allowing for easy exploration and aggregation of necessary technology and human resources. As a result, it is expected to promote the launch of new businesses utilizing the fusion of technology and human resources and lead to the creation of new patent assets.

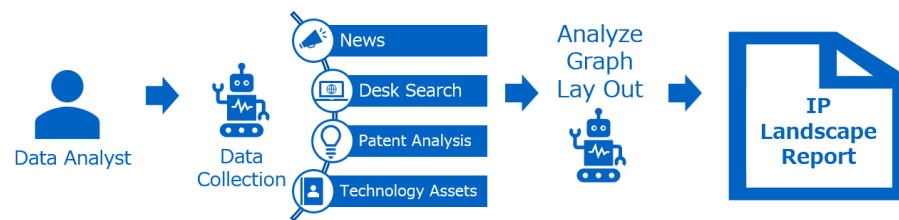
3. Reforming the foreign patent application process using AI

Our company has a high ratio of overseas sales, and files foreign patent applications in line with business strategy. For these foreign patent applications, it is essential to translate the application documents into the local language, and this accounts for a large portion of the man-hours in preparing documents for foreign applications. In particular, since careful selection of terms is required for patent translation, the issue is the variation in quality and necessary work time by workers. We addressed this

issue by developing an AI-based proofreading assist function. This function has the potential to significantly reduce the man-hours in both the translation and final checking processes. As a result, we proceeded with preparation for implementing this function to reduce the burden on workers in these processes, allowing them to focus on more advanced quality checks and highly specialized translation tasks. We plan to continue making improvements and further utilize AI technology to maximize man-hours reduction.

4. Improving the productivity of IP Landscape using generative AI

Data analysts in the Intellectual Property Division have been conducting IP Landscape analysis (a multifaceted analysis that combines technical information, including intellectual property, and market information, and provides various outputs, such as strategic proposals). As awareness of the usefulness of this analysis has increased internally, the number of requests for such analysis has increased, and it has become difficult to provide stable, high-quality outputs. On the other hand, while handling numerous cases, we found that there was a possibility of building a common process that could be applied to all requests, like information collection and analysis, regardless of what is requested. Therefore, we are considering developing a tool that utilizes generative AI to automatically collect and analyze the necessary information from a wide variety of sources, regardless of the request. By doing this, we will be able to significantly reduce the man-hours for information collection, etc., and allow data analysts to focus on advanced information processing.



Dialogue with Stakeholders

In order to make our disclosure and communication of intellectual property activities more effective, we regularly hold dialogues with our stakeholders.

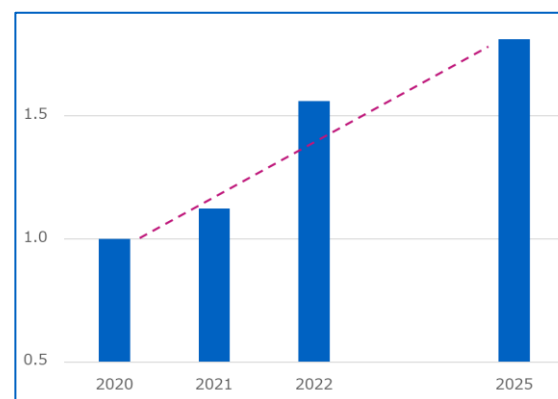
In fiscal 2024, we exchanged opinions with several stakeholders on our disclosure and communication through our Intellectual Property Report and events for stakeholders. Particularly, with Nomura Asset Management Co., Ltd., we discussed the linkage between intellectual property disclosure and communication and management strategy, as well as evaluation indicators for intellectual property investment and the connection with financial and human resource strategies.

Konica Minolta (KM) Our company actively discloses and communicates our intellectual property initiatives through the publication of the Intellectual Property Reports, the holding of events for stakeholders, and direct dialogue with stakeholders. In our disclosures and communications, we are conscious of showing the link with our business strategy, and we strive to disclose how intellectual property supports future business growth as a data-backed story.

Nomura Asset Management (Nomura) At an event for stakeholders, you explained your intellectual property strategy, which supports the enhancement of business profitability through selection and concentration, as one of the basic policies of your Medium-term Business Plan (2023-2025). In this context, you introduced the strategy that supports the expansion of strengthening businesses using specific technologies and products, which was easy to understand.

KM To deepen understanding further, we believe it is necessary to communicate how these technologies and products will contribute to the realization of the Medium-term Business Plan from the perspective of more specific value creation.

Nomura At the event, in the discussion of selection and concentration of intellectual property investments, you mentioned the ratio of patent applications as an indicator of the appropriateness of intellectual property investments in the strengthening businesses. On the other hand, in your Intellectual Property Report 2023, you used a different indicator called intellectual property ROI (Return On Investment). Why is that?



Trend of intellectual property ROI
in Business Technologies Business
(from Intellectual Property Report 2023)

KM Because the offered products and business environment differ for each of our businesses, we believe it is difficult to evaluate all of our businesses with a single indicator. As an example of using of intellectual property ROI, in the office business covered in the Intellectual Property Report 2023, there are many patents per product, and intellectual property plays an important role. If we do not own enough intellectual property rights, including patents, it could affect the profitability of the business. In such businesses, we consider the difference in royalty income and expenditure that varies depending on the presence or absence of intellectual property activities, as profit (i.e., Return), and calculate and evaluate intellectual property ROI.

Dialogue with Stakeholders

Nomura I see, so you are selecting the optimal evaluation indicators according to the positioning of each business and the objectives of your intellectual property activities.

KM Regarding the ratio of patent applications in the strengthening businesses to the company-wide total patent applications, which you mentioned earlier, we have raised our target for fiscal 2025 to 70% based on the results of fiscal 2023. We will explore consider future targets considering the sales of the strengthening business, their ratio to the whole, and the consistency with our management and business strategies.

Nomura Your company clearly shows the relationship with management and business strategies. We think it would be good if you could also show the connection with financial indicators and human resource strategies.

KM When discussing our intellectual property activities, we aim to explain the connection with financial indicators in more detail, and show them as a story that links the timeline from the past to the future. We also regard

human resources as an important intangible asset, and we have set out an intellectual property human resources strategy in our Medium-term Intellectual Property Plan that looks ahead to the medium- and long-term, so we will consider setting specific KPIs and evaluating the execution status. Furthermore, we also think it is necessary to disclose, from the perspective of intellectual property, how our products and services, such as IQ-501 and SANUQI, have become the key to the expansion of the strengthening businesses.

Nomura We hope that you will continue to provide high-quality disclosure and communication, and that this will lead to sustainable enhancement of corporate value not only in the short- and medium-term but also in the long-term.

KM Thank you very much for your valuable opinions. We will make use of these opinions and actively and clearly disclose and communicate information about our activities related to intellectual property, which is the source of our corporate value.

Key products and services for the expansion of strengthening businesses

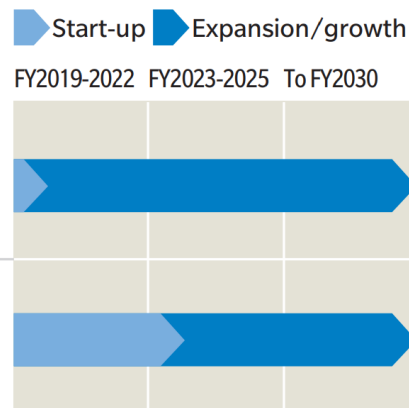
Key growth products/services



Professional Print Business
IQ-501
 (Intelligent Quality Optimizer)



Industry Business
SANUQI
 (Display film)



Topics

I Intellectual Property Activities for Digital Label Printing Press

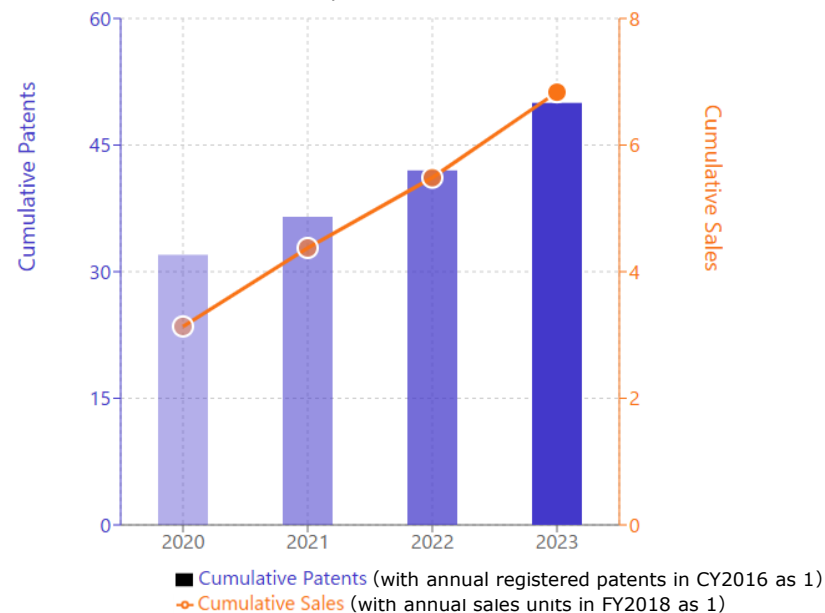
Our AccurioLabel series of digital label printing press enable long-distance printing by transporting continuous paper wound on a roll at a constant tension between the unwinder and the rewinder, and transferring and fixing label images, etc. on the paper at the image forming section.

There is increasing demand for label printing year by year, which is indispensable for daily necessities such as beverages, food, and miscellaneous goods. The AccurioLabel series achieve high productivity with excellent print speed and operability, and meet the demand for shorter delivery times in the expanding market. Furthermore, the adoption of an electrophotographic method using toner enables high-quality image output, and responds to the strict quality needs of the market.



To support business growth and expansion in the strengthening area for Professional Print, we have positioned the roll paper printing-related technology adopted in the AccurioLabel series, including the latest model "AccurioLabel 400", as a key area for building strong patent barriers, and have been working in close collaboration with our development department to intensively file patent applications from the technology development stage.

Trend of the number of registered patents for roll paper printing-related technology and product sales performance



As a result of steadily executing this strategy, as shown in the figure above, the portfolio of registered patents for roll paper printing-related technology has steadily expanded, supporting the robust sales of the AccurioLabel series.

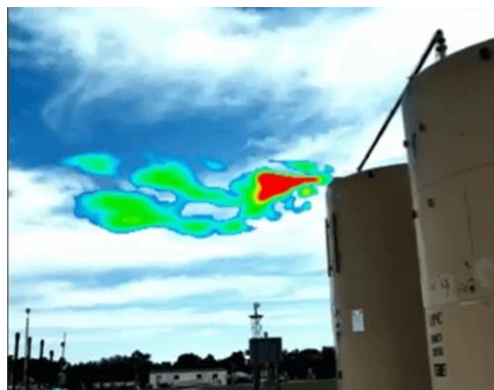
We will continue our efforts to grow and expand the strengthening area for Professional Print by strengthening the patent barriers and optimizing the patent portfolio.

Topics

I Intellectual Property Activities for Gas Leak Inspection Systems

Our gas leak inspection systems apply our core optical and image processing technologies to infrared cameras, making invisible gas “visible.” This enables users to quickly, easily and accurately detect the source, amount and concentration of gas leaks. In addition, as plant and factory safety operations become more advanced, inspections can be conducted from a distance, significantly improving the safety of inspection work. Furthermore, the industry's smallest and lightest handheld device enables use in a wide range of environments and situations.

We are promoting activities to establish this new technology of “inspection using gas detection images” as an industry standard and other rules. By popularizing and standardizing this system for inspections of gas storage facilities, where visual inspection was previously mainstream, we will improve safety and efficiency. Through this rulemaking, we are also contributing to creating a new market in the field of inspection of gas storage facilities. In recognition of these efforts, the Ministry of Economy, Trade and Industry selected us as a “company with a high market formation power index”. The Ministry is promoting “rulemaking-type market creation,” in which companies create new markets by engaging in rulemaking, and our gas leak inspection system business is introduced as one of the success examples. Furthermore, we not only create new markets and revitalize the industry, but also establish a competitive advantage by protecting the value and strength of our unique gas detection technology with patents (e.g.,



Reference Source :
Colorado State University METEC

Japanese Patent No. 6245418, US Patent No.10145788B2). With this patent strategy, we will strengthen our presence in the newly created market and drive the resolving of social issues as an industry leader.

【Details of the Ministry of Economy, Trade and Industry news release can be found [here](#) - only in Japanese】

In addition, this inspection system received the “2024 ONE Future Awards” Technology of the Year award (Production category) from Our Nation’s Energy Future, a coalition of U.S. natural gas companies committed to the reduction of methane emissions, which is a major social issue of global concern. It is highly regarded as an inspection system that can accurately detect gas leak locations and amounts, with high precision and reliability, trusted by many oil and gas operators and government agencies in the United States of America.



With these domestic and international evaluations as momentum, we will nurture “seeds for future growth” that lead to business creation by utilizing technology and intellectual property, and connect them to establishing a foundation for growth.

External Evaluations

I Named Among Top 100 Global Innovators 2024 by Clarivate for Three Consecutive Years

Konica Minolta was named among the Top 100 Global Innovators 2024 by Clarivate, a UK-based global information service company, for three consecutive years.

To create this list, Clarivate uses its own intellectual property and patent data to identify companies and organizations that have met the qualifying criteria of having filed 500 or more patent applications since 2000 and been granted 100 or more patents during the past five years, and then evaluates the identified candidates in terms of four factors: "Influence," "Success," "Geographic investment" and "Rarity."



I Digital Label Printing Press "AccurioLabel 400" Wins Multiple Design Awards

The high-speed digital label printing press "AccurioLabel 400" has won the "Winner" award in the "Industry" category of the international design award "German Design Award 2024." It also won the "Nippon Brand Prize" under the Machine Design Award IDEA. This product is the top model in the AccurioLabel series of digital label printing press, achieving unprecedented operational efficiency even in high-volume areas through high-speed printing, extended continuous printing length, and process automation.



I Design Analysis Service "EXplainable KANSEI" Technology Wins Best Paper Award at IoT-AI 2024 International Conference

A paper on "brand identity analysis technology through the integration of AI and neuroscience", which is employed in our design analysis service "EXplainable KANSEI," won the Best Paper Award at the international conference "IoT-AI 2024".

IoT-AI is an international conference on the integration and application of the Internet of Things (IoT) and artificial intelligence (AI), and covers a wide range of topics from basic research to social implementation of AI. Our technology was selected as the most innovative and influential among research presentations at IoT-AI 2024.

EXplainable KANSEI is an online service that visualizes and quantitatively analyzes human sensibility towards design by integrating sensibility brain engineering with our proprietary imaging analysis. It can optimize designs for packages, stores, websites, etc. in a way that leads to purchasing activities, and has already been used by 150 companies or more.

The technology related to this service is protected by patent rights (e.g., Japanese Patent No. 7255751), and the name "EXplainable 感性" is protected by a trademark right (Japanese Trademark No. 6543578). Recognizing the creation and acquisition of such intellectual property rights are essential investments for business growth and strengthening profitability, we will continue to actively engage in intellectual property activities.

【Details of the award-winning paper can be found [here](#)】

Data Section

Major Data for 5 years

| (Million of yen) | FY2019 | FY2020 | FY2021 | FY2022 | FY2023 |
|--|---------------|---------------|---------------|---------------|---------------|
| Revenue | 996,101 | 863,381 | 911,426 | 1,130,397 | 1,159,999 |
| Business Contribution Profit *1 | 23,250 | -15,018 | -12,154 | 29,739 | 26,019 |
| R&D Expenses | 74,040 | 65,034 | 62,678 | 63,894 | 65,101 |
| Number of Patents Owned | 20,453 | 19,814 | 19,737 | 19,841 | 19,787 |
| In Japan | 11,757 | 11,083 | 11,174 | 11,378 | 11,573 |
| Overseas | 8,696 | 8,731 | 8,563 | 8,463 | 8,214 |
| Number of Patents Acquired | 2,198 | 1,850 | 1,602 | 1,531 | 1,351 |
| In Japan | 1,226 | 1,234 | 1,163 | 1,158 | 1,037 |
| Ranking Among Japanese Corporations *2 | 19 | 11 | 15 | 19 | 20 |
| Overseas | 972 | 616 | 439 | 373 | 314 |
| Ranking Among Japanese Corporations in Number of Patents Acquired in the US *3 | 24 | 22 | 33 | 32 | 44 |
| Rate of Requests for Examination | 64.5% | 82.0% | 83.7% | 81.9% | 66.9% |
| Rate of Patent Grants Decided | 83.0% | 76.4% | 78.6% | 64.8% | 73.7% |

*1 Original index of our Company, the profit subtracted sales cost, SG&A from revenue

*2 Ranking by number of patents acquired based on information in the Japan Patent Office Annual Report 2024 published by the Japan Patent Office.

*3 Ranking estimated from information in Intellectual Property Owners Association Top 300 Patent Owners.

• IFRS Standards

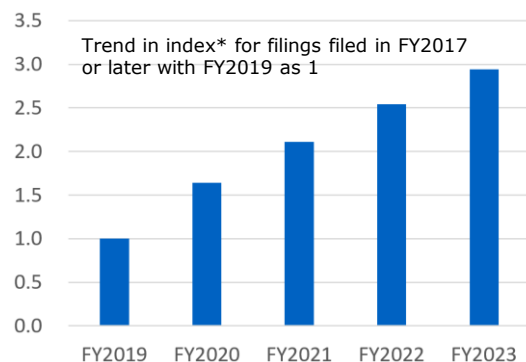
• Number of Patents Owned: In Japan = Japanese patents; Overseas = US and Chinese patents

• Number of Patents Acquired: In Japan = Japanese patents; Overseas = US and Chinese patents

• Rate of Requests for Examination = Number of requests for examination / Number of cases with examination request deadline date within the fiscal year

• Rate of Patent Grants Decided = Number of patent grants decided / (Number of patent grants decided + Number of grants denied + Number of cases withdrawn after first action or abandoned)

For FY2023, the discontinued operation (Precision Medicine business) is included.



*The value obtained by dividing the right holder score provided by Patent Result Co., Ltd.'s "Biz Cruncher" by the number of active patents.

Our company owns approximately 20,000 patents in Japan and overseas, which is a very large patent portfolio in light of our sales and asset size.

In addition to the number of patents, we are also focusing on improving the quality of our patents. The graph on the lower left shows the trend of the value obtained by dividing the right holder score, provided by a commercially available patent analysis tool, by the number of our active patents. This data shows that the value of our patents has steadily increased over the past five years.

We will continue to make every effort to build an intellectual property portfolio that contributes to business growth.

[Column] Our IP Landscape

To make the IP Landscape more accessible to our employees and to help them have a concrete image of its utilization, we have published explanations and analysis samples of the IP Landscape on our internal website. This is intended to further raise awareness among our employees and ensure that they do not miss out on any opportunities to make timely use of the IP Landscape.

In addition, to improve the quality and productivity of the IP Landscape, we conduct post-report reviews and obtain and analyze feedbacks from requesters for all cases to identify points for improvement in our report content. We then take measures to address the issues and work towards realizing a more sophisticated IP Landscape.



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