ANNUAL REPORT 2023

Korean Intellectual Property Office

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ANNUAL REPORT
2023

A Message from the Commissioner

> KIPO will continue to strive for intellectual property innovation to lead the digital transformation era

Recent advancements in new technologies such as semiconductors and artificial intelligence (AI) have accelerated the pace of digital transformation. Also, the growing competition for technological supremacy and rising protectionism has increased the influence of technology development on industries and the economy. Therefore, continuous innovation of the intellectual property (IP) system is essential for new technologies and designs to be properly safeguarded and for an environment to be created where fair competition is ensured. As the Republic of Korea's main authority on industrial property, encompassing patents, utility models, trademarks and designs, the Korean Intellectual Property Office (KIPO) is committed to improving IP examination and trial services, strengthening IP protection, and supporting the creation and utilization of high-quality IP. In particular , throughout 2023, we have prioritized enhancing our infrastructure to better support innovation, ensuring that IP plays a pivotal role in the growth of enterprises.

To begin with, KIPO has strived to enhance the quality of its examination and trial administration as well as improve user-centered IP application services. In April 2023, we implemented a novel approach by recruiting retired semiconductor professionals to leverage their expertise as examiners and by establishing a dedicated bureau for semiconductor examination. These initiatives aim to facilitate rapid and accurate patent examinations in the semiconductor sector, a foundational
field of the Fourth Industrial Revolution. Additionally, we have begun implementation of a “Digital Patent Trial System" that incorporates AI technology to streamline the trial and appeal process. This system will be gradually established over three years (2023-2025) and will provide faster, more accurate, and more convenient trial administrative services for its users.

Secondly, KIPO has focused its endeavors to fortify an effective IP protection system that supports innovation and economic growth. Recognizing the vulnerability of small and medium-sized enterprises (SMEs) and universities/public research institutes in IP protection, KIPO has introduced “IP-MIX Strategy Consulting” and expanded customized legal and expert consultations to prevent the misappropriation of technologies and trade secrets. These enhanced services aid in the strategic use
of IP rights and the better protection of core technologies. Moreover, the release of the "2023 Anti-Counterfeiting Technology Guidebook" will help companies combat counterfeit products by effectively using the latest technologies. In recognition of these efforts, the Republic of Korea's ranking in IP protection rose by nine places in the 2023 World Competitiveness Yearbook by the International Institute for Management Development (IMD). Furthermore, KIPO initiated the issuance of a INTERPOL Purple Notice concerning new criminal methods related to design infringement which has been shared with Interpol’s 196 member countries. This marks the first time a Purple Notice has been issued in the field of industrial property rights, reinforcing comprehensive IP protection efforts domestically and abroad.

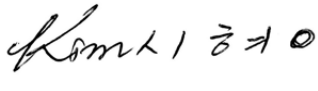
Thirdly, in alignment with the Republic of Korea’s “Special Act on Fostering National Strategic Technologies” passed in February 2023, mandating the integration of IP strategies in research and development (IP-R&D), KIPO developed and distributed “IP-R&D Guidelines” to help R&D institutions strategically create and utilize IP in their research activities. Also, tailored patent strategies were devised for R&D institutions related to national strategic technologies. Additionally, we opened a new Patent Statistics Center to better understand the value and economic impact of IP and established the IP Valuation Management Center to ensure that the true value of IP is recognized. These measures will foster the creation and utilization of high-quality IP as a catalyst for national development.

Lastly, to advance global IP standards, KIPO has deepened its collaborative efforts on the international stage. In January 2023, the Director General of the World Intellectual Property Organization Daren Tang visited the Republic of Korea to discuss capacity-building initiatives for developing countries under the Funds-in-Trust KIPO and signed an MOU for the operation of the Master’s Degree Program in Intellectual Property and Development Policy (MIPD) which was jointly designed by WIPO and the Republic of Korea’s government. This strengthened cooperation underscores our commitment to the advancement of the global IP community. As one of the five leading patent offices (IP5), KIPO also engaged international discussions on the role of IP in addressing climate change and has been approved to lead the KIPO-proposed project on the inventorship of AI-generated inventions. Additionally, KIPO successfully carried out its duties as chair of the Trademark 5 (TM5) and Industrial Design 5 (ID5) meetings in 2023 and facilitated cooperative project that advance and harmonize international norms.

Moving forward, KIPO will remain dedicated to enhancing expertise in examinations and trials, improving convenience for users, and building an IP system that adapts to the rapidly changing global environment driven by digital transformation.

I hope the publication of the 2023 Annual Report provides you with clear and comprehensive insight into KIPO’s recent activities and strategic vision for the future.

KIM Shi-Hyeong | Acting Commissioner & Vice Commissioner



Innovation

KIPO fosters IP Innovation through fast services with reliable quality.

Creative ideas have the power to change the world. KIPO continues to provide timely, accurate, and innovative IP examination services to ensure that ideas are adequately protected as IPR.

Premium Examination Services

KIPO continually aims to provide high-quality, customer-oriented, and fast examination services by raising the quality of IP administration, improving examination systems, and reducing first office action pendency.

In 2023, the average first office action pendency was 16.1 months for patents and utility models, 13.1 months for trademarks, and 4.0 months for industrial designs.

To provide timely registration of rights and accommodate the IP strategies of our users, patent and utility model examinations have three tracks: regular examination, accelerated examination, and customer-deferred examination. Trademark and industrial design examinations have two tracks: regular examination and accelerated examination.

◂ AI Technology
A new future using AI technology is coming.

Competitiveness

KIPO increases its IP competitiveness by maintaining the highest number of resident patent applications per both GDP and population.

In this era of creative economies, IPRs are the core of competent business strategies.
KIPO is dedicated to establishing a competitive and rewarding IP system by transforming novel ideas into strong IPRs.

IP Competitiveness

Top Global Ranking

According to WIPO's World IP Indicator unveiled in 2023, the ROK ranks 1st worldwide for having the highest number of national patent and PCT patent applications per PPP$ GDP.

IPR Applications

In 2023, we received a preliminary total of 587,526 applications for patents, utility models, industrial designs, and trademarks. Out of that number, 78,125 applications were filed by non-residents.

PCT Applications

The number of PCT applications from the ROK has continually grown every year. We have the 4th largest amount of PCT applications by country of origin. There were 22,166 PCT applications in total for 2023 which is a 1.1% increase from 2022. The Korean language is also the 4th most commonly used language as an official PCT publication language (source: WIPO IP Statistics Data Center).

◂ Starfield Library (Suwon)

An innovative library with an open-concept design, featuring towering bookshelves and a diverse collection of over 50,000 books.

Harmonization

KIPO collaborates with key national allies to create a global community that appropriately values and rewards inventions.

Cooperation is fundamental to creating an environment where IPRs are promptly acquired and firmly protected for stakeholders. KIPO engages in activities that advance the global IP systems as it works to increase the value of IP.

Worldwide IP Collaboration

Global Cooperation Forums

Taking on the role as one of the world's leading IP offices, KIPO engages in cooperation forums with other leading IP offices that contribute to harmonizing global IP systems, such as the IP5 for patents, the TM5 for trademarks, and the ID5 for industrial designs.

Patent Prosecution Highway (PPH) with 38 Countries & Regions

KIPO works with countries and regions around the world under the PPH for reducing the time and costs required to obtain patent rights overseas. As of 2023, the PPH has been implemented with 38 countries and regions.

- PPH participants: Australia, Austria, Brazil, Canada, Chile, China, Colombia, Denmark, EAPO, EPO, Estonia, Finland, France, Germany, Hungary, Iceland, Indonesia, Israel, Japan, Malaysia, Mexico, New Zealand, Norway, NPI, Peru, Philippines, Poland, Portugal, Russia, Saudi Arabia, Singapore, Spain, Sweden, TIPO, UK, USA, Vietnam and Visegrad Patent Institute

87 IP-Sharing Projects

KIPO implements IP-Sharing projects to share our gained knowledge of rapid development and to help bridge the IP divide among developed and developing countries. These projects aim to help create cost efficient and sustainable appropriate technology and brand development for improving the quality of life and income of local communities.

Funds-In-Trust (FIT) KIPO

Jointly undertaken in collaboration between KIPO and WIPO, the FIT KIPO is applied towards projects that support developing countries and strengthen the global IP system through economic, social, and cultural development. For the continued operation of the FIT KIPO, Korea has contributed about 14.9 million Swiss francs in total since 2004.

◂ Songdo International City (Incheon)
The landscape beautifully blends traditional Korean hanok architecture with modern urban structures, creating a unique and harmonious atmosphere.

2023 Highlights

Jan.

16 Korea-UAE MOU on Reinforced Cooperation in the Field of IP

27 Patent Statistics Center Opening Ceremony

Feb.

07~11 WIPO Director General's Visit to the ROK

09 13th International IP Protection Conference

10 KIPO-WIPO Roundtable with Youth and Women-led Innovative SMEs

Mar.

07 MOU on the Public Safety Invention Challenge

Apr.

11 Semiconductor Examination Bureau Launch at KIPO

28 Korea-U.S. MOU on Strengthening Cluster Partnership

May.

12 58th Invention Day

31 KIPO-JPO Heads Meeting

Jun.

14~15 IP5 Heads Meeting

15 Korea-Qatar MOU on Bilateral Cooperation in IP

Jul.

05~07 64th WIPO General Assembly

20 Korea International Women's Invention Expo

Aug.

03~05 Youth Invention Festival

21~25 Korea-Uzbekistan Heads of IP Offices Meeting

Sep.

05 Korea-ASEAN Heads of IP Offices Meeting

11 TM5/ID5 Annual Meeting

Oct.

20 KIPO-UAE High-Level Meeting

22 KIPO-SAIP Bilateral Meeting

25 KIPO-Qatar MOU on Comprehensive Cooperation in IP

Nov.

01~04 Korea Invention Patent Exhibition

30 TRIPO Heads Meeting

Dec.

08 IP Startup Demo Day

18 IP-R&D Conference

2023 IP Trends

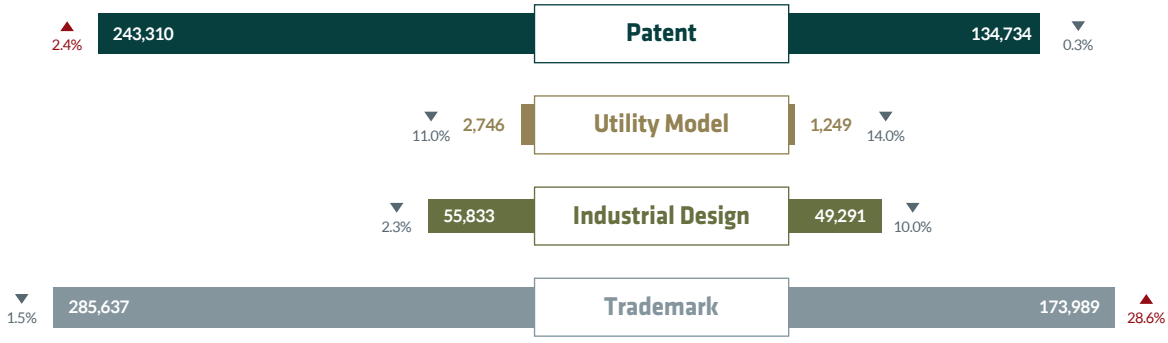
Overview of Key Data in 2023

Domestic IPR Applications

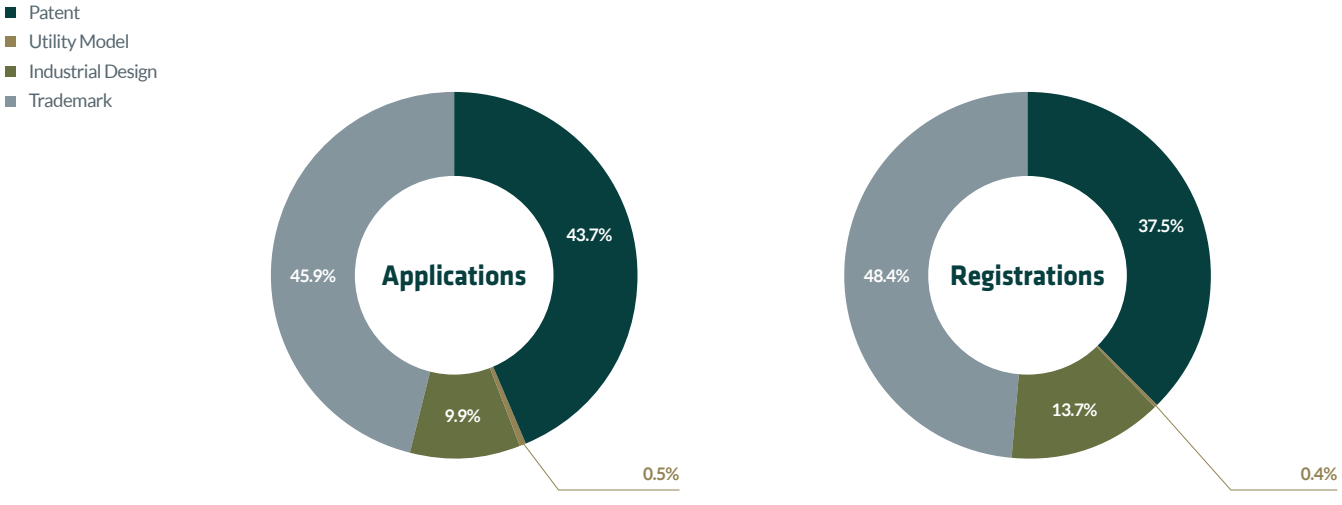
(unit: cases)

Applications	587,526	▲ 0.03%

Registrations	359,263	▲ 10.0%



• **Ratio by IPRs**

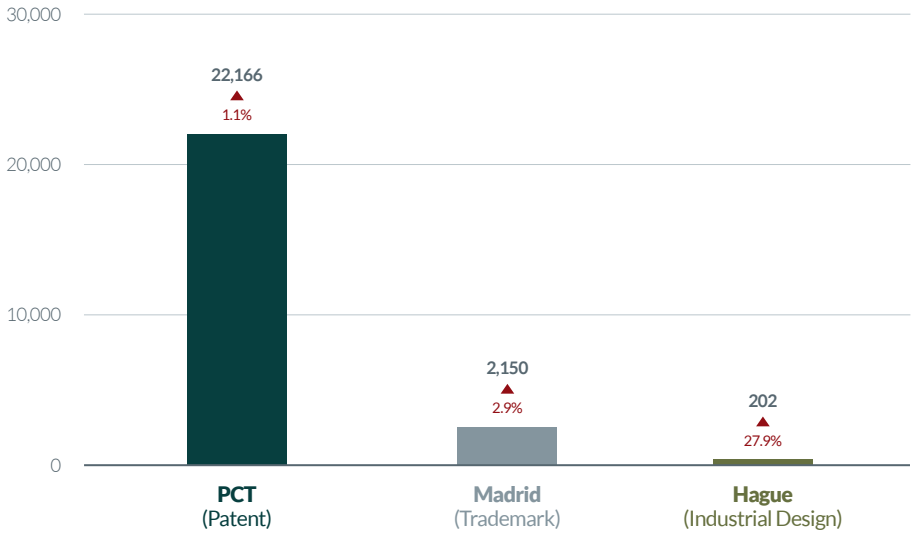


International IPR Applications

• **KIPO as the Receiving Office (International Phase)**

(unit: cases)

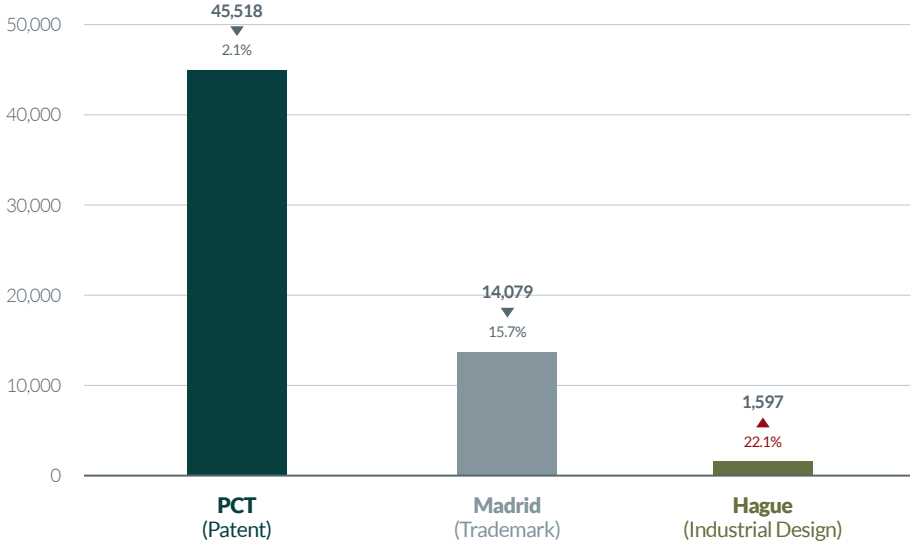
24,518 ▲ 1.0%



• **KIPO as the Designated Office (National Phase)**

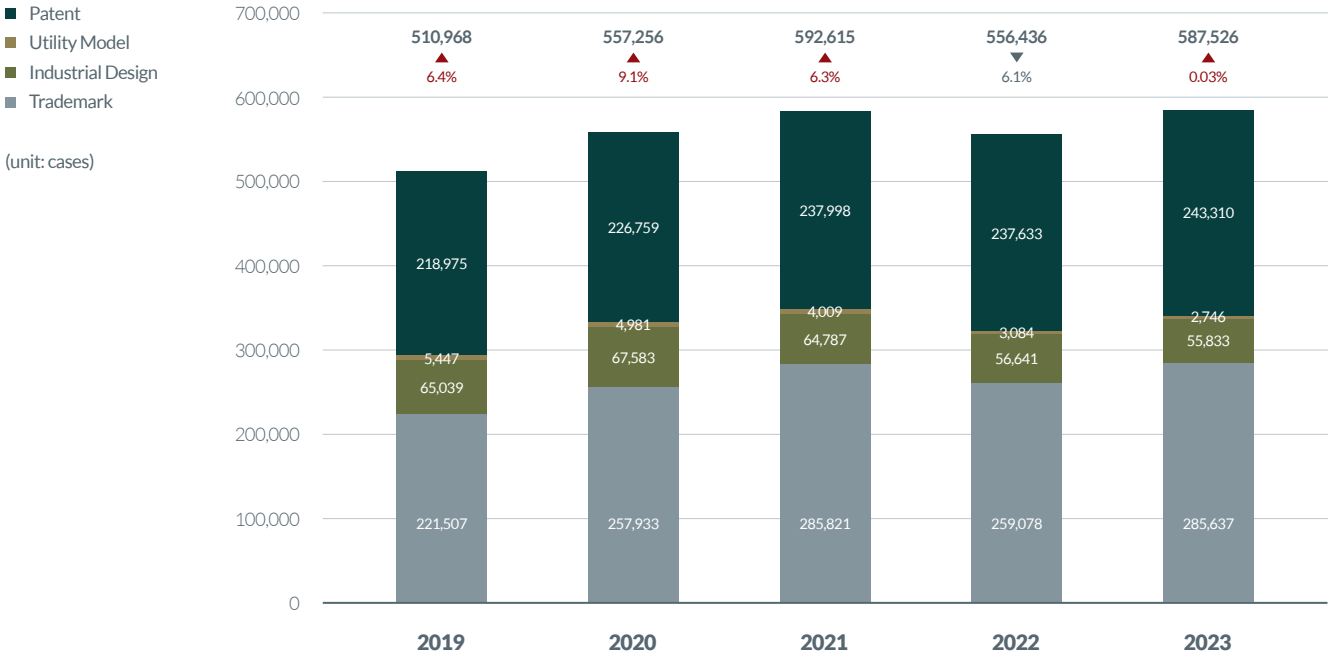
(unit: cases)

61,224 ▼ 5.2%

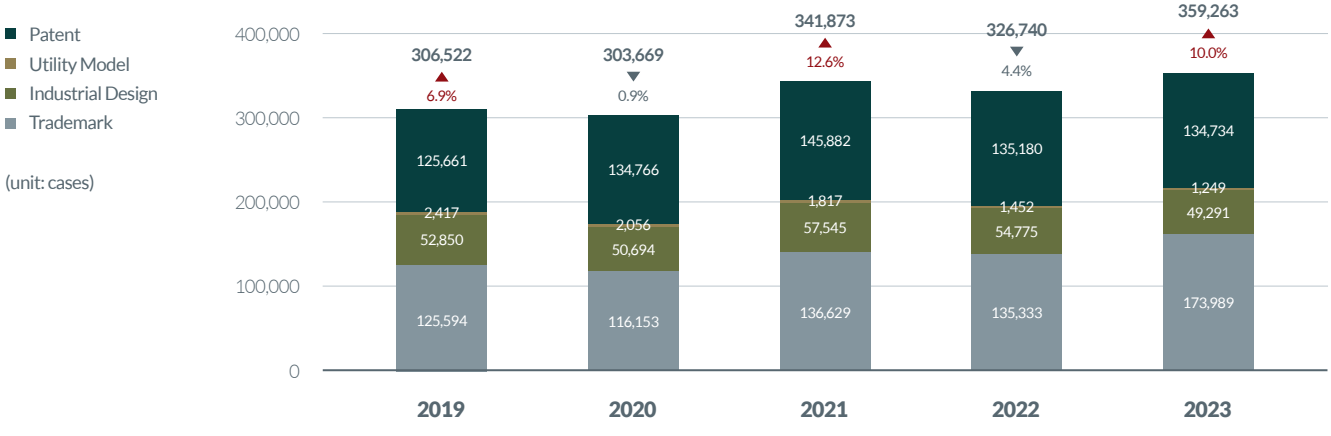


IPR Applications and Registrations by Year

IPR Applications

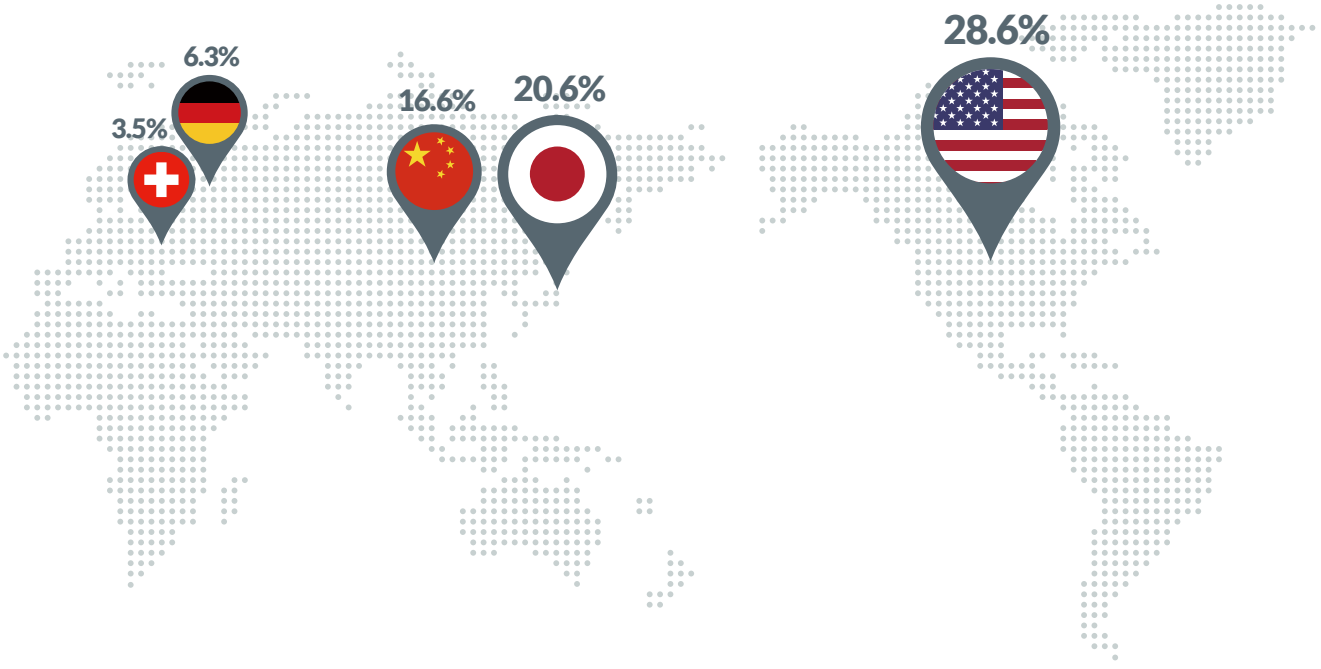


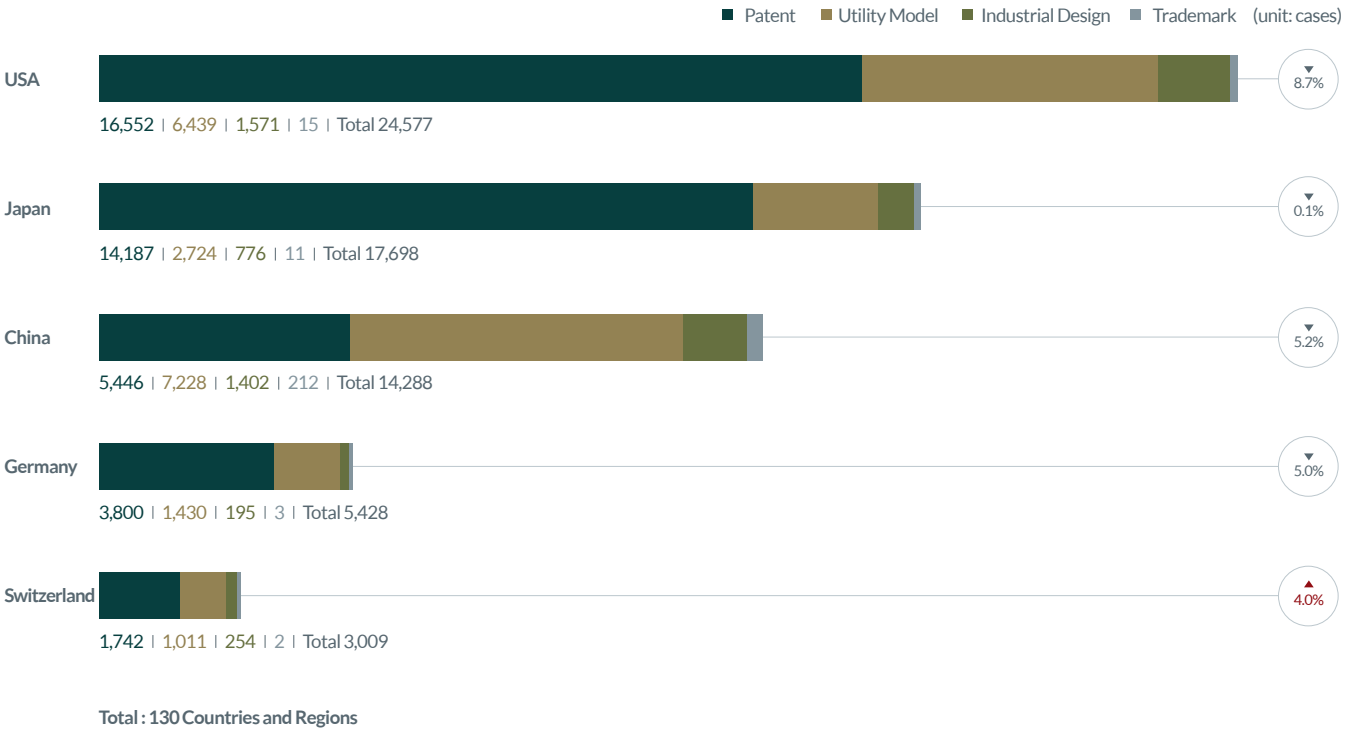
IPR Registrations



Non-resident IPR Applications filed at KIPO

Top 5 Countries/Regions





Total : 130 Countries and Regions

Top IPR Filing Domestic & Foreign Companies

Patent

	1st.	2nd.	3rd.	4th.	5th.
Domestic	SAMSUNG ELECTRONICS **12,563** 11,421 ▲10.0%	LG Electronics **4,182** 4,721 ▼11.4%	LG Energy Solution **3,741** 3,384 ▲10.5%	SAMSUNG DISPLAY **3,444** 3,145 ▲9.5%	HYUNDAI **3,119** 2,990 ▲4.3%
Foreign	QUALCOMM® **1,433** 857 ▲67.2%%	APPLIED MATERIALS **781** 683 ▲14.3%	SEL **619** 608 ▲1.8%	TEL TOKYO ELECTRON **599** 707 ▼15.3%	Nitto **479** 505 ▼5.1%

Industrial Design

	1st.	2nd.	3rd.	4th.	5th.
Domestic	LG Electronics **682** 718 ▼5.0%	CJ **565** 433 ▲30.5%	SAMSUNG ELECTRONICS **360** 443 ▼18.7%	HYUNDAI **333** 223 ▲49.3%	OSSTEM IMPLANT **272** 115 ▲137%
Foreign	 **434** 304 ▲42.8%	LOUIS VUITTON **87** 65 ▲33.8%	Google **79** 44 ▲79.5%	Sony Interactive Entertainment **63** 9 ▲600%	HERMÈS PARIS **61** 32 ▲90.6%

Trademark

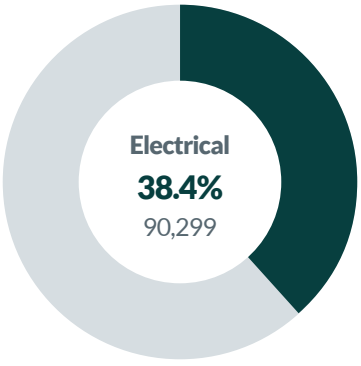
	1st.	2nd.	3rd.	4th.	5th.
Domestic	LG Household & Health Care **779** 864 ▼9.8%	SAMSUNG C&T **680** 184 ▲270%	SHINSEGAE **487** 183 ▲166%	CJ **391** 313 ▲24.9%	KOREA GINSENG CORP **307** 125 ▲146%
Foreign	L'ORÉAL PARIS **98** 60 ▲63.3%	Mizuno **67** 21 ▲219%	 **66** 50 ▲32.0%	PHILIP MORRIS **63** 39 ▲61.5%	Boehringer Ingelheim **56** 25 ▲124%

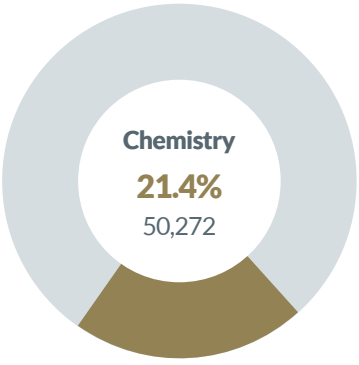
■ 2023 ■ 2022 | ▲▼ Year-over-year comparison (unit: cases)

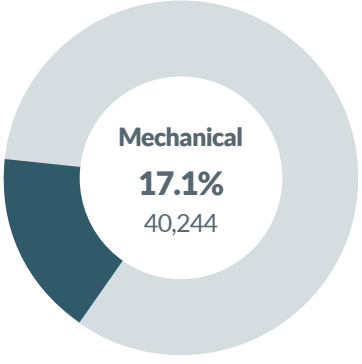
Patent Applications by Technology

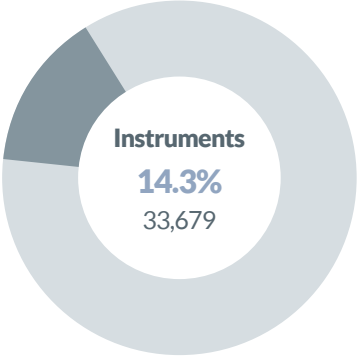
Top 5 WIPO Technology Fields

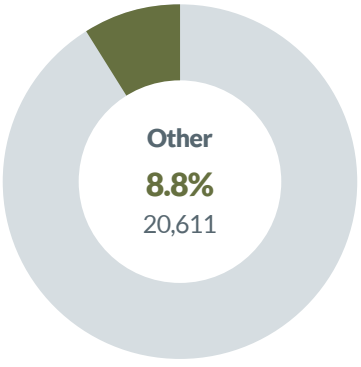
(unit: cases)

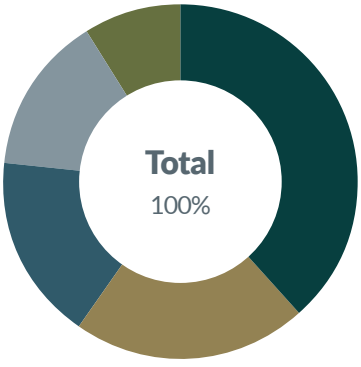






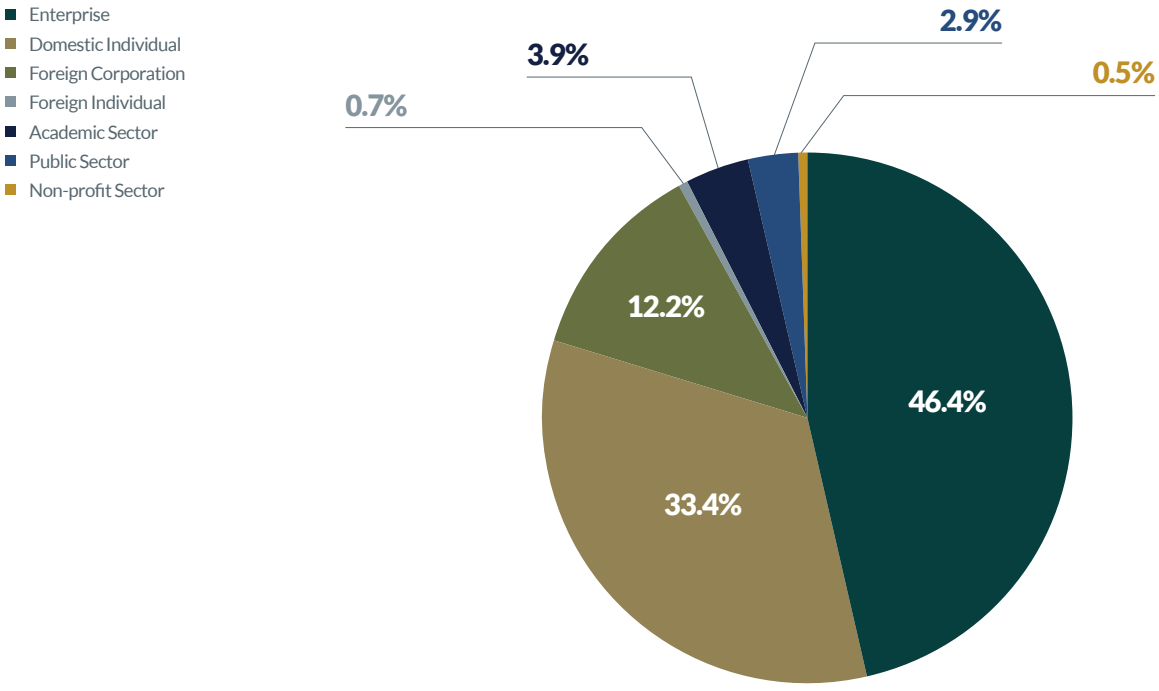


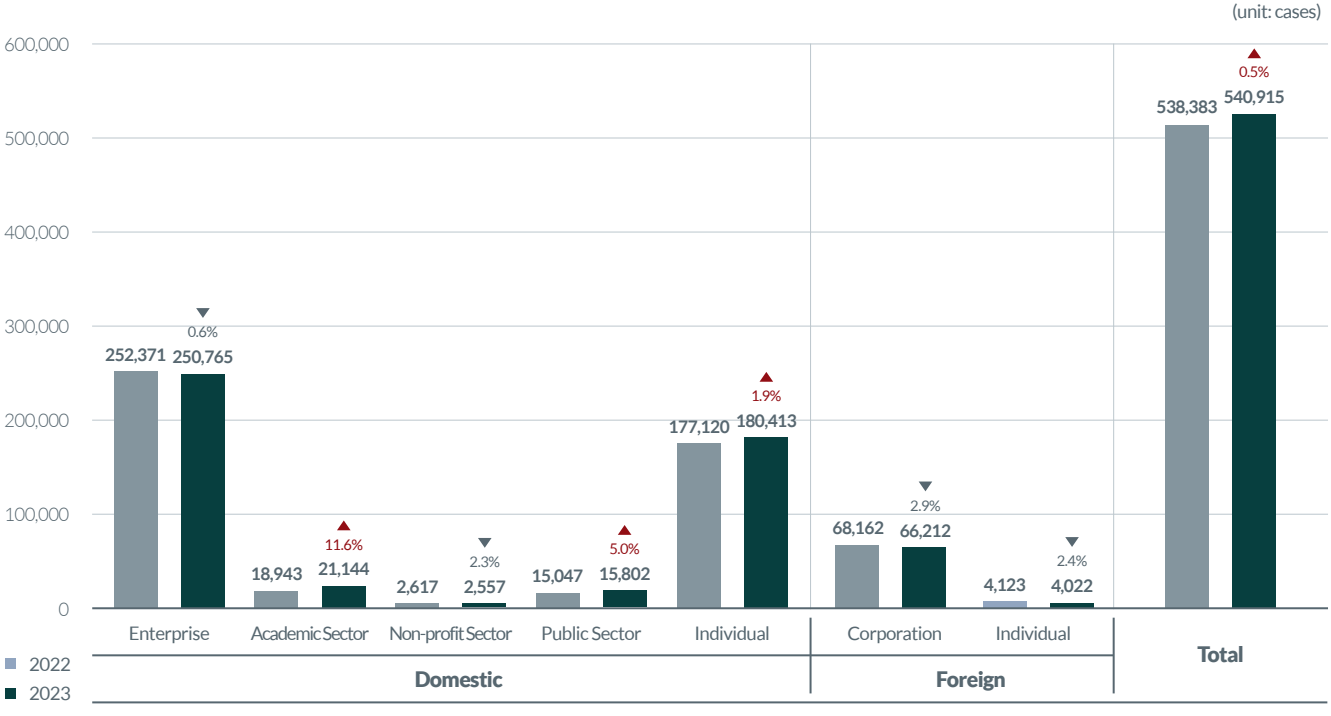




Applications by Applicant Type

Ratio of Applications According to Applicant Type

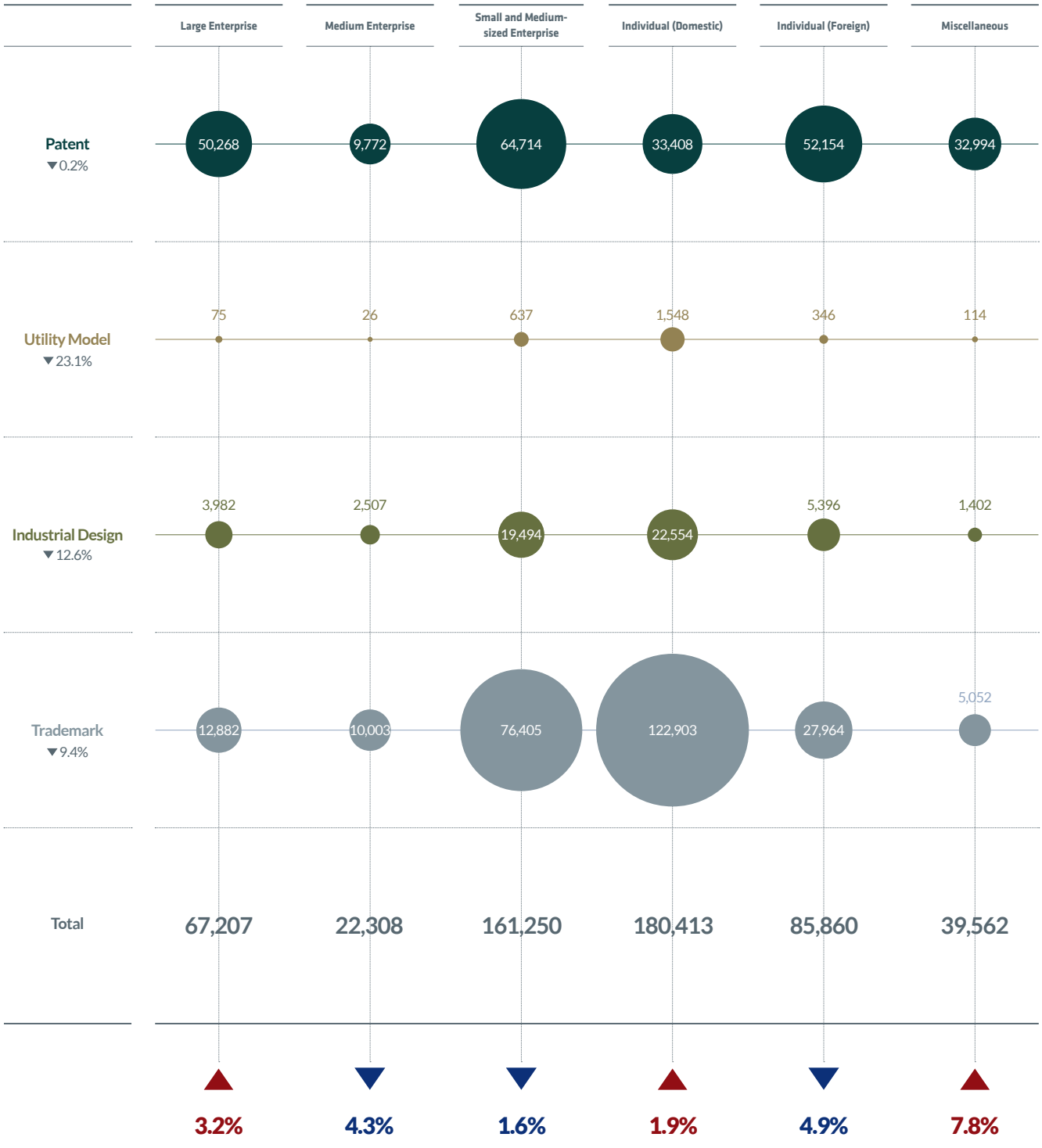




※ Not Included: Miscellaneous (uncategorized applicant type, domestic filing of international designs and trademarks) 15,685 cases

Applications by Applicant Type for Each IPR

(unit: cases)



Improving the IP System

AI-based User Services

AI technology is utilized to enhance IP administration and improve user convenience.

Enhancement of Patent Examination Capabilities in the Semiconductor Field

Creative Administration Division

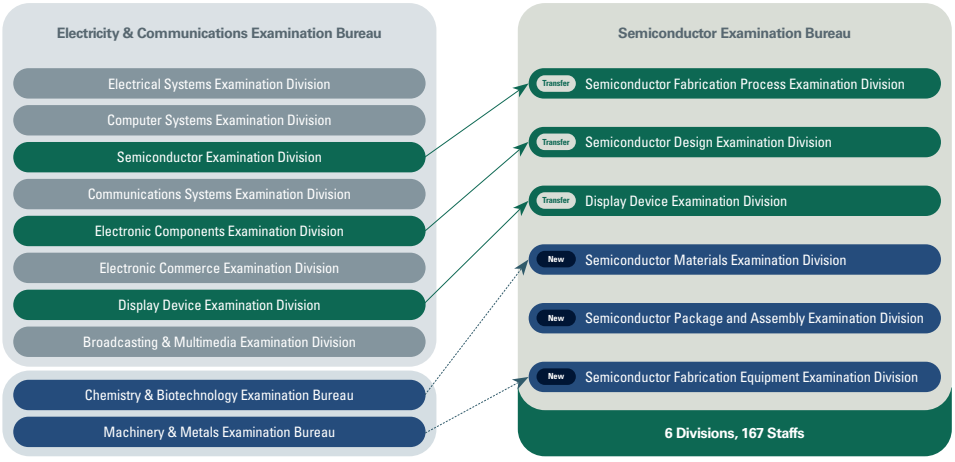
Amidst the global competition for technological supremacy, the Korean Intellectual Property Office (KIPO) has implemented a new approach to secure this competitive edge. Focusing on the field of semiconductors, KIPO began employing retired semiconductor experts and professionals from the private sector to conduct patent examinations. Doing so leverages their accumulated knowledge and field experience to conduct proficient patent examinations and prevents core technologies from being leaked due to overseas employment opportunities. Furthermore, a Semiconductor Examination Bureau was newly organized within KIPO to help enhance examination capabilities and create synergy with the addition of new personnel.

In total, KIPO recruited 69 semiconductor experts from the private sector as patent examiners to perform fast and accurate examinations. Final candidates were chosen with consideration to the current volume of patent applications, the characteristics of semiconductor technologies, and industry trends across various fields (i.e. semiconductor design, manufacturing processes, post-processing, substrate transport and processing equipment, display materials, OLED processes and devices, and specialized display technologies).

The first phase of recruitment began in March 2023 and resulted in the hire of 30 experts. After a successful first phase of recruitment, the second phase resulted in 39 additional experts being chosen out of 191 applicants. This unique approach of patent examiner recruitment has been highly praised as a novel attempt by the government to protect advanced technologies and utilize the expertise of private-sector veteran professional in public service.

Furthermore, KIPO newly established the Semiconductor Examination Bureau in April 2023 to help improve both efficiency and quality of semiconductor technology examination. The Bureau is comprised of six divisions with 167 members and addresses the previous issue of semiconductor examiners dispersed across multiple divisions. Three divisions were transferred from the Electricity & Communications Examination Bureau, three new divisions were created, and

Establishment of the Semiconductor Examination Bureau



several examiners were transferred from other chemical (materials) and mechanical (equipment) examination bureaus.

This setup allows for balanced distribution of existing and new examiners across divisions and helps facilitates communication for better examination processes (i.e. three-person consultative examinations, etc.).

Through efforts such as optimizing the rich experience of retired professionals in patent examination and newly establishing a specialized Semiconductor Examination Bureau, KIPO expects to enable more timely examinations across all semiconductor sectors, including manufacturing and assembly processes, materials, and equipments. This will ultimately lead to faster and accurate examinations and allow companies to secure their developed technologies and gain a competitive edge in the market.

Amendments to Improve Design Application Convenience

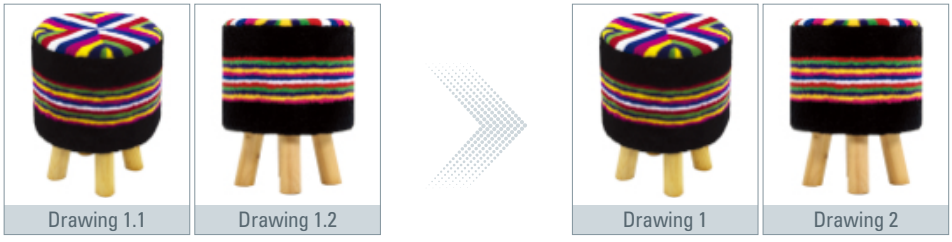
Design Examination Policy Division

To obtain registration of designs, an application must be submitted to KIPO in accordance with the enforcement rules of the Design Protection Act and undergo the examination process. However, applicants have voiced concerns regarding the complexity and difficulty of representing designs in the application documents and the description methods of drawings.

Therefore, to improve applicant convenience, KIPO implemented amendments to the Design Protection Act in December 2023. These amendments revise the requirements for the design application, especially by simplifying the drawing identification system, revising permissible file formats, and unifying the field for image design usage.

Firstly, the identification number system for design drawings attached to the application has been simplified from an identification system with decimals to an identification system with just whole numbers to prevent unnecessary errors by applicants.

Simplification of Drawing Identification Number System



Drawing 1.1 | Drawing 1.2 → Drawing 1 | Drawing 2

Also, the format for 3D computer modeling files, which can be submitted instead of drawings, has also been significantly revised. With this amendment, IGES file format will be maintained due to its high popularity among applicants, however, the other formats (i.e. 3DS, DWG, DWF and 3DM) will be replaced with STP, STL, and OBJ for their higher stability and compatibility.

Revision of 3D Computer Modeling File Formats

2D Image Drawing | 3D Model Drawing

Lastly, the mandatory field for "the purpose of image design" has been integrated with the existing "description of the design" field to eliminate unnecessary redundancy. This simplifies the application process and encourages the filing of image design applications.

Introduction of Trademark Consent Agreement

Trademark Examination Policy Division

Under KIPO's system, applications for trademarks that are identical or similar to another party's previously registered or filed trademark (referred to as the "senior mark") is considered grounds for rejection. Statistical data in 2022 indicated this to be the reason for the rejection of over 40% of all trademark applications, with about 82% of these filed by small and medium-sized enterprises (SMEs) and small business owners. A trademark would be rejected even when the owner of the conflicting senior mark gave consent for co-existence. Therefore, there had been a call to expand the scope of allowable trademark registrations to reflect actual trade practices such as this.

KIPO has initiated the process to introduce "Trademark Consent Agreement" which allows registration and use of trademarks that are identical or similar to co-exist with senior marks, provided that there is consent from the prior registrant or applicant. However, to protect consumers, applications will be refused for cases where the trademarks are entirely identical for the same goods and registration can be canceled if any of the co-existing trademarks are later used with unfair competition practices that lead to consumer confusion or deception.

By obtaining prior consent from the owner of the senior marks, small businesses and SMEs will be able to successfully register and securely use their intended trademarks and prevent potential trademark disputes for using similar trademarks. This system goes into effect in May 2024. It will also retroactively apply to applications filed before the implementation date as long as their registration status is finalized after the time of enactment.

In addition, several other changes have been made to KIPO's trademark system, such as the refund of renewal fees if the trademark right expires before the start of the new duration, automatic recognition of the right of priority for amended applications, and the recognition of the division of international trademarks. These are expected to contribute to protecting applicants' rights and improving convenience.

Improvement of Examiner-Applicant Communication for IP Examination

KIPO places great value on enhancing the convenience of its services for IP users. Therefore, in response to the increasing demand for user-friendly services, IT technologies are being utilized to upgrade KIPO customer services, particularly to improve ease of contact and communication between examiners and applicants regarding the examination process. In this regard, KIPO has introduced an "Online Examination Response Reservation System" and improved "Chatbot" consultation features which will allow high quality correspondence with focus on the convenience of its users.

Patent Legal Administration Division

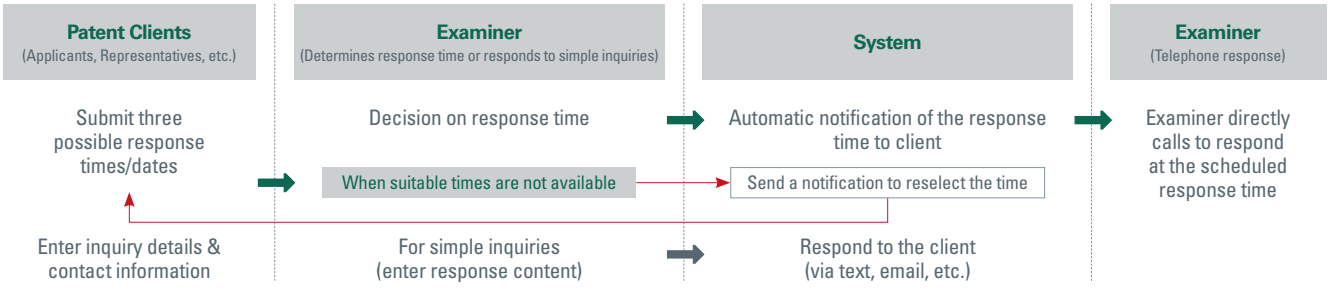
Introduction of the "Online Examination Response Reservation System"

As part of the ROK's initiative for active administration in the field of patent examination, KIPO officially launched an "Online Examination Response Reservation System" starting in July 2023. This system intends for an examiner to respond to an applicant's inquiry by contacting them via phone call on a designated date. When submitting an inquiry, the applicant will indicate the content of the notification of their inquiry, a contact number, and preferred times when they can be reached. The service is available through KIPO's electronic application platform "Patent-ro" (www.patent.go.kr).

Not only does this system provide more convenience for its users, but it also allows for an examiner to provide more precise and high-quality answers by sufficiently reviewing the inquiry before responding to the applicant. For simpler inquiries, the response can also sent via text message and email, making communication with examiners more convenient.

There are also future plans to increase accessibility through the introduction of a QR code on application documents. By diversifying and improving examination-related communication tools from the standpoint of customers, KIPO will strive to maintain in-time communication between examiners and applicants so that they are able to obtain strong IPRs in a timely manner.

Online Examination Response Reservation System



Industrial Property Registration Division

Improvement of Chatbot Consultation

In order to meet the increasing demand for consultation services, KIPO has been operating an automated chatbot service since 2022 that can provide services 24 hours/365 days. This service was launched in collaboration with the Ministry of the Interior and Safety in the effort to enhance the efficiency of IP consulting services for the public. With more people relying on chatbots over other methods of consultations, KIPO decided to further improve its services for enhanced user accessibility and convenience.

Main improvements include:
1) Improving accessibility by expanding the number of chatbot access points from two to five websites (i.e. Patent Customer Consultation Center, Virtual Assistant Service for the Public, KIPO, Patent-ro, KIPRIS).
2) Enhancing convenience by providing shared access automated chatbot consultations and representative chat consultations.
3) Assuring the timeliness of information by updating the Q&A database to reflect recent legal and regulation amendments in real time. Also, an expert is designated to continuously monitor and check for errors and misinformation as well as supplement the chatbot's training materials to further improve the quality of the consultation service.

With the improvement to the chatbot system, there has been a significant overall increase in user engagement which is evident by number of consultation requests by increasing 128% and processed cases increasing by 145% in 2023 compared to 2022.

Enhancement of the Patent Trial System with AI and IT Technology

Industrial Property Information System Division

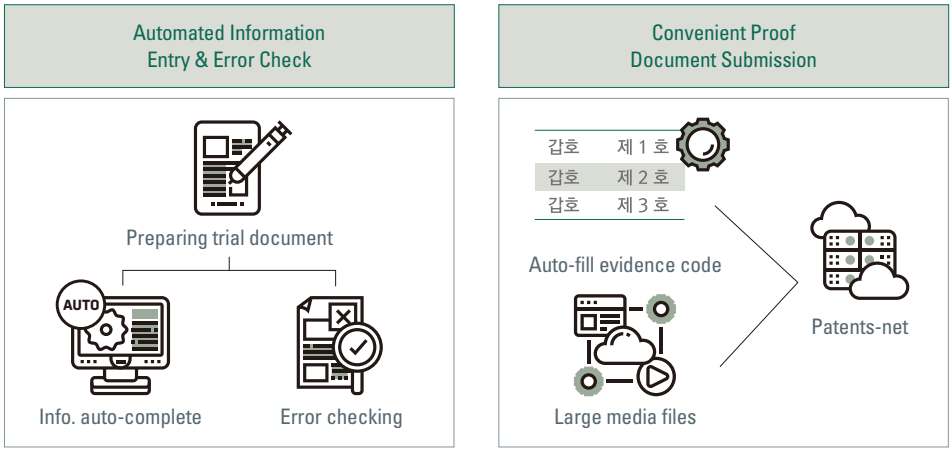
To equip itself with a trial system suitable for the digital era, KIPO implemented a three-year plan (2023 to 2025) for building a highly advanced and efficient IT system that employs artificial intelligence (AI), automation, and other new digital technologies for the formality examination and trial sectors. In 2023, focus was put on improving public services and trial procedures. KIPO's Intellectual Property Trial and Appeal Board (IPTAB) launched a "Digital Patent Trial System" by incorporating AI and IT technologies to simplify the process of filing patent trials online and introducing AI into patent trial administration. New features have been made available on the respective electronic systems for filing and submitting online forms for trials or appeals. Both petitioners and IPTAB's formality examiners will be able to complete their tasks more quickly and efficiently.

1) Improvement of Patent Trial e-Filing Service

Beginning in December 2023, KIPO's patent trial e-filing service has been improved to provide new features that will make filing or submission more concise and error-proof. The new autofill and auto-complete functions have been added so that users can fill in the fields of trial-related electronic forms more easily and correctly. First, the applicant goes through the process of verifying their identity as the rightful right holder or party to the trial case. Then, by linking with KIPO's database system, essential information will be automatically filled in such as the assigned number of the patent applicant the trial case.

Additionally, the improved services enhance user convenience by

Improvement of Patent Trial e-Filing Services



automatically filling in evidence codes when submitting proof documents which were previously required to be manually entered every time. When it comes to evidentiary documents, KIPO also made it possible for trial parties to upload multi-media files and large file sizes up to 200MB at a time. These new features help minimize non-compliance with formality requirements and reduce the chance of the parties having to make corrections or amendments later on.

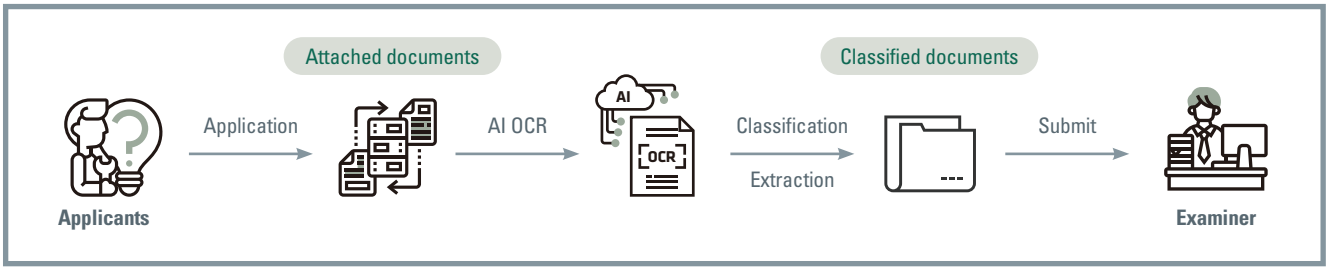
2) Automation of Trial Procedures using AI

IPTAB has also adopted AI to increase work efficiency and productivity of formality examination, enhancing the overall trial procedures. Before acceptance of a case, a formality examination is carried out for all the documents submitted by the trial parties. An examiner reviews whether the documents have met the given requirements and if the provided information is presented in a proper format or in a correct manner. However, there can be up to 171 different types of documents to check, some of which include an image file that requires manual screening.

Previously, the attached documents, which can be submitted as images, relied on manual inspection by examiners due to the inability of computers to recognize the image. KIPO has automated this process by introducing AI-powered Optical Character Recognition (OCR) technology to recognize and extract information that is necessary for examination. The use of this technology is highly anticipated to alleviate the workload of formality examiners by automatically extracting relevant information even from the images attached in the submitted documents and carrying out a preliminary review.

Upon successful operation of the AI system within the field of trial and appeal, KIPO will consider wider usage in other administrative duties, such as the handling of IP applications and registrations. KIPO will work to upgrade its IT systems across the board by making the most of cutting-edge technologies so as to provide high-quality and easy-to use services to our users.

Automation of Trial Procedures using AI



Strengthening IPR Protection

2023 Korean Wave Festival
Performers play traditional Korean drums at the 2023 Korean Wave Festival.

Protection of Trade Secrets through Customized Consultations

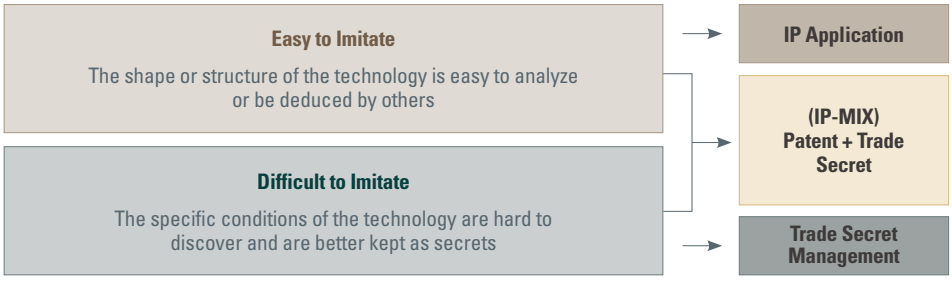
Intellectual Property Protection Policy Division

As trade secrets are valuable IP assets that give companies a competitive edge in the marketplace, KIPO has been supporting SMEs, universities, and public research institutes which have experienced difficulties to protect their trade secrets and advanced technologies. Starting in 2023, KIPO launched "IP-MIX strategy consulting" emphasizing the use of multiple forms of IP rights (i.e., patents, trademarks, copyrights, and trade secrets) for secure protection as well as expanded legal advisory support to have more comprehensive defense against misappropriation and infringement of IP.

It is particularly important to ensure protection of trade secrets because loss of their value can lead to significant financial and reputational damage, loss of competitive advantage, and potentially irreversible consequences for a company's market position. Companies without an effective strategy to sufficiently protect their technology are vulnerable to third-party misappropriation and theft of their unprotected technologies by competitors. Also, they may not be able to receive the appropriate compensation or legal remedies. In 2022, the amount of damage over 5 years caused by core technology leaked abroad is estimated to be about KRW 22 trillion (source: National Intelligence Service) and damages by SME technology leakage is about KRW 282.7 billion (source: Ministry of SMEs and Startups).

More specifically, the IP-MIX strategy consulting encourages companies to create strategies for optimal technology protection by combining trade secret protection with other IP rights, like patents or trademarks. KIPO sends technology protection experts to visit the companies for on-site consultations on how to better protect their technologies from being targeted or imitated by competitors and latecomers in the market. This integrated approach allows companies to safeguard their proprietary information through trade secret management while also

Example of IP-MIX Strategy Recommendation



securing exclusive rights through other IP mechanisms. For example, based on the characteristic of the technology, those that are easily replicable are recommended to be protected as patents, while those with aspects that are difficult to discern (e.g., temperature or pressure of a process) are recommended to be protected as trade secrets.

Moreover, KIPO is also expanding the consultation services for expert legal guidance for SMEs, universities, and public research institutes affected by trade secret leaks or infringement. Ongoing legal advice will continue to be provided by lawyers from KIPO's Trade Secret Protection Center to guide companies on possible legal remedies and response methods for trade secret theft or misappropriation. Now additionally, more comprehensive "on-site Technology Protection Consultation" will be jointly provided by both lawyers and KIPO's Tech Police officers to provide legal advice as well as guidance on reporting and investigative procedures. By collaborating with law enforcement and other authorities to address trade secret misappropriation and infringement, the partnership ensures that companies have recourse through legal avenues when dealing with theft or misappropriation of their trade secrets.

Ultimately, KIPO aims to provide a robust framework for companies to protect their IP assets with a specific focus on the integration of various forms of protection, effective trade secret management, and collaboration with enforcement authorities. Through this initiative, companies can better navigate the complexities of IP protection in a dynamic and evolving landscape and utilize trade secrets to encourage innovation and investment which fosters technological advancement and economic growth.

Publication of a Guidebook on Anti-Counterfeit Technologies

Intellectual Property Protection Policy Division

In response to damages caused by the growing number of counterfeit products both domestically and internationally, various technologies are rapidly evolving to reduce damages caused by counterfeits, such as network-based authentication systems and blockchain. However, a general lack of awareness of these anti-counterfeiting technologies and a lack of information on utilization methods have made it difficult for companies to implement them on their product.

In October 2023, KIPO published the "2023 Anti-Counterfeit Technology Guidebook" in the effort to help companies prevent and minimize damages from counterfeit products. The Guidebook includes information on the latest technologies that be used by companies to help distinguish between genuine and fake products, track the distribution history, or prevent falsification of genuine products.

The first section of the Guidebook outlines evaluation factors that need to be considered when utilizing technologies for anti-counterfeiting, including technology-specific evaluation factors (① ease of implementation, ② reliability of assessment ③ ease of use, ④ applicability ⑤ expandability) as well as general guidelines and precautions. The second section provides information on currently-known technologies used to combat counterfeit products, such as network-based authentication, genuine identification labels, physical security markings, blockchain, and digital media copy protection. Detailed explanations are included on each of their features, advantages and disadvantages, actual cases studies of utilization, and

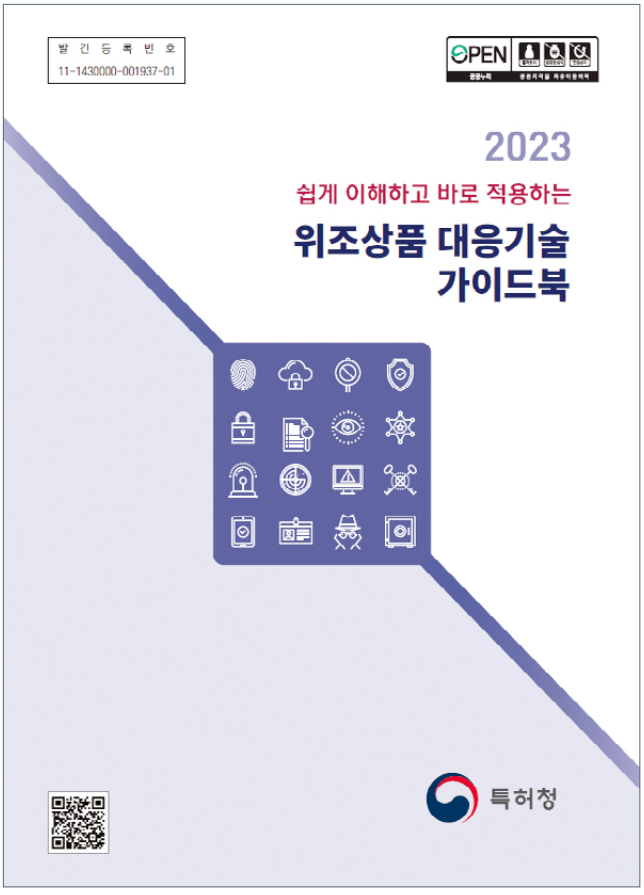
Examples of Technologies for Anti-Counterfeiting

Type	Specific Technologies
Network-Based Authentication	Long-distance remote authentication systems (RFID), Near Field Communication (NFC) technology, barcodes, QR codes, electronic seals, magnetic stripes, etc.
Genuine Identification Labels	Holograms, seals, fabric labels, tags, double printing labels, etc.
Physical Security Markings	Laser engraving, security seals, special box cuts, security films, etc.
Hidden Genuine Markings	Phrases using nanotechnology, special patterns, DNA coding, special particles, etc.
Blockchain	Transaction data shared and approved by all participants
Digital Media Copy Protection	Digital Rights Management (DRM), Automatic Content Recognition technologies, etc.

recommended industries. The final section introduces 12 companies which are public and private holders of the featured technologies. This information will help enterprises have a better chance to utilize the anti-counterfeit technologies to protect their product.

To ensure accessibility to many companies, the Guidebook has been published on KIPO's official website (www.kipo.go.kr), the Korea Trade-Investment Promotion Agency's website (www.dream.kotra.or.kr), and the Korean Intellectual Property Protection Agency's website (www.ip-navi.or.kr).

2023 Anti-Counterfeit Technology Guidebook



Issuance of the World's First Purple Notice in the Field of IP Rights

Technology & Design Police Division

The International Criminal Police Organization (INTERPOL) is the world's largest international police organization that facilitates trans-national communication and cooperation among law enforcement. In 2023, KIPO's Technology & Design Police (Tech Police) and the Korean National Police Agency were able to issue the first INTERPOL Purple Notice regarding recent forms of design infringement crimes. Especially as trans-national criminal methods become more sophisticated, it is important to engage in open communication and information sharing on a global scale.

As one of eight notices issued by INTERPOL, a "Purple Notice" is issued for the purpose of sharing and collecting information on methods of criminal operation among 196 member countries to prevent similar crimes abroad. This allows law enforcement agencies in each country to detect similar crimes early on, carry out effective investigations, and make criminal arrests related with design infringement. The notice initiated by the ROK is the world's first time a Purple Notice has been issued for crimes specifically related to IP rights.

In particular, this Purple Notice contains information on new criminal methods related to design infringement and imitation of product designs through the sale of counterfeit "loss goods." Loss goods refer to surplus units bought by brand companies from manufacturing contractors to cover potential defects. These surplus units, which are the same in quality but without the brand logo, can be then sold. In the ROK case, counterfeiters would make similar looking products with different materials to cause confusion as genuine "loss goods" and sold for a higher profit.

By issuing this Purple Notice, ROK is actively engaging in international law enforcement cooperation, which highlights the ROK's commitment to protecting IP rights on a worldwide level, even in criminal matters. The ROK will continue comprehensive efforts for global protection of IP rights and enhance information sharing on the production and distribution of counterfeits with INTERPOL to address IP infringement crimes, both domestically and internationally.

Eight Types of INTERPOL Notices

source: www.interpol.int

Rise of National Competitiveness with Improved IP Protection

Intellectual Property Protection Policy Division

Every year, the International Institute for Management Development (IMD) publishes its "World Competitiveness Yearbook" that ranks 64 nations based on economic and social indicators. In particular, the IP protection ranking is measured by the competitiveness and effectiveness of a nation's IP protection in fostering and leveraging IP assets for economic growth and innovation. In 2023, the ROK's ranking for IP protection showed a significant increase by climbing nine places from the previous year (from 37th to 28th place).

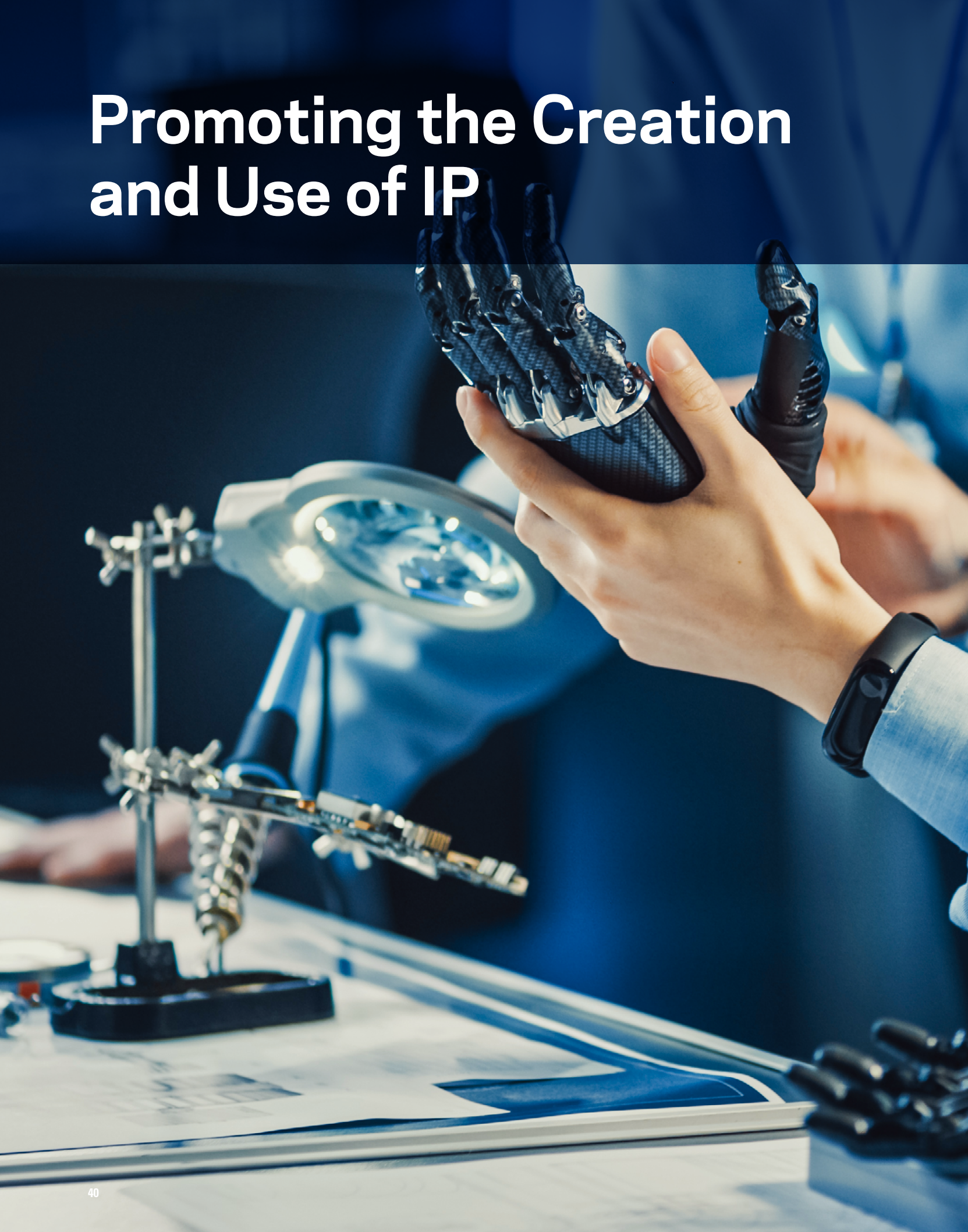
Specifically, the IMD evaluates 336 criteria under four main factors: economic performance, government efficiency, business efficiency, and infrastructure. IP protection is one of five indicators related to IP within the sub-section "scientific infrastructure" of the infrastructure sector. The ranking is made considering data such as the duration and scope of protection, enforcement measures, and penalties for infringement.

On one hand, the ROK holds top rankings for quantitative IP-related indicators, such as the number of patent applications and the number of registrations. Both of these rankings have maintained their positions at 4th place from the previous year. Also, the number of patent applications per 100,000 population has remained at 2nd place, and the number of effective patents per 100,000 population rose from 4th to 3rd place.

In contrast, IP protection had remained outside the top 30 until 2023, which indicated a need for improvement. The recent significant advancement in IP protection ranking could be attributed to the focused efforts of the ROK government. This includes increasing penalties for IP infringement and illegal transfer of technology, arresting offenders through investigation by KIPO's Tech Police, reinforcing enforcement of counterfeit goods, encouraging the use of IP dispute and resolution systems, and organizing IP protection seminars and education for businesses.

It is especially important to continually strengthen IP protection as it serves as a cornerstone of innovation, economic development, consumer protection, cultural preservation, and global trade. Through strong IP laws and robust enforcement, the rights of innovators and creators can be safeguarded and contribute to the advancement of society and the economy. KIPO will continue to do its utmost to ensure that the valuable intangible assets of companies are thoroughly protected both domestically and internationally.

Promoting the Creation and Use of IP



Strategic Use of IP in R&D

IP is strategically incorporated to optimize research and development and foster innovation.

Optimization of IP-based National R&D

Intellectual Property Creation Strategy Division

"IP-R&D" refers to the strategic integration of IP within the research and development (R&D) process that focuses on fostering innovation and ensuring that R&D outputs are protected and leveraged effectively through IP rights. Therefore, the ROK government has focused on IP-R&D as a strategic approach to building an innovative economy that raises national competitiveness while allowing sustainable and secure development.

Previously, as part of a five-year IP-R&D project (2017-2021), the ROK provided support for customized patent strategies for 1,862 R&D projects in total undertaken by industry, academia, and research institutes. Also, from 2020 to 2022, KIPO provided patent trend analysis results to be applied during the planning phase of government R&D projects. With high satisfaction from participating institutions, the expected economic effects amount to about KRW 1.38 trillion (12.3 times the cost of government support) by securing overseas patents, promoting technology transfers, and increasing royalty income. Budget savings were worth approximately KRW 301.8 billion by avoiding duplicate projects and providing specific direction to R&D.

In September 2023, the ROK implemented the "Special Act on the Development of National Strategic Technologies" which mandates the integration of IP strategies in R&D activities across government departments. This includes KIPO carrying out analysis on national strategic technology patent trends and R&D departments conducting strategic research and analysis on IP rights.

Accordingly, KIPO has begun the task of supporting IP-R&D in full force to improve the efficiency of R&D in national strategic technology fields, such as semiconductors, advanced bio, and quantum. The main methods of support include providing customized patent strategies to R&D institutions in these related fields and disseminating a "IP-R&D Implementation Guidelines."

1) Patent Strategy Support

KIPO is newly supporting the patent strategies of institutions that perform R&D for national strategic technologies. A total of 50 institutions is selected through consideration of the urgency and impact of national strategic technology development. This includes 20 institutions from innovation-leading fields (i.e., semiconductors, displays, secondary batteries, etc.); 15 from future-challenges fields (i.e., advanced bio, hydrogen, etc.); and 15 from essential-foundation fields (i.e., quantum, artificial intelligence, advanced robotics/manufacturing, etc.).

2) IP-R&D Implementation Guidelines

In December 2023, KIPO created the "IP-R&D Implementation Guidelines" for providing government departments in charge of national R&D projects with reference information to facilitate strategic research and analysis of IP rights, such as patents. The Guidelines contain patent trends for 12 national strategic technologies, definitions of strategic research and analysis, patent trends for specific key technologies, essential analysis content based on the type of key technology or R&D (i.e., basic, applied, development, etc.) and quality control of the research and analysis.

Furthermore, KIPO plans to restructure its patent big data analysis project focusing on the 12 national strategic technologies and plans to create a system that supports government R&D planning which will actively enhance the efficiency from a patent perspective as well as foster private patent research and analysis institutions for IP-R&D.

Public Release of Pharmaceutical Experimental Dataset

Industrial Property Data Management Division

KIPO operates a data platform called the Korea Intellectual Property Rights Information Service Plus (also known as "KIPRISPlus") which provides information on domestic and international IP rights publications and IP administration of 13 countries. In February 2023, through KIPRISPLUS (plus.kipris.or.kr), KIPO released about 450,000 records of pharmaceutical experimental data to be freely available to the public.

The released information includes data related to pharmaceutical experiments as well as reference dataset that allows AI to extract experimental data included in the Patent Gazette. KIPRISPlus also provided 119 types of reference dataset for AI which has been opened for multilingual translation and image search in the format of files or OpenAPI.

In particular, the pharmaceutical experimental data is a database of basic information derived from processing and analyzing images of tables included in the Patent Gazette, such as active ingredient names, test methods, and test values. The dataset contains information from image classification by categorizing data from various images, table structures (rows × columns) by accurately extracting table data, and experimental data identification by automatically identifying names of ingredients, test values, etc.

With the released pharmaceutical experimental data, textual data can be extracted from image-based data on patent documents and research papers which can then be analyzed. Based on this, IP service providers will be able to develop services that extract and utilize experimental data from the Patent Gazette. In turn, related companies and research institutions will be able to use examples and data for their research and development of vaccines, new drugs, etc.

AI Reference Dataset

Image	Classifying information from images attached to domestic patent gazettes (e.g. tables, graphs, chemical formulas, flowcharts, etc.)	
Table Structure	Distinguishing structural information (rows x columns) from the table to accurately identify table data and extract textual information	
Experimental Data	Identifying reference data for automatic classification of components used in experiments, experiment names, values, etc.	
Detailed Information	Service Type	Bulk Data
	Number of Data	447,000 cases
	Provision Method	DB Bulk
	Details	Images, table structure information, attribute information
	Cost	Free

Establishment of the Patent Statistics Center

Intellectual Property Policy Division

As IP statistics is an important objective criterion for national policy decision-making, major national IP offices are known to regularly publish IP statistical analysis reports prepared by economic and industry experts to reflect key national policies. However, until now, KIPO has published reports mainly focused on quantitative values and current trend analysis of IP. In January 2023, KIPO launched the "Patent Statistics Center" to specialize in collecting, analyzing, and disseminating IP data and statistics by PhD-level experts who are capable of conducting analysis from economic and industrial perspectives.

As a specialized unit established within the Korea Institute of Intellectual Property (KIIP), the Patent Statistics Center aims to provide valuable insight and support for IP stakeholders, including policymakers, researchers, businesses, and innovators. The Center will continuously perform tasks such as analyzing the value and economic impact of IP based on the latest statistics of patents, utility models, trademarks, and designs. Furthermore, the published reports will be utilized to enhance support for national R&D innovation as well as the formulation of economic and industrial security policies and business management strategies.

For example, statistical analysis of patent big data of key industrial sectors (i.e., semiconductors) can help assess technology trends and company competitiveness and identify promising R&D projects. Also, statistical analysis of patents and market trends can help early detection of industries with declining or diminishing competitiveness. And lastly, for import products that highly depend on foreign country support, statistical analysis of the import products and patents can help set direction for technological independence.

Going forward, users such as companies and public institutions will be able to have convenient access to high-quality IP statistical analysis reports through the KIIP website (www.kiip.re.kr).

Vitalization of Idea Transactions

Idea Innovation Division

"Idea Transaction" generally refers to the buying and selling of ideas, concepts, or innovations among inventors, creators, and businesses at various stages of development. In other words, idea creators connect with those who can turn their concepts into reality and companies obtain ideas to develop innovative products. By facilitating such opportunities and the right environment for idea transaction, KIPO has been working to bridge the gap between idea creators and potential buyers or collaborators, ultimately encouraging innovation and growth of economy.

1) Creating an Ecosystem for Idea Generation and Utilization

Especially in the era of digital transformation, it is important to create a digital ecosystem conducive to vitalizing idea transactions. Therefore, KIPO established Idea-ro (www.idearo.kr) as an online idea transaction platform for idea transaction that facilitates innovation, IP management, and collaboration by allowing the sharing and trading of ideas while ensuring that ideas are protected through IP rights.

The platform has been used to connect inventors with investors, assist businesses in managing their IP portfolios, and provide educational resources to help users navigate the IP landscape. In the three years of its operation, Idea-ro has attracted approximately 15,000 members with registering 7,423 ideas and completing 562 idea transactions. In 2023, the cumulative amount of transaction surpassed 250 million won for the first time.

2) Hosting the First "Idea Day"

To promote and encourage idea transaction activities, KIPO organized and hosted the first "Idea Day" event in December 2023. The event showcased the best examples of idea transactions, presented research on protection and utilization strategies of ideas, and presented awards to notable achievements with idea transactions and to the winners of the National Idea Competition.

One of the recipients of KIPO's commendation, Barup Co., Ltd., used Idea-ro to propose the idea of a lightweight and organized "train cabin cleaning cart" designed for elderly cleaning workers which led to a business contract with KorailTech, a railway tech company affiliated with the ROK's national railway system. Another recipient, the National Land Safety Management Institute used Idea-ro for soliciting ideas on construction and facility safety management, contributing to the activation of idea transactions by tendering 74 projects and purchasing 123 ideas from the public.

2023 Idea Day

Operational Performance of Idea-ro

Category	Mar. 2021~	2022	~Dec. 2023	Cumulative
Number of Transaction	112	155	295	562
Amount (in 10000 won)	5,931	4,901	14,210	25,042

Enhancement of the Reliability of IP Valuation

Intellectual Property Utilization Division

As more companies rely on IP finance to leverage their intangible assets and secure financing (i.e., IP-backed collateral for loans, IP-based investments, etc.), it is particularly crucial to provide reliable and systematic valuation of a company's IP assets. Within this framework, IP valuation refers to the process of determining the current or potential economic value of an intangible IP in a monetary amount or quantitative grade or score. The ROK is especially leading in the efforts to establish standards and best practices for IP valuation by improving transparency, reliability, and consistency.

1) Launch of the IP Valuation & Management Center

With rapid expansion of the scale of IP finance activities in the ROK, it is becoming increasingly important to ensure accurate valuation of IP which is crucial for facilitating financial transactions and attracting investment. Therefore, in July 2023, KIPO launched the "IP Valuation & Management Center" within the Korea Invention Promotion Association (KIPA) to provide overall management of the quality of IP valuation.

The IP Valuation & Management Center is dedicated to quality control tasks, such as developing various assessment models for IP valuation, distributing them to valuation institutions, and operating a valuation information system that manages the results. Additionally, experienced professionals conduct sample surveys to diagnose the quality of selected results and validity surveys to ensure that valuation is conducted according to evaluation standards as well as carrying out other investigations and analysis tasks on valuation results.

2) Expansion of IP Valuation Institutions

To further encourage IP finance as an alternative source of financing for innovative companies, KIPO designated 11 more institutions in the private sector to be IP valuation institutions. With these additions, the number of institutions that can conduct valuation of IP assets has increased to a total of 33 (25 private, 8 public) from the previous 22 (14 private, 8 public).

Before designating the new institutions, KIPO carried out on-site inspections and specified evaluations through external experts. As IP valuation institutions have significantly expanded, especially in the private sector, KIPO will provide them with training to establish themselves in the market and to manage the quality of IP valuations. Furthermore, there is potential for IP valuation to be applied to other areas such as IP transactions and technology transfers or when analyzing damages from patent infringement and technology misappropriation.

Enhancing Global IP Cooperation

Banpo Bridge Rainbow Fountain
The Rainbow Fountain plunges 20 meters into the Han River water on both side of Banpo Bridge in Seoul.

Discussions on IP5 Cooperation to Combat Climate Change

International Cooperation Division

KIPO is a member of a cooperative framework of the world's five largest patent offices, also known as the IP5 along with CNIPA (China), EPO (Europe), JPO (Japan), and USPTO (the United States). The IP5 collectively accounts for approximately 85% of the world's patent applications and KIPO is a leading IP institution responsible for the fourth largest volume of patent applications. In June 2023, the heads of patent offices of the IP5 convened in Honolulu, USA. Through a joint meeting with industry representatives, participants engaged in discussions on the role of IP in effectively responding to climate change and the direction of future cooperation.

Since the establishment of the IP5 in 2007, KIPO has been at the forefront alongside the other patent offices to create a "user-friendly global IP ecosystem". The IP5 has since collaborated on various initiatives, such as sharing best practices, exchanging information and data, and harmonizing patent procedures and practices to streamline the patent system globally.

The 2023 Heads Meeting is the first time the IP5 has discussed the role of IP in achieving the United Nations Sustainable Development Goals (UN SDGs). The strategic theme of the IP5 was "The Role of IP in Combating Climate Change" in order to start substantial discussions on specific measures for achieving the SDGs. During the meeting, KIPO presented the ROK's efforts toward carbon neutrality and explained related IP policies including the selection of "100 Core Technologies for Korean Carbon Neutrality" as well as KIPO's priority examination system for green technologies and IP financing projects to support their commercialization.

KIPO also announced their plans to establish a Korean Patent Classification (KPC) system for green technologies to systematically organize and accumulate patent data in the area of green technology. Doing so will help increase the accuracy and efficiency of prior art searches and effectively understand patent application trends.

Additionally, the IP5 agreed to include "Achieving Sustainable Development" in the Vision Statement, which had previously focused on examination cooperation and system harmonization. This agreement lays the groundwork for the IP5 to collaborate in various ways within the IP field to address common challenges, such as climate change. Further discussions were made on systematic communication strategies with the industrial sector, the primary users of IP services, which is expected to foster public-private cooperation for the development of the global IP system.

Moreover, the IP5 has been conducting projects related to advanced technology and AI in line with the "NET/AI Roadmap" which was proposed by KIPO in 2019. With global interest rising about AI-generated inventions, it is necessary to have international discussions on recognizing AI as an inventor. KIPO will continue to lead discussions on advanced technology as KIPO's new proposed project "Study on the Inventorship of AI-Generated Inventions" was approved by IP5. The project entails compiling and reviewing legal frameworks and case law related to AI inventors from IP5 countries. The compiled results will be jointly announced at 2024 IP5 Heads meeting.

Hosting of the TM5/ID5 as Chair

As the five leading IP offices in trademark and industrial design, KIPO, CNIPA, JPO, EUIPO and USPTO, have joined together in a cooperative framework called the TM5 (Trademark 5) and ID5 (Industrial Design 5). Collectively, the five offices account for over 60% of the world's trademark applications and over 70% of the world's design applications. Every year, the TM5 and ID5 work together to discuss policy directions and check cooperation matters for the formation and harmonization of international norms. KIPO was selected as the chair to host the 2023 meetings and lead meaningful discussions of the TM5 and ID5.

Trademark Examination Policy Division

Organization of the TM5 meeting by KIPO

Appointed as chair of the TM5 meeting, KIPO organized the "TM5 Midterm Meeting" in May 2023 at the Sands Expo and Convention Center in Singapore to discuss major trademark issues. WIth the World Intellectual Property Organization (WIPO) also in attendance, the five offices reviewed the progress of 15 cooperative projects, including measures to raise awareness of trademark infringement and prevent bad-faith applications, and shared their views on new project proposals.

Notably, in accordance to the increase in trademark applications related to virtual spaces, KIPO proposed a new project to research trademarks in virtual space.

Furthermore, during the annual meeting of the International Trademark Association (INTA), KIPO hosted the TM5 Trademark User Session (May 17) in Singapore and operated a booth to promote the Korean trademark system. Additional meetings throughout the year included the TM5 Midterm Meeting, TM5 Working-Level Meeting (June 15-16), and TM5 Annual Meeting (September 11-12).

Design Examination Policy Division

Hosting the ID5 meeting in the ROK

Since the inception of the ID5 in 2015, KIPO has played a leading role in the discussion of international design norms as a pioneering country in the field of design. As chair of the ID5 meeting, KIPO hosted the ID5 Midterm Meeting in June 2023 in Jeju, Korea, to discuss key design issues.

The five offices reviewed the progress of 12 cooperative projects, including "sharing the status of utilization of new technologies related to design, such as artificial intelligence and 3D file applications" and "protecting designs in virtual spaces (metaverse)." Additionally, following China's accession to the Hague Agreement for International Design Applications in May 2022, proposals were made to explore ways to improve consistency in the examination of international designs among the ID5 member countries.

ID5 Cooperative Projects

Leading Office	Project Title (2023)
CNIPA	User Guide on Design Drawing Requirements
EUIPO	Joint Promotion for Activating Cooperative Communication
	Comparison of Design Novelty Examination
	E-Learning Platform for Small and Medium Enterprises
	Sharing the Status of Utilization of New Technologies Related to Design
JPO	ID5 Statistics Operation
	Design Practice Recommendations
	Registration Design Indication System
USPTO	Cooperation Project Reform Plan
	Electronic Exchange of Priority Documents
KIPO	Operation of the ID5 Website
	Protection of Designs in the Metaverse

Improvement of the Patent Prosecution Highway (PPH)

Patent Legal Administration Division

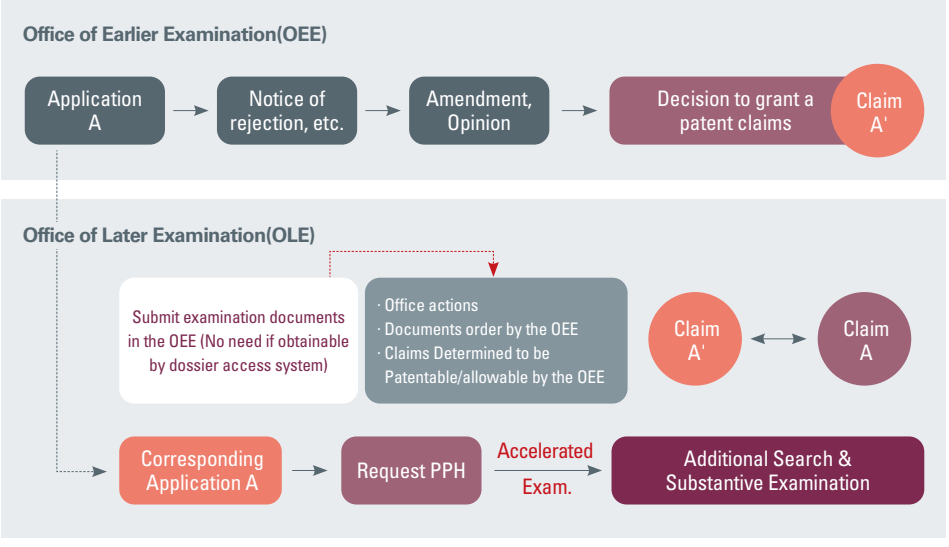
The Patent Prosecution Highway (PPH) is an international cooperation program that leverages the fast-track examination procedures already in place among participating patent offices of different countries. This allows applicants to receive final disposition of a patent application more quickly and efficiently than standard examination processing.

In detail, using the examination results from an office where a patent application is initially filed (referred to as the office earlier examination or OEE), an applicant can submit a request for fast-track examination for the same patent to another office (referred to as the office of later examination or OLE). The examination finding from the OEE are used to expedite the application process in the OLE, thereby reducing workload and improving examination quality by reducing duplication of effort and leveraging the expertise of multiple patent offices.

1) PPH Cooperation with the US and Japan

Especially among the IP5 members, discussions had been ongoing to enhance the predictability of each stage of examination for PPH applications. The USPTO and JPO first launched an improvement initiative in 2022. Beginning in August 2023, KIPO joined the USPTO and JPO in implementing an "improvement initiative" in order to support applicants to establish effective IP strategies and enter overseas markets through fast acquisition of rights.

Under this initiative, the time to receive the first examination notice for accelerated examination under the PPH framework would be reduced from four to three months and the period between an applicant's response and the next examination notice to be managed within three months. KIPO's participation in this



was decided following the Memorandum of Understanding on Bilateral Cooperation between USPTO and KIPO signed in June 2023.

Now applicants who have applied for the PPH at KIPO, the USPTO and JPO may obtain patents within three months from the grant of a PPH request. As more countries join the initiative, applicants desiring to expand their market would find it easier to predict the timing of PPH examination at each country and manage their IP systematically and enter the global market more strategically.

2) Pilot PPH between the ROK and Indonesia

In December 2023, KIPO began a pilot PPH program with the IP office of Indonesia (Directorate General of IP; DGIP) for prioritized examinations. This PPH program was established following an agreement at the Korea-Indonesia summit and between the heads of the IP offices of the ROK and Indonesia.

Prior to the pilot program, it could take up to 40 months to acquire a patent from the Indonesian Patent Office. Through the PPH, applicants who have received a relatively earlier patent decision from KIPO (average duration of domestic patent examination is 18.4 months) can expect a significantly reduced time to acquire a patent from DGIP.

With the addition of Indonesia, KIPO has partnered with a total of 38 IP offices (34 countries and 4 international organizations) through bilateral, IP5, and Global PPH (including PCT-PPH) programs.

Korean Model of National Invention & Creative Education

Trade and Cooperation Division

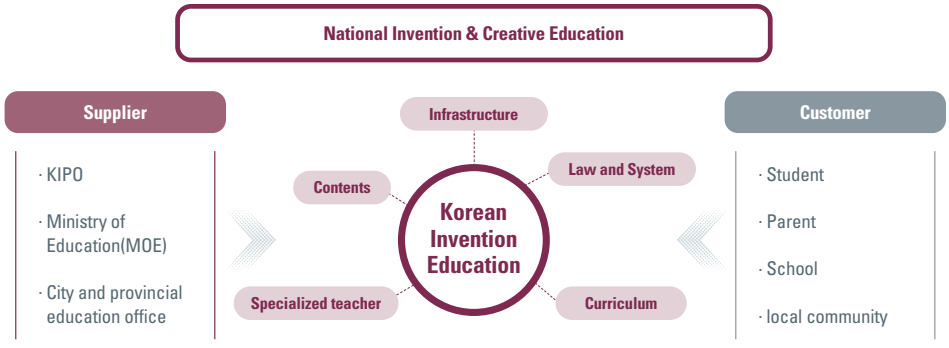
It is crucial to facilitate an environment conducive the growth of youth into innovative talented persons as they are the key pioneers to shape the future. In order to prove educational opportunities that enhance youth's inventive capabilities to developing countries, KIPO launched an initiative based on the ROK's successful experience in the development through invention education called the Korean model of National Invention & Creativity Education (NICE) aimed at fostering creative problem-solving abilities and critical thinking skills from an early age.

Accordingly, KIPO worked with WIPO to organize the 2023 KIPO-WIPO Leadership Course for Building Capacity of Teachers and Policy Makers in School Invention and IP Education based on this Korean model of invention education. Specifically,this course takes a blended deep-learning approach designed to impart experiential invention education unique to the ROK by combining theoretical education on invention education principles and practical training in student guidance activities. Overall, the curriculum covers the ROK's invention and IP education policies, laws, systems, the history of invention/IP education, and its integration with regular subjects.

A total of 15 senior officials/policymakers (i.e., Deputy Minister of Education from Cambodia) and educators from Cambodia, Egypt, Malaysia, Indonesia and Vietnam participated in the course. Participants were able to engage in both theoretical lessons and site-visits to the International Intellectual Property Training Institute (IIPTI) in Daejeon and the Regional Invention Experience Education Center in Gyeongju.

The long-term goal is to help countries discover innovative talents essential for economic development. It is expected that the participating officials and educators will return to their respective countries and reference the Korean-model of invention education to promote more effective educational policies for youth.

Korean Model of Invention Education System



Future Plan

KIPO Vision & Strategy

To contribute to technological innovation and industrial development by promoting the creation and utilization of IP and strengthening its protection.

Vision

To step forwards as a leading IP country through innovation of IP administration.

Strategy

1

Support creation of strong IP that leads industrial innovation

2

Establish an IP protection system responding to changes in the global environment

3

Support innovative growth through promotion of IP utilization

4

Build an IP foundation to lead the future

Performance Goals

1. Support consumer-oriented R&D innovation
2. Provide fair and accurate examination and trial services

1. Establish a system of domestic and overseas IP protection
2. Create a favorable international IP environment by strengthening international cooperation

1. Promote the commercialization and transaction of patent technology from universities, public research institutions and SMEs
2. Promote startup and commercialization based on IP

1. Foster a creative IP workforce
2. Innovate patent administration services to actualize a “Digital Platform Government”

IP Support Systems & Programs 2024

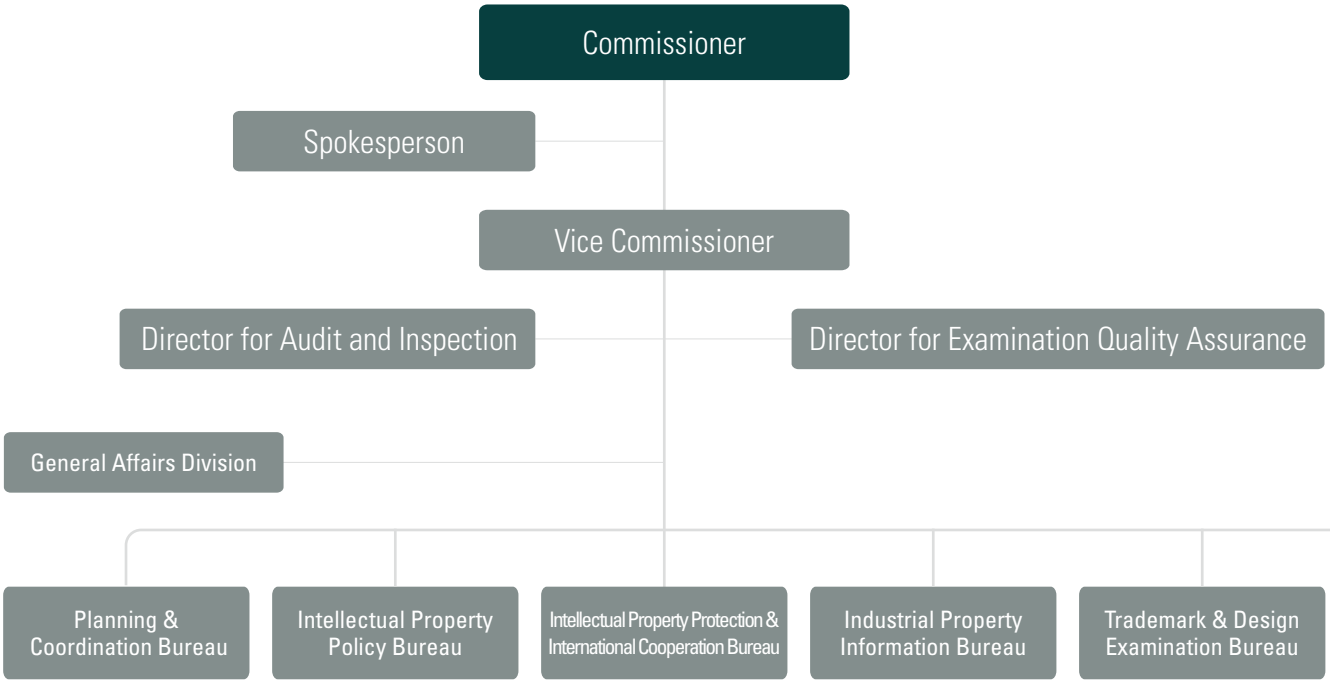
Field	Project/Initiative Name	Beneficiaries	Support Details
Creation	"IP Didimdol"	Aspiring Entrepreneurs and Individuals	Support for actualizing and securing rights for excellent ideas discovered at Regional IP Centers, IP Startup Zones, and the Creative Economy Innovation Centers.
	"IP Narae"	Technology-based Startup Companies	Support for enhancing the IP management system of startup companies through IP technology and management strategy consulting
	IP-based Support for Overseas Expansion	SMEs (planning to export)	Comprehensive support of IP services, including support for acquiring IP rights abroad for promising SMEs with high export growth potential.
	IP-Linked R&D Strategy Support	SMEs and Midsized Companies with Research Organizations, Universities, and Public Institutions	Customized and dedicated support with IP-linked R&D strategies to assist companies, universities, and public institutions in securing core and original patents.
	Standard Essential Patents Creation Support	Universities, Public Institutions, SMEs, and Midsized Companies	Support for strategies to secure standard essential patents through the entire process of R&D and standardization
	Creation and Utilization of High-Quality Patents from Government R&D Support	Universities and Public Institutions	Support for strengthening the capabilities of creating and utilizing excellent patents through a IP management diagnosis of universities and public institutions.
	Public R&D Patent Technology Trend Analysis	Government R&D Departments and Specialized Agencies	Provision of patent trend analysis of the related-technology during planning and evaluation stages of public R&D research to prevent duplicate investment of R&D budget.
	IP Services Growth Support	IP Information Service Companies	Support for establishing market-tailored IP information service development strategies, implementing minimum viable pilot services, and improving functionality
	"Women Invention Everywhere"	Female Aspiring Entrepreneurs	Support for discovering marketable everyday inventions by creative women and supporting the process of application, design, prototype production, and commercialization of the product.
	IP Data Gift Policy	Aspiring Entrepreneurs and Small Enterprises within 7 years of startup	Free provision of IP data necessary for product development in the field of IP information services for up to 5 years
	"IP Direct SME Support"	SMEs	Consultation and discovery of urgent SME IP issues through regional IP centers throughout the country, and resolution of these difficulties through IP services support.
	Public-Private Partnership IP Strategy Support	Aspiring Entrepreneurs and Small Enterprises (within 7 years of startup)	Investment in startups and overseeing of corporate IP by private entities, and support for the commercialization of IP products through business packages by the government.
	IP Capability Strengthening for Small Businesses	Small Business Owners	Support for securing rights (i.e., trademarks and recipes) owned by small business owners, and operation of educational and counseling programs
	IP-C&D Strategy Support	SMEs	Support for SMEs includes developing innovative products using IP, commercialization consulting, and market strategy assistance.
	IP Transaction Support	Individuals, SMEs, etc.	Brokerage services by patent transaction specialists for individuals and SMEs wishing to introduce patent technology, and support for enhancing the capabilities of private IP trading companies for independent operation

Field	Project/Initiative Name	Beneficiaries	Support Details
	Valuation Support for IP Commercialization	Individuals, SMEs, etc.	Support for the costs required for IP value assessment to utilize the IP owned by individuals and SMEs for business feasibility analysis and technology transactions
	Idea Transaction Support	Individuals, Companies, etc.	Operating an easy and safe idea trading platform that connects the demand and supply of ideas and allows various entities to participate
	Transaction and Commercialization Support of Carbon Neutrality Ideas	SMEs (in the field of carbon neutrality)	Identify and refine creative public ideas in the carbon neutrality field through idea platform 'Idearo', and support companies with carbon neutrality IP strategies and product development.
	Priority Purchase Recommendation System for High-quality Inventions	Individuals, SMEs	Support for entry into market through the KIPO Commissioner's recommendation of excellent invention products that apply patent technologies to national institutions, local governments, and public institutions.
	Public IP Commercialization Support	Universities and Public Institutions	Support for the entire lifecycle (from patent creation to technology transfer and commercialization) of patents owned by universities and public institutions.
	Reinvestment of IP Profits Support	Universities and Public Institutions	Creation of an independent environment for universities and public institutions to voluntarily reclaim a portion of technology transfer profits and reinvest in the commercialization of other promising patent technologies.
	Diagnosis Support for Public Institutions-owned Patents	Universities and Public Organizations	Consultation support for strategically managing and utilizing patents held by public institutions, and enhancing the utilization of government R&D patents.
Protection	Trade Secret Protection Centers	Universities, Public Organizations, SMEs	Provision of trade secret education, distribution of trade secret management systems, trade secret protection consulting, legal advice for dispute and leakage, digital forensics support, trade secret verification services, etc.
	Overseas IP Centers	SMEs/Midsized Companies (planning to export)	Support for securing local IP rights and resolving IP issues to enhance the export competitiveness of companies expanding overseas.
	Bad Faith Trademark Filings & Counterfeit Goods Response Support	SMEs/Midsized Companies	Support for monitoring bad faith trademark filings abroad and responding to the distribution of counterfeit products online overseas.
	Patent/K-Brand Dispute Response Strategies Support	SMEs/Midsized Companies (planning to export)	Provision of customized protection strategies for each stage of international IP disputes.
	Early Detection of Patent Dispute Risks Support	SMEs in the field of high-tech industry	Support for monitoring of patents with potential risks and disputes and providing patent dispute prevention training and practice.
	IP Right Dispute Mediation System	Right Holders, Licensees, Inventors, and Stakeholders	Inducing dispute resolution through agreement by a mediation panel composed of experts in the relevant field upon application for dispute mediation.
Finance	IP Mutual Aid	SMEs/Midsized Companies	Distribution and mitigation of the burden of costs related to IP among SMEs and midsized companies through a mutual aid system based on mutual assistance.

Field	Project/Initiative Name	Beneficiaries	Support Details
	IP-backed Collateral/Loans Recovery Support	Banks with IP Collateral Loan Agreements	Mitigating the bank's losses by purchasing the bank's collateral IP upon corporate default
	IP Finance Valuation Support	SMEs	Support for the cost of valuation for IP finance including IP-guaranteed loans, IP-backed loans and IP investment.
Education and Consultation	IP Digital Education	General Public	Provision of digital education online content related to IP knowledge and management.
	Specialized Universities for IP Professionals Cultivation	Universities Participating in the Ministry of Education's Regional Innovation Platform	Training of IP professionals to drive continuous growth of regional innovation companies and local dissemination of IP education in connection with the Ministry of Education's Regional Innovation Platform Project.
	Corporate IP Personnel Training	Early-stage Startups, Startup Stakeholders, etc.	Provison of customized practical training linked to the creation of corporate value to nurture IP-based personnel who can lead new industry trends.
	IP-Talented Entrepreneurs Cultivation	Middle School Students or Adolescents Aged 13-15	Selecting inventive youth to cultivate them as IP-based talented entrepreneurs.
	Invention Education Centers	Elementary, Middle, and High School Students	Expansion of the scope of invention education and early nurturing and discovery of creative invention talents.
	IP Meister Program	Vocational High School Students	Supporting vocational and Meister high school students to explore industrial site problems, propose, improve, and secure rights for ideas, and transfer technology.
	Employee Invention System Consultation	SMEs/Midsized Companies	Deployment of employee invention experts (i.e., patent attorneys) to companies to newly operate or those facing difficulties in operating an employee invention compensation system for supporting regulation establishment and resolution of operational difficulties.
	Patent Support Desks	SMEs	Provision of IP-related consultation services by patent attorneys and IP experts at regional IP centers, IP Startup Zones, and Creative Economy Innovation Centers.
	Public Patent Attorney Counseling Center	Small Businesses, Disabled Individuals, Basic Livelihood Security Recipients, and Other Socially Vulnerable Groups	Provision of free Public patent attorneys services, including patent-related consultation, document preparation, and direct representation in administrative proceedings or revocation lawsuits for socially disadvantaged people.
	Patent Information Search and Electronic Application Training	Patent Officers of Companies, Institutions, Research Institutes, Students, and Aspiring entrepreneurs	Provision of customized patent information search and electronic application training for different educational targets related to IP rights.
Events	Invention Day Event	General Public	Designation of May 19th as "Invention Day" to commemorate the invention of world's first rain gauge with a ceremony and awards for inventors.
	Korea Invention Patent Exhibition	General Public	Organization of events such as the Invention Patent Fair, Trademark Design Rights Fair, and Seoul International Invention Fair.
	International Women's Invention Expo	Women (holders of filed/registered IP rights)	Organization of an exposition that includes the operation of booths for domestic and international companies, provision of opportunities for distribution consultations with major domestic retailers, support for live commerce.
	IP Information Utilization Startup Contest	General Public	Hosting of a contest to discover creative ideas and entrepreneurship using IP information, excellent teams receive awards and free data and recommendations for startup support programs by the Ministry of SMEs and Startups.
	D2B Design Fair	General Public	Provision of a stage for the commercialization and filing of design rights for creative designs, thereby fostering prospective designers and supplying creative designs to domestic SMEs.

Field	Project/Initiative Name	Beneficiaries	Support Details
	"Campus Patent Universiade"	Domestic College (Graduate) Students	Expansion of patent data utilization and analysis education at universities to cultivate IP talents needed by companies and supply creative ideas from universities to the industrial field.
	Korea Student Invention Exhibition	Elementary, Middle, and High School Students	Nurturing of creative talented inventors by discovering and awarding students' invention ideas and exhibiting excellent student inventions
	Korea Student Creativity and Innovation Championship	Elementary, Middle, and High School Students	Organization of a competition where teams (each 5-7 members) of elementary, middle, and high school students creatively solve given tasks for fostering creativity, teamwork, and leadership.
	Patent Technology Award	General Public	Recognition of outstanding inventions registered at KIPO with awards to encourage the spirit of innovation.
	IP Startup Contest (IP League)	Aspiring Entrepreneurs, Entrepreneurs	Selection of (aspiring) entrepreneurs (teams) who possess or have applied for outstanding IP to provide awards and follow-up support for entrepreneurship and IP support projects
Other Programs and Initiatives	Excellent Employee Invention Compensation Certification System	SMEs/Midsized Companies (with a employee invention system and have implemented employee invention compensation within 2 years from the application date)	Provision of various incentives (i.e., bonus points) when participating in government support projects to certified companies.
	IP Management Certification	SMEs Practicing Exemplary IP Management	Provision of various incentives such as bonus points when participating in government support projects to certified companies.
	Fee Reduction Program	Individuals, SMEs, etc.	Reduction of fees for patent, utility model, and design applications, request for examinations; 70% reduction of the first 3 years of registration fees; and 50% reduction of registration fees from the 4th year to the end of the term.
	IP-Related Tax Support	SMEs, Midsized Companies, and Large Enterprises	1. Exemption from income tax on employee invention compensation. 2. Income tax/corporate tax reduction for income from technology transfer (licensing). 3. Tax deduction for SMEs' patent investigation/analysis expenses.
	Patent Trial - National Representative System	Small Businesses, Disabled Individuals, and Other Socially/ Economically Disadvantaged Groups	Support for the appointment of national representatives for socially/economically disadvantaged parties in trial cases.
Official Development Assistance	Appropriate Technology and Brand Development Support	Cooperatives in Developing Countries, etc.	Utilization of patent information to provide technological solutions to appropriate to the local circumstance and development of brands and business strategies to increase income of communities in developing countries.
	IP Utilization by Government Ministries in ODA Projects	Cooperatives in Developing Countries, etc.	Support for customized patent consulting during joint research periods with developing countries through collaboration with other ministries (Ministry of Science and ICT, Rural Development Administration) using patent R&D analysis, supporting the development of appropriate technologies and brands for seeds targeted for technology development by the Rural Development Administration, thereby achieving sustainable economic growth in developing countries.
	Fund-In-Trust KIPO (WIPO)	Patent-related Personnel in Developing Countries, Youth, Women, SMEs	Organization of IP-related capacity building and awareness enhancement projects for developing countries and least developed countries through contributions to the Fund-In-Trust KIPO.

KIPO Organization Chart



- Planning & Budget Division
- Creative Administration Division
- Regulatory Reform & Legal Affairs Division

- Intellectual Property Policy Division
- Intellectual Property Utilization Division
- Intellectual Property Human Resources Division
- Regional Intellectual Property Division
- Intellectual Property Creation Strategy Division
- Idea Innovation Division

- Intellectual Property Protection Policy Division
- Intellectual Property Dispute Settlement Division
- Technology & Design Police Division
- Trademark Police Division
- International Cooperation Division
- Trade and Cooperation Division
- Unfair Competition Investigation Division

- Industrial Property Information Policy Division
- Industrial Property Information System Division
- Industrial Property Data Management Division
- Industrial Property Application Division
- Industrial Property Registration Division
- Industrial Property International Application Division

- Trademark Examination Policy Division
- Design Examination Policy Division
- Home & Daily Goods Trademark Examination Division
- Chemicals & Foods Trademark Examination Division
- Service Mark Examination Division
- Machinery & Electronics Trademark Examination Division
- International Trademark Examination Division
- Home & Daily Goods Design Examination Division
- Industrial Supplies Design Examination Division
- New Industry Trademark Examination Division

- Artificial Intelligence & Big Data Examination Division
- Internet of Things Examination Division
- Biotechnology & Healthcare Examination Division
- Intelligent Robot Examination Division
- Autonomous Driving Technology Examination Division
- Smart Manufacturing Examination Division

Digital Convergence Examination Bureau

Intellectual Property Trial and Appeal Board

- Board 1-10
- Trial Policy Division / Litigation Division

International Intellectual Property Training Institute

- Education Planning Division
- IP Education Division
- International Education Division

Seoul Branch Office

- General Affairs Support Division
- Electronic Documentation Division

Patent Examination Policy Bureau

- Patent Examination Policy Division
- Patent Legal Administration Division
- Household Goods Examination Division
- Food & Biological Resources Examination Division
- Residential Technology Examination Division
- Home Applications Examination Division
- PCT International Search & Preliminary Examination Division I
- PCT International Search & Preliminary Examination Division II

Electricity & Communications Examination Bureau

- Electrical Systems Examination Division
- Computer Systems Examination Division
- Communications Systems Examination Division
- Electronic Commerce Examination Division
- Broadcasting & Multimedia Examination Division

Chemistry & Biotechnology Examination Bureau

- Organic Chemistry Examination Division
- Pharmaceuticals Examination Division
- Materials Chemistry Examination Division
- Advanced Energy Technology Examination Division
- Polymer & Textile Examination Division
- Medical Technology Examination Division
- Environmental Technology Examination Division

Machinery & Metals Examination Bureau

- General Machinery Examination Division
- Mechatronics Examination Division
- Construction Technology Examination Division
- Automobile Examination Division
- Mechanical Power Systems Examination Division
- Transportation Machinery Examination Division
- Measurement Technology Examination Division
- Materials & Metals Examination Division

Semiconductor Examination Bureau

- Semiconductor Fabrication Process Examination Division
- Semiconductor Design Examination Division
- Display Device Examination Division
- Semiconductor Materials Examination Division
- Semiconductor Package and Assembly Examination Division
- Semiconductor Fabrication Equipment Examination Division

Appendix

Applications

Application by IPR type

(unit: cases)

Category	2019	2020	2021	2022	**2023**
Patents	218,975	226,759	237,998	237,633	**243,310**
Utility models	5,447	4,981	4,009	3,084	**2,746**
Subtotal	224,422	231,740	242,007	240,717	**246,056**
Designs	64,111 (66,637)	66,354 (68,695)	63,647 (65,922)	55,333 (57,845)	**53,738 (55,833)**
Trademarks	204,998 (252,309)	243,935 (290,207)	270,421 (290,209)	242,368 (290,323)	**241,130 (285,637)**
Total	493,531 (543,368)	542,029 (590,642)	576,075 (598,138)	538,418 (588,885)	**540,924 (587,526)**

Note: Figures in parentheses include multiple applications.

PCT applications (KIPO as the Receiving Office)

(unit: cases)

Category	2019	2020	2021	2022	**2023**
Number of applications	18,885	19,675	20,528	21,916	**22,166**
Growth rate	11.1%	4.2%	4.3%	6.8%	**1.1%**

International trademark applications under the Madrid System

(unit: cases)

Category	2019	2020	2021	2022	**2023**
Korea as office of origin	1,419	1,599	2,012	2,089	**2,150**
Korea as designated office	16,509	13,998	15,400	16,710	**14,079**

International design applications under the Hague System

(unit: cases)

Category	2019	2020	2021	2022	**2023**
Korea as office of origin	178	250	279	280	**202**
Korea as designated office	928	1,229	1,140	1,308	**1,597**

Comparison of domestic and foreign applications

(unit: cases)

Category			2019	2020	2021	2022	2023
Patents	Domestic	Cases	171,606	180,484	186,245	183,747	**191,154**
		Ratio	78.4%	79.6%	78.3%	77.3%	**78.6%**
	Foreign	Cases	47,396	46,275	51,753	53,886	**52,156**
		Ratio	21.6%	20.4%	21.7%	22.7%	**21.4%**
	Total		218,975	226,759	237,998	237,633	**243,310**
Utility models	Domestic	Cases	4,975	4,595	3,642	2,784	**2,400**
		Ratio	91.3%	92.3%	90.8%	90.3%	**87.4%**
	Foreign	Cases	472	386	367	300	**346**
		Ratio	8.7%	7.7%	9.2%	9.7%	**12.6%**
	Total		5,447	4,981	4,009	3,084	**2,746**
Designs	Domestic	Cases	59,877 (61,204)	62,698 (63,939)	59,880 (61,175)	51,428 (52,814)	**49,907 (51,068)**
		Ratio	93.3% (91.8%)	94.5% (93.1%)	94.1% (92.8%)	92.9% (91.3%)	**92.9% (91.5%)**
	Foreign	Cases	4,234 (5,433)	3,656 (4,756)	3,767 (4,747)	3,905 (5,031)	**3,831 (4,765)**
		Ratio	6.7% (8.2%)	5.5% (6.9%)	5.9% (7.2%)	7.1% (8.7%)	**7.1% (8.5%)**
	Total		64,111 (66,637)	66,354 (68,695)	63,647 (65,922)	55,333 (57,845)	**53,738 (55,833)**
Trademarks	Domestic	Cases	190,204 (228,530)	230,318 (269,332)	255,746 (269,219)	228,219 (268,334)	**227,221 (264,779)**
		Ratio	92.8% (90.6%)	94.4% (92.8%)	94.6% (92.8%)	94.2% (92.4%)	**94.2% (92.7%)**
	Foreign	Cases	14,794 (23,779)	13,617 (20,875)	14,675 (20,990)	14,149 (21,989)	**13,909 (20,858)**
		Ratio	7.2% (9.4%)	5.6% (7.2%)	5.4% (7.2%)	5.8% (7.6%)	**5.8% (7.3%)**
	Total		204,998 (252,309)	243,935 (290,207)	270,421 (290,209)	242,368 (290,323)	**241,130 (285,637)**
Total	Domestic	Cases	426,662 (466,315)	478,095 (518,350)	505,513 (520,281)	466,178 (507,679)	**470,682 (509,401)**
		Ratio	86.5% (85.8%)	88.2% (87.8%)	87.8% (87.0%)	86.6% (86.2%)	**87.0% (86.7%)**
	Foreign	Cases	66,869 (77,053)	63,934 (72,292)	70,562 (77,857)	72,240 (81,206)	**70,242 (78,125)**
		Ratio	13.5% (14.2%)	11.8% (12.2%)	12.2% (13.0%)	13.4% (13.8%)	**13.0% (13.3%)**
	Total		493,531 (543,368)	542,029 (590,642)	576,075 (598,138)	538,418 (588,885)	**540,924 (587,526)**

Note: Figures in parentheses include multiple applications.

Patent and utility model applications by technological field in 2023

(unit: cases)

Classification	Patents			Utility models		
	Domestic	Foreign	**Subtotal**	Domestic	Foreign	**Subtotal**
Electrical machinery, apparatus, energy	16,481	3,940	**20,421**	164	37	**201**
Audio-visual technology	5,833	1,799	**7,632**	39	15	**54**
Telecommunications	2,598	621	**3,219**	16	1	**17**
Digital communication	7,878	3,203	**11,081**	2	-	**2**
Basic communication processes	578	256	**834**	-	-	**-**
Computer technology	14,592	2,991	**17,583**	34	7	**41**
IT methods for management	14,683	402	**15,085**	20	1	**21**
Semiconductors	10,264	4,297	**14,561**	5	21	**26**
Optics	2,731	2,210	**4,941**	26	8	**34**
Measurement	8,866	1,878	**10,744**	51	4	**55**
Analysis of biological materials	651	288	**939**	2	-	**2**
Control	4,022	468	**4,490**	42	-	**42**
Medical technology	10,326	2,303	**12,629**	116	27	**143**
Organic fine chemistry	3,801	2,601	**6,402**	-	1	**1**
Biotechnology	3,892	3,091	**6,983**	-	-	**-**
Pharmaceuticals	3,171	2,466	**5,637**	-	-	**-**
Macromolecular chemistry, polymers	1,794	1,883	**3,677**	1	-	**1**
Food chemistry	5,006	364	**5,370**	17	1	**18**
Basic materials chemistry	2,940	1,729	**4,669**	4	1	**5**
Materials, metallurgy	3,416	1,637	**5,053**	7	4	**11**
Surface technology, coating	2,276	1,741	**4,017**	7	9	**16**
Micro-structural and nano-technology	17	14	**31**	-	-	**-**
Chemical engineering	3,549	1,006	**4,555**	41	12	**53**
Environmental technology	3,583	443	**4,026**	45	7	**52**
Handling	4,879	949	**5,828**	161	18	**179**
Machine tools	3,724	1,021	**4,745**	50	5	**55**
Engines, pumps, turbines	2,036	775	**2,811**	32	11	**43**
Textile and paper machines	1,621	467	**2,088**	19	1	**20**
Other special machines	6,257	1,392	**7,649**	217	12	**229**
Thermal processes and apparatus	2,892	336	**3,228**	46	3	**49**
Mechanical elements	2,399	842	**3,241**	51	18	**69**
Transport	9,290	1,420	**10,710**	133	18	**151**

(unit: cases)

Classification	Patents			Utility models		
	Domestic	Foreign	**Subtotal**	Domestic	Foreign	**Subtotal**
Furniture, games	4,978	603	**5,581**	354	46	**400**
Other consumer goods	5,277	1,396	**6,673**	282	36	**318**
Civil engineering	7,873	514	**8,387**	260	14	**274**
Others	6,980	810	**7,790**	156	8	**164**
Total	191,154	52,156	**243,310**	2,400	346	**2,746**

Note: Figures for 2023 are preliminary.

Patent applications in biotechnology

(unit: cases)

Category	2019		2020		2021		2022		**2023**	
	Cases	Ratio	Cases	Ratio	Cases	Ratio	Cases	Ratio	**Cases**	**Ratio**
Domestic	7,269	71.0%	7,878	71.0%	8,010	67.2%	7,844	63.8%	**8,126**	**64.8%**
Foreign	2,973	29.0%	3,218	29.0%	3,918	32.8%	4,443	36.2%	**4,419**	**35.2%**
Total	10,242	100%	11,096	100%	11,928	100%	12,287	100%	**12,545**	**100%**

Note1: Figures for 2023 are preliminary.
Note2: Based on the following biotechnological categories of the Eighth Edition of the International Patent Classification: A01H; A01K 67/00~67/04; A01N 63/00~65/00; A61K 8/97~8/99; A61K 8/64~8/68; A61K 35/12~35/76; 36/00~36/9068; A61K 38/00~38/58, 39/00~39/44, 48/00, 51/00~51/10; C02F; C07H 19/00~21/04; C07K; C12C~M; C12N; C12P; C12Q; C12S; G01N 33/50~33/98.

Patent applications in business methods

(unit: cases)

Category	2019		2020		2021		2022		**2023**	
	Cases	Ratio	Cases	Ratio	Cases	Ratio	Cases	Ratio	**Cases**	**Ratio**
Domestic	10,321	95.1%	12,251	96.5%	15,019	96.4%	15,836	97.1%	**14,683**	**97.3%**
Foreign	534	4.9%	449	3.5%	557	3.6%	473	2.9%	**402**	**2.7%**
Total	10,855	100%	12,700	100%	15,576	100%	16,309	100%	**15,085**	**100%**

Note1: Figures for 2023 are preliminary.
Note2: Based on the Ninth Edition of the International Patent Classification.

Applications by residents of foreign countries/regions in 2023

(unit: cases)

Countries/Regions	Patent & Utility models		Designs		Trademarks		Total
	Domestic	PCT	Domestic	Hague	Domestic	Madrid	
United States of America	1,505	15,039	1,427 (1,876)	144 (338)	3,270 (5,804)	3,170 (5,262)	**24,555 (29,824)**
Japan	3,939	10,261	618 (725)	158 (238)	1,369 (2,513)	1,355 (2,448)	**17,700 (20,124)**
China	801	4,856	1,017 (1,072)	385 (677)	5,370 (6,330)	1,859 (2,776)	**14,288 (16,512)**
Germany	586	3,217	75 (110)	120 (654)	200 (297)	1,230 (2,676)	**5,428 (7,540)**
Switzerland	165	1,602	68 (128)	185 (353)	224 (403)	790 (1,561)	**3,034 (4,212)**
France	150	1,386	122 (127)	204 (353)	273 (423)	856 (1,756)	**2,991 (4,195)**
United Kingdom	113	1,348	97 (149)	34 (94)	403 (717)	711 (1,673)	**2,706 (4,094)**
Netherlands	259	872	81 (88)	55 (141)	71 (129)	299 (557)	**1,637 (2,046)**
Italy	35	483	25 (55)	98 (213)	131 (177)	723 (1,398)	**1,495 (2,361)**
Taiwan, Province of China	801	116	44 (53)	-	443 (541)	-	**1,404 (1,511)**
Singapore	151	205	12 (20)	6 (6)	462 (775)	284 (537)	**1,120 (1,694)**
Sweden	91	628	19 (62)	9 (23)	52 (135)	253 (586)	**1,052 (1,525)**
Canada	40	444	45 (55)	25 (41)	226 (330)	195 (416)	**975 (1,326)**
Australia	9	261	43 (65)	1 (1)	164 (225)	319 (591)	**797 (1,152)**
Israel	46	416	8 (9)	19 (29)	38 (57)	69 (108)	**596 (665)**
Belgium	9	346	1 (1)	21 (23)	30 (57)	130 (236)	**537 (672)**
Denmark	33	267	35 (42)	18 (41)	40 (87)	142 (242)	**535 (712)**
Spain	16	134	1 (1)	10 (16)	54 (68)	260 (457)	**475 (692)**
Austria	54	267	1 (1)	14 (70)	15 (35)	114 (285)	**465 (712)**
Finland	16	256	1 (1)	6 (20)	11 (26)	85 (237)	**375 (556)**
Ireland	17	184	15 (35)	2 (7)	32 (55)	69 (130)	**319 (428)**
Luxembourg	21	118	18 (25)	-	36 (70)	76 (183)	**269 (417)**
India	17	136	4 (4)	-	43 (52)	66 (130)	**266 (339)**
Norway	4	142	3 (6)	15 (34)	18 (20)	72 (181)	**254 (387)**
New Zealand	2	57	16 (16)	-	40 (61)	101 (159)	**216 (295)**
Turkiye	-	33	-	6 (13)	24 (25)	113 (190)	**176 (261)**
Russian Federation	6	42	5 (5)	4 (4)	34 (39)	81 (195)	**172 (291)**
Thailand	2	36	1 (1)	-	94 (109)	35 (41)	**168 (189)**
United Arab Emirates	-	18	-	1 (2)	115 (156)	23 (48)	**157 (224)**
Viet Nam	4	-	5 (5)	1 (1)	42 (51)	81 (132)	**133 (193)**
Poland	3	42	1 (2)	2 (4)	6 (7)	61 (122)	**115 (180)**
Cayman Islands	4	12	-	-	75 (236)	12 (14)	**103 (266)**
Saudi Arabia	-	60	-	-	20 (105)	-	**80 (165)**
Malaysia	4	13	1 (1)	1 (4)	39 (51)	19 (41)	**77 (114)**

(unit: cases)

Countries/Regions	Patent & Utility models		Designs		Trademarks		Total
	Domestic	PCT	Domestic	Hague	Domestic	Madrid	
Virgin Islands (British)	-	7	-	-	54 (79)	13 (22)	**74 (108)**
Cyprus	-	8	-	-	6 (12)	48 (101)	**62 (121)**
Brazil	1	25	1 (1)	-	19 (31)	15 (16)	**61 (74)**
Mexico	2	21	-	-	25 (37)	12 (17)	**60 (77)**
Liechtenstein	14	25	-	3 (10)	4 (10)	12 (37)	**58 (96)**
Portugal	2	17	1 (1)	1 (2)	15 (15)	18 (27)	**54 (64)**
Czech Republic	3	16	-	1 (2)	2 (2)	27 (79)	**49 (102)**
Chile	1	5	-	-	35 (39)	4 (4)	**45 (49)**
Bulgaria	-	1	-	2 (7)	1 (1)	37 (92)	**41 (101)**
Indonesia	1	1	2 (2)	-	23 (27)	14 (19)	**41 (50)**
The Hong Kong Special Administrative Region of the People's Republic of China	1	4	-	-	35 (55)	-	**40 (60)**
Hungary	1	10	-	2 (2)	2 (5)	24 (41)	**39 (59)**
South Africa	1	8	-	-	15 (17)	-	**24 (26)**
Malta	-	7	-	-	2 (11)	13 (27)	**22 (45)**
Estonia	-	7	-	1 (1)	5 (6)	8 (11)	**21 (25)**
Ukraine	-	1	1 (1)	2 (3)	3 (3)	14 (18)	**21 (26)**
Greece	-	7	-	-	8 (23)	6 (9)	**21 (39)**
Kazakhstan	2	-	-	-	12 (12)	5 (9)	**19 (23)**
Slovenia	1	9	-	2 (2)	1 (2)	5 (6)	**18 (20)**
Azerbaijan	-	-	-	-	16 (16)	2 (2)	**18 (18)**
Mongolia	1	-	2 (2)	-	10 (15)	5 (8)	**18 (26)**
Lithuania	-	2	-	2 (2)	2 (2)	11 (17)	**17 (23)**
Argentina	-	3	-	-	13 (15)	-	**16 (18)**
Barbados	2	6	1 (4)	-	7 (16)	-	**16 (28)**
Seychelles	-	-	-	-	15 (23)	1 (2)	**16 (25)**
Slovakia	-	7	-	-	-	9 (10)	**16 (17)**
Morocco	-	3	-	1 (5)	1 (1)	11 (28)	**16 (37)**
Philippines	1	2	-	-	8 (22)	4 (4)	**15 (29)**
Mauritius	-	1	-	-	12 (17)	1 (1)	**14 (19)**
Croatia	-	2	-	1 (1)	-	10 (10)	**13 (13)**
Pakistan	1	1	3 (3)	-	7 (10)	-	**12 (15)**
Monaco	-	-	-	-	4 (4)	8 (14)	**12 (18)**
Uzbekistan	2	-	1 (1)	-	7 (8)	2 (9)	**12 (20)**

(unit: cases)

Countries/Regions	Patent & Utility models		Designs		Trademarks		Total
	Domestic	PCT	Domestic	Hague	Domestic	Madrid	
Romania	-	1	1 (1)	1 (1)	1 (6)	7 (9)	**11 (18)**
Iceland	-	3	-	-	1 (3)	6 (13)	**10 (19)**
Cuba	-	10	-	-	-	-	**10 (10)**
Antigua and Barbuda	-	9	-	-	-	-	**9 (9)**
Republic of Moldova	-	1	-	-	-	8 (8)	**9 (9)**
Kyrgyzstan	-	2	-	-	6 (6)	-	**8 (8)**
The former Yugoslav Republic of Macedonia	-	-	-	-	-	7 (21)	**7 (21)**
Latvia	-	-	-	-	-	7 (11)	**7 (11)**
Serbia	-	2	-	-	-	5 (17)	**7 (19)**
Kuwait	-	-	-	-	7 (14)	-	**7 (14)**
Qatar	-	-	-	-	6 (30)	-	**6 (30)**
Iran (Islamic Republic of)	1	2	-	-	1 (1)	1 (17)	**5 (21)**
Bermuda	-	2	-	-	1 (1)	2 (2)	**5 (5)**
Egypt	-	1	-	-	2 (4)	2 (3)	**5 (8)**
Dominican Republic	-	-	-	-	5 (5)	-	**5 (5)**
Bahamas	-	-	-	-	5 (5)	-	**5 (5)**
Sri Lanka	-	1	2 (2)	-	2 (2)	-	**5 (5)**
Gibraltar	-	1	-	-	4 (28)	-	**5 (29)**
Belarus	-	-	-	-	-	4 (4)	**4 (4)**
Nigeria	-	-	4 (4)	-	-	-	**4 (4)**
Macao	-	-	-	-	3 (3)	-	**3 (3)**
Samoa	2	-	-	-	1 (3)	-	**3 (5)**
Isle of Man	-	-	-	1 (2)	1 (4)	1 (1)	**3 (7)**
Costa Rica	-	2	-	-	1 (1)	-	**3 (3)**
Guatemala	-	-	-	-	3 (4)	-	**3 (4)**
Jersey(U.K.)	-	2	-	-	-	1 (1)	**3 (3)**
Georgia	-	-	-	-	1 (1)	2 (2)	**3 (3)**
Colombia	-	-	-	-	1 (2)	1 (1)	**2 (3)**
Uruguay	-	-	-	-	-	2 (5)	**2 (5)**
United Republic of Tanzania	2	-	-	-	-	-	**2 (2)**
Faroe Islands	-	-	-	-	-	2 (2)	**2 (2)**
San Marino	-	-	-	-	-	2 (3)	**2 (3)**
Guernsey	-	-	-	-	-	2 (2)	**2 (2)**
Curacao	-	-	-	-	2 (2)	-	**2 (2)**

(unit: cases)

Countries/Regions	Patent & Utility models		Designs		Trademarks		Total
	Domestic	PCT	Domestic	Hague	Domestic	Madrid	
Lebanon	1	1	-	-	-	-	**2 (2)**
Jordan	-	-	-	-	2 (3)	-	**2 (3)**
Belize	-	2	-	-	-	-	**2 (2)**
Oman	-	-	-	-	-	2 (2)	**2 (2)**
Tunisia	-	1	-	-	-	1 (1)	**2 (2)**
Cambodia	-	2	-	-	-	-	**2 (2)**
Bangladesh	1	-	-	-	1 (1)	-	**2 (2)**
Bosnia and Herzegovina	-	2	-	-	-	-	**2 (2)**
Myanmar	-	-	-	-	-	1 (1)	**1 (1)**
Saint Vincent and the Grenadines	-	-	-	-	-	1 (4)	**1 (4)**
Yemen	-	-	-	-	1 (3)	-	**1 (3)**
Syrian Arab Republic	-	-	-	-	1 (1)	-	**1 (1)**
Ghana	-	-	1 (1)	-	-	-	**1 (1)**
Nepal	-	-	-	-	1 (1)	-	**1 (1)**
Sudan	1	-	-	-	-	-	**1 (1)**
Cameroon	-	-	-	-	1 (1)	-	**1 (1)**
Liberia	-	-	1 (1)	-	-	-	**1 (1)**
Armenia	-	-	-	-	1 (1)	-	**1 (1)**
Panama	1	-	-	-	-	-	**1 (1)**
Benin	-	-	1 (1)	-	-	-	**1 (1)**
Trinidad and Tobago	-	-	-	-	-	1 (3)	**1 (3)**
Vanuatu	-	-	-	-	1 (1)	-	**1 (1)**
Netherlands Antilles	-	-	-	-	1 (1)	-	**1 (1)**
Saint Lucia	-	-	-	-	1 (1)	-	**1 (1)**
Bahrain	-	-	-	-	-	1 (1)	**1 (1)**
Ethiopia	1	-	-	-	-	-	**1 (1)**
Puerto Rico	-	-	-	-	1 (2)	-	**1 (2)**
El Salvador	-	-	-	-	1 (3)	-	**1 (3)**
Nicaragua	-	-	-	1 (2)	-	-	**1 (2)**
Others	1	-	-	-	8 (9)	-	**9 (10)**
Total	8,951	43,550	3,831 (4,765)	1,565 (3,442)	13,908 (20,855)	14,061 (26,142)	**85,866 (107,705)**

Note: Figures in parentheses include multiple applications.

Examinations

Patents and utility models

(unit: cases)

Category			2019	2020	2021	2022	2023
Patents	Office Action	Approval of registration	9,637	11,483	12,900	12,851	**12,019**
		Notice of preliminary rejection or amendment	158,527	170,299	164,312	155,927	**160,912**
		Other notices	1,613	1,990	1,709	504	**514**
		Withdrawal or abandonment	2,594	2,723	3,055	3,511	**4,205**
		Total	172,371	186,495	181,976	172,793	**177,650**
	Final Decision	Approval of registration	115,302	126,228	134,338	125,619	**124,947**
		Rejection or cancellation	50,944	47,331	46,074	41,538	**44,168**
		Withdrawal abandonment, annulment, or rejection	3,914	3,997	4,298	5,335	**6,421**
		Total	170,160	177,556	184,710	172,492	**175,536**
Utility models	Office Action	Approval of registration	225	216	144	146	**111**
		Notice of preliminary rejection or amendment	4,739	4,007	3,192	2,724	**2,457**
		Other notices	21	14	8	6	**5**
		Withdrawal or abandonment	109	99	97	74	**33**
		Total	5,094	4,336	3,441	2,950	**2,606**
	Final Decision	Approval of registration	2,329	1,994	1,801	1,419	**1,280**
		Rejection or cancellation	2,815	2,254	1,854	1,524	**1,414**
		Withdrawal abandonment, annulment, or rejection	217	174	152	118	**62**
		Total	5,361	4,422	3,807	3,061	**2,756**

Designs and trademarks

(unit: cases)

Category			2019	2020	2021	2022	2023
Designs	Office Action	Publication/approval of registration	31,029 (32,218)	31,232 (32,640)	36,682 (38,470)	34,907 (36,636)	**30,406 (31,725)**
		Notice of preliminary rejection	29,303 (31,778)	27,068 (29,055)	28,415 (30,537)	26,783 (29,546)	**23,169 (25,198)**
		Other notices	-	-	-	-	**-**
		Total	60,332 (63,996)	58,300 (61,695)	65,097 (69,007)	61,690 (66,182)	**53,575 (56,923)**
	Final Decision	Approval of registration	53,987 (56,989)	51,407 (54,101)	58,103 (61,383)	54,687 (57,883)	**48,317 (51,473)**
		Rejection	7,343 (8,055)	7,095 (7,776)	7,864 (8,396)	7,743 (8,406)	**6,527 (7,131)**
		Total	61,330 (65,044)	58,502 (61,877)	65,967 (69,779)	62,430 (66,289)	**54,844 (58,604)**
Trademarks	Office Action	Publication/approval of registration	98,557 (112,244)	94,942 (108,405)	118,905 (133,969)	133,505 (149,427)	**160,149 (181,197)**
		Notice of preliminary rejection	77,623 (116,298)	67,433 (99,287)	80,913 (113,232)	88,165 (123,366)	**103,381 (148,228)**
		Other notices	-	-	-	-	**-**
		Total	176,180 (228,542)	162,375 (207,692)	199,818 (247,201)	221,670 (272,793)	**263,530 (329,425)**
	Final Decision	Approval of registration	145,794 (187,392)	133,882 (173,499)	162,874 (201,381)	167,261 (204,848)	**221,979 (273,040)**
		Rejection	32,014 (41,658)	28,219 (37,267)	31,697 (39,962)	31,000 (38,996)	**42,708 (54,565)**
		Total	177,808 (229,050)	162,101 (210,766)	194,571 (241,343)	198,261 (243,844)	**264,687 (327,605)**

Note: Figures in parentheses include multiple applications.

Average first office action pendency

(unit: months)

Category	2019	2020	2021	2022	2023
Patents / Utility models	10.8	11.1	12.2	14.4	**16.1**
Trademarks	6.8	8.9	10.8	13.9	**13.1**
Designs	5.4	4.6	5.2	4.8	**4.0**

Average total pendency

(unit: months)

Category	2019	2020	2021	2022	2023
Patents / Utility models	15.6	15.8	16.0	18.4	**20.1**
Trademarks	11.1	13.2	14.7	17.7	**17.6**
Designs	6.9	6.2	6.4	6.0	**5.2**

PCT international search reports and preliminary examinations undertaken by KIPO

(unit: cases)

Category	2019	2020	2021	2022	2023
International Search Reports	27,167	28,547	28,359	29,935	**29,285**
International Preliminary Examinations	131	100	124	105	**118**

Note: Based on KIPO data

Registrations

Registrations by IPR type

(unit: cases)

Category	2019	2020	2021	2022	**2023**
Patents	125,661	134,766	145,882	135,180	**134,734**
Utility models	2,417	2,056	1,817	1,452	**1,249**
Subtotal	128,078	136,822	147,699	136,632	**135,983**
Designs	52,850	50,694	57,545	54,775	**49,291**
Trademarks	125,594	116,153	136,629	135,333	**173,989**
Total	306,522	303,669	341,873	326,740	**359,263**

Note: Trademark registration renewals are excluded.

Comparison of domestic and foreign registrations

(unit: cases)

Category			2019	2020	2021	2022	**2023**
Patents	Domestic	Cases	94,852	103,881	110,351	99,202	**99,315**
		Ratio	75.5%	77.1%	75.6%	73.4%	**73.7%**
	Foreign	Cases	30,809	30,885	35,531	35,978	**35,419**
		Ratio	24.5%	22.9%	24.4%	26.6%	**26.3%**
	Total		125,661	134,766	145,882	135,180	**134,734**
Utility models	Domestic	Cases	2,238	1,842	1,618	1,288	**1,098**
		Ratio	92.6%	89.6%	89.0%	88.7%	**87.9%**
	Foreign	Cases	179	214	199	164	**151**
		Ratio	7.4%	10.4%	11.0%	11.3%	**12.1%**
	Total		2,417	2,056	1,817	1,452	**1,249**
Designs	Domestic	Cases	46,011	45,169	50,878	47,518	**42,019**
		Ratio	87.1%	89.1%	88.4%	86.8%	**85.2%**
	Foreign	Cases	6,839	5,525	6,667	7,257	**7,272**
		Ratio	12.9%	10.9%	11.6%	13.2%	**14.8%**
	Total		52,850	50,694	57,545	54,775	**49,291**

(unit: cases)

Category			2019	2020	2021	2022	**2023**
Trademarks	Domestic	Cases	102,333	94,892	116,997	115,442	**150,166**
		Ratio	81.5%	81.7%	85.6%	85.3%	**86.3%**
	Foreign	Cases	23,261	21,261	19,632	19,891	**23,823**
		Ratio	18.5%	18.3%	14.4%	14.7%	**13.7%**
	Total		125,594	116,153	136,629	135,333	**173,989**
Total	Domestic	Cases	245,434	245,784	279,844	263,450	**292,598**
		Ratio	80.1%	80.9%	81.9%	80.6%	**81.4%**
	Foreign	Cases	61,088	57,885	62,029	63,290	**66,665**
		Ratio	19.9%	19.1%	18.1%	19.4%	**18.6%**
	Total		306,522	303,669	341,873	326,740	**359,263**

Patent and utility model registrations by technological field in 2023

(unit: cases)

Classification	Patents			Utility models		
	Domestic	Foreign	**Subtotal**	Domestic	Foreign	**Subtotal**
Electrical machinery, apparatus, energy	8,206	2,604	**10,810**	74	29	**103**
Audio-visual technology	4,273	1,227	**5,500**	23	4	**27**
Telecommunications	1,573	477	**2,050**	8	-	**8**
Digital communication	3,013	1,739	**4,752**	-	-	**-**
Basic communication processes	429	251	**680**	-	-	**-**
Computer technology	6,770	2,146	**8,916**	3	4	**7**
IT methods for management	6,148	223	**6,371**	5	-	**5**
Semiconductors	5,342	3,732	**9,074**	6	8	**14**
Optics	2,499	1,676	**4,175**	5	5	**10**

(unit: cases)

Classification	Patents			Utility models		
	Domestic	Foreign	**Subtotal**	Domestic	Foreign	**Subtotal**
Measurement	4,677	1,347	**6,024**	38	1	**39**
Analysis of biological materials	309	164	**473**	2	-	**2**
Control	2,179	321	**2,500**	20	-	**20**
Medical technology	5,599	1,756	**7,355**	63	15	**78**
Organic fine chemistry	2,354	1,615	**3,969**	-	-	**-**
Biotechnology	1,617	1,259	**2,876**	2	-	**2**
Pharmaceuticals	1,207	848	**2,055**	-	-	**-**
Macromolecular chemistry, polymers	1,036	1,393	**2,429**	-	-	**-**
Food chemistry	2,161	137	**2,298**	6	2	**8**
Basic materials chemistry	1,897	1,419	**3,316**	1	-	**1**
Materials, metallurgy	1,734	1,197	**2,931**	1	-	**1**
Surface technology, coating	1,279	1,214	**2,493**	7	2	**9**
Micro-structural and nano-technology	17	19	**36**	-	-	**-**
Chemical engineering	2,286	800	**3,086**	31	6	**37**
Environmental technology	1,912	286	**2,198**	12	-	**12**
Handling	2,382	672	**3,054**	75	8	**83**
Machine tools	2,087	820	**2,907**	51	7	**58**
Engines, pumps, turbines	1,365	642	**2,007**	14	3	**17**
Textile and paper machines	903	510	**1,413**	5	-	**5**
Other special machines	3,604	1,084	**4,688**	109	2	**111**
Thermal processes and apparatus	1,942	259	**2,201**	16	6	**22**
Mechanical elements	1,693	842	**2,535**	52	7	**59**
Transport	5,798	1,024	**6,822**	54	9	**63**
Furniture, games	2,736	431	**3,167**	162	18	**180**
Other consumer goods	3,023	926	**3,949**	121	13	**134**
Civil engineering	5,265	359	**5,624**	132	2	**134**
Total	99,315	35,419	**134,734**	1,098	151	**1,249**

Note: Figures for 2023 are preliminary.

Patent registrations in biotechnology

(unit: cases)

Category	2019		2020		2021		2022		2023	
	Cases	Ratio	Cases	Ratio	Cases	Ratio	Cases	Ratio	**Cases**	**Ratio**
Domestic	4,534	78.4%	4,969	79.0%	4,913	76.4%	3,481	67.9%	**3,845**	**68.2%**
Foreign	1,249	21.6%	1,321	21.0%	1,514	23.6%	1,643	32.1%	**1,794**	**31.8%**
Total	5,783	100%	6,290	100%	6,427	100%	5,124	100%	**5,639**	**100%**

Note1: Figures for 2023 are preliminary.
Note2: Based on the following biotechnological categories of the Eighth Edition of the International Patent Classification: A01H; A01K 67/00~67/04; A01N 63/00~65/00; A61K 8/97~8/99; A61K 8/64~8/68; A61K 35/12~35/76; 36/00~36/9068; A61K 38/00~38/58, 39/00~39/44, 48/00, 51/00~51/10; C02F; C07H 19/00~21/04; C07K; C12C~M; C12N; C12P; C12Q; C12S; G01N 33/50~33/98.

Patent registrations in business methods

(unit: cases)

Category	2019		2020		2021		2022		2023	
	Cases	Ratio	Cases	Ratio	Cases	Ratio	Cases	Ratio	**Cases**	**Ratio**
Domestic	3,500	93.6%	4,581	94.3%	5,898	94.9%	5,892	95.2%	**6,148**	**96.5%**
Foreign	241	6.4%	277	5.7%	316	5.1%	300	4.8%	**223**	**3.5%**
Total	3,741	100%	4,858	100%	6,214	100%	6,192	100%	**6,371**	**100%**

Note1: Figures for 2023 are preliminary.
Note2: Based on the Ninth Edition of the International Patent Classification.

Registrations by resident of foreign countries/regions in 2023

(unit: cases)

Countries/Regions	Patents & Utility models		Designs		Trademarks		**Total**
	Domestic	PCT	Domestic	Hague	Domestic	Madrid	
United States of America	9,178	1,071	1,735	299	2,892 (5,399)	2,754 (4,927)	**17,929 (22,609)**
Japan	9,650	1,165	699	196	1,192 (2,068)	1,199 (2,499)	**14,101 (16,277)**
China	2,988	352	1,012	478	5,053 (5,926)	1,437 (2,541)	**11,320 (13,297)**
Germany	2,499	313	97	365	150 (284)	1,193 (3,374)	**4,617 (6,932)**
Switzerland	1,020	132	192	354	242 (403)	671 (1,810)	**2,611 (3,911)**
France	1,071	127	89	250	298 (473)	722 (1,733)	**2,557 (3,743)**
United Kingdom	791	82	114	57	373 (756)	489 (1,334)	**1,906 (3,134)**

(unit: cases)

Countries/Regions	Patents & Utility models		Designs		Trademarks		Total
	Domestic	PCT	Domestic	Hague	Domestic	Madrid	
Netherlands	672	84	169	220	55 (110)	212 (522)	**1,412 (1,777)**
Italy	365	44	53	144	114 (173)	534 (1,113)	**1,254 (1,892)**
Taiwan, Province of China	786	87	56	-	276 (393)	-	**1,205 (1,322)**
Sweden	481	48	136	33	51 (108)	248 (807)	**997 (1,613)**
Canada	256	28	39	22	184 (337)	170 (362)	**699 (1,044)**
Singapore	145	5	45	17	324 (459)	126 (264)	**662 (935)**
Australia	125	15	36	-	115 (189)	316 (617)	**607 (982)**
Denmark	143	24	73	46	25 (73)	176 (431)	**487 (790)**
Israel	249	28	2	20	24 (31)	71 (132)	**394 (462)**
Spain	91	4	3	10	57 (78)	209 (361)	**374 (547)**
Belgium	189	19	12	12	37 (41)	104 (221)	**373 (494)**
Austria	202	16	1	4	10 (28)	100 (291)	**333 (542)**
Finland	197	15	-	14	20 (70)	86 (278)	**332 (574)**
Luxembourg	97	8	17	1	47 (60)	57 (113)	**227 (296)**
Ireland	95	11	7	4	35 (72)	67 (125)	**219 (314)**
Norway	73	8	-	21	11 (25)	68 (188)	**181 (315)**
New Zealand	31	4	23	-	39 (60)	83 (179)	**180 (297)**
Russian Federation	36	5	1	4	14 (23)	74 (205)	**134 (274)**
India	68	4	1	-	27 (45)	31 (56)	**131 (174)**
Turkiye	18	2	-	3	13 (20)	55 (83)	**91 (126)**
Thailand	31	1	3	-	38 (52)	8 (16)	**81 (103)**
Poland	22	2	-	6	6 (7)	36 (88)	**72 (125)**
United Arab Emirates	11	-	-	-	52 (78)	6 (9)	**69 (98)**
Viet Nam	2	-	-	7	20 (23)	36 (56)	**65 (88)**
Cayman Islands	19	5	-	-	38 (101)	3 (3)	**65 (128)**
Malaysia	8	2	1	4	28 (34)	16 (21)	**59 (70)**
Czech Republic	18	2	-	3	2 (9)	29 (121)	**54 (153)**
Liechtenstein	19	2	-	2	3 (8)	25 (79)	**51 (110)**
Saudi Arabia	29	2	-	-	19 (39)	-	**50 (70)**
Brazil	16	3	7	-	13 (44)	6 (9)	**45 (79)**
Portugal	15	1	-	-	10 (12)	18 (29)	**44 (57)**
Barbados	22	2	-	-	7 (12)	7 (54)	**38 (90)**
Mexico	4	-	1	-	23 (32)	9 (9)	**37 (46)**

(unit: cases)

Countries/Regions	Patents & Utility models		Designs		Trademarks		Total
	Domestic	PCT	Domestic	Hague	Domestic	Madrid	
Cyprus	5	-	-	-	6 (9)	26 (91)	**37 (105)**
Chile	2	-	-	-	34 (41)	-	**36 (43)**
Antigua and Barbuda	23	6	-	-	-	-	**29 (29)**
South Africa	7	1	-	-	20 (24)	-	**28 (32)**
Malta	10	-	-	-	8 (18)	7 (22)	**25 (50)**
Iceland	-	-	22	-	-	2 (6)	**24 (28)**
Bulgaria	1	-	3	1	6 (6)	13 (27)	**24 (38)**
Philippines	3	-	1	-	6 (10)	14 (33)	**24 (47)**
Slovenia	4	1	-	6	-	11 (24)	**22 (35)**
Indonesia	-	-	-	-	17 (21)	5 (17)	**22 (38)**
Hungary	6	5	-	2	1 (3)	8 (14)	**22 (30)**
Seychelles	1	1	-	-	15 (15)	4 (5)	**21 (22)**
Greece	9	-	-	2	1 (3)	7 (11)	**19 (25)**
Virgin Islands (British)	1	-	-	-	10 (19)	6 (9)	**17 (29)**
Lithuania	3	-	-	-	3 (5)	9 (15)	**15 (23)**
Argentina	-	-	-	-	15 (15)	-	**15 (15)**
Panama	-	-	-	4	7 (20)	1 (11)	**12 (35)**
Mauritius	1	-	1	-	8 (12)	-	**10 (14)**
Mongolia	-	-	1	-	9 (11)	-	**10 (12)**
The Hong Kong Special Administrative Region of the People's Republic of China	1	-	-	-	9 (11)	-	**10 (12)**
Kazakhstan	-	-	-	-	5 (5)	4 (10)	**9 (15)**
Bermuda	2	-	-	-	2 (2)	5 (11)	**9 (15)**
Ukraine	1	-	1	-	-	6 (9)	**8 (11)**
Estonia	1	-	-	-	2 (14)	5 (13)	**8 (28)**
Slovakia	2	-	-	1	-	4 (4)	**7 (7)**
Croatia	-	-	-	1	-	5 (5)	**6 (6)**
Samoa	-	-	-	-	6 (7)	-	**6 (7)**
Morocco	-	-	-	-	-	6 (165)	**6 (165)**
Namibia	-	-	-	-	-	6 (6)	**6 (6)**
Sri Lanka	1	-	-	-	2 (3)	3 (3)	**6 (7)**
Pakistan	1	1	2	-	1 (1)	-	**5 (5)**
Colombia	1	-	-	-	3 (4)	1 (1)	**5 (6)**
Jersey(U.K.)	3	-	-	-	-	2 (4)	**5 (7)**
Kyrgyzstan	-	-	1	-	3 (3)	-	**4 (4)**
Egypt	-	-	-	-	4 (9)	-	**4 (9)**
Georgia	-	-	-	-	-	4 (4)	**4 (4)**
Monaco	-	-	-	-	-	4 (6)	**4 (6)**

(unit: cases)

Countries/Regions	Patents & Utility models		Designs		Trademarks		Total
	Domestic	PCT	Domestic	Hague	Domestic	Madrid	
Romania	2	-	-	-	-	2 (6)	**4 (8)**
Latvia	-	-	-	-	-	4 (8)	**4 (8)**
Andorra	-	-	-	-	-	4 (10)	**4 (10)**
Isle of Man	-	-	-	-	3 (17)	-	**3 (17)**
Bahamas	-	-	-	-	2 (2)	1 (1)	**3 (3)**
San Marino	1	-	-	-	-	2 (3)	**3 (4)**
Peru	1	-	-	-	2 (2)	-	**3 (3)**
Kuwait	-	-	-	-	3 (7)	-	**3 (7)**
Qatar	-	-	-	-	1 (6)	2 (5)	**3 (11)**
Uzbekistan	-	-	-	-	3 (3)	-	**3 (3)**
Costa Rica	-	1	-	-	2 (2)	-	**3 (3)**
Cuba	2	-	-	-	1 (1)	-	**3 (3)**
Serbia	-	-	-	-	-	3 (8)	**3 (8)**
Nigeria	-	-	1	-	1 (2)	-	**2 (3)**
Belize	2	-	-	-	-	-	**2 (2)**
Gibraltar	-	-	-	-	-	2 (9)	**2 (9)**
Macao	1	-	-	-	1 (1)	-	**2 (2)**
Republic of Moldova	-	-	-	-	-	2 (3)	**2 (3)**
Iran (Islamic Republic of)	-	-	-	-	-	2 (3)	**2 (3)**
Jordan	-	-	-	-	2 (5)	-	**2 (5)**
Curacao	-	-	-	-	-	2 (6)	**2 (6)**
Belarus	-	-	-	-	-	2 (2)	**2 (2)**
Bahrain	-	-	-	-	2 (2)	-	**2 (2)**
Saint Kitts and Nevis	-	-	-	-	2 (2)	-	**2 (2)**
Burundi	-	-	1	-	-	-	**1 (1)**
Bangladesh	-	-	1	-	-	-	**1 (1)**
Azerbaijan	-	-	-	-	1 (1)	-	**1 (1)**
Uruguay	-	-	-	-	1 (1)	-	**1 (1)**
Puerto Rico	-	-	-	-	1 (2)	-	**1 (2)**
Nepal	-	-	-	-	1 (1)	-	**1 (1)**
Lebanon	-	-	-	-	1 (1)	-	**1 (1)**
Fiji	-	-	-	-	1 (3)	-	**1 (3)**
Libyan Arab Jamahiriya	-	-	-	-	1 (1)	-	**1 (1)**
Syrian Arab Republic	-	-	-	-	-	1 (1)	**1 (1)**
Palau	-	-	-	-	1 (1)	-	**1 (1)**
Niger	1	-	-	-	-	-	**1 (1)**
Armenia	-	-	-	-	-	1 (1)	**1 (1)**
Others	-	-	-	-	-	1 (1)	**1 (1)**
Total	31,831	3,739	4,659	2,613	12,173 (18,509)	11,650 (25,653)	**66,665 (87,004)**

Note: Figures in parentheses include multiple applications

Trials and Appeals

Requests for trial and appeal

(unit: cases)

Category		2019	2020	2021	2022	2023
Appeal against examiner's decision to reject application	Patents	2,820	2,110	2,196 (2,196)	1,589 (1,589)	**1,700 (1,700)**
	Utility models	128	59	33 (33)	28 (28)	**22 (22)**
	Designs	58	50	49 (49)	41 (41)	**39 (39)**
	Trademarks	1,330 (1,868)	1,021 (1,615)	1,104 (1,724)	748 (1,115)	**1,073 (1,563)**
	Subtotal	4,336 (4,874)	3,240 (3,834)	3,382 (4,002)	2,406 (2,773)	**2,834 (3,324)**
Appeals against examiner's decision to dismiss amendment	Patents	-	-	-	-	**-**
	Utility models	-	-	-	-	**-**
	Designs	-	-	1 (1)	-	**1 (1)**
	Trademarks	3	-	1 (1)	1 (1)	**-**
	Subtotal	3	-	2 (2)	1 (1)	**1 (1)**
Appeals against examiner's decision of cancellation	Patents	-	-	-	-	**-**
	Utility models	-	-	-	-	**-**
	Designs	3	3	3 (3)	1 (1)	**2 (2)**
	Trademarks	-	-	-	-	**-**
	Subtotal	3	3	3 (3)	1 (1)	**2 (2)**
Trials for correction	Patents	127	119	150 (150)	109 (109)	**125 (125)**
	Utility models	2	3	4 (4)	-	**1 (1)**
	Designs	-	-	-	-	**-**
	Trademarks	-	-	-	-	**-**
	Subtotal	129	122	154 (154)	109 (109)	**126 (126)**
Invalidation	Patents	478	383	408 (408)	374 (374)	**336 (336)**
	Utility models	15	20	12 (12)	11 (11)	**14 (14)**
	Designs	215	188	152 (152)	160 (160)	**151 (151)**
	Trademarks	472 (541)	372 (433)	291 (342)	264 (323)	**231 (282)**
	Subtotal	1,180 (1,249)	963 (1,024)	863 (914)	809 (868)	**732 (783)**

(unit: cases)

Category		2019	2020	2021	2022	2023
Trials to confirm scope of IP right	Patents	348	374	445 (445)	300 (300)	**770 (770)**
	Utility models	21	17	11 (11)	14 (14)	**11 (11)**
	Designs	136	169	155 (155)	142 (142)	**123 (123)**
	Trademarks	103 (123)	108 (129)	112 (123)	88 (104)	**132 (138)**
	Subtotal	608 (628)	668 (689)	723 (734)	544 (560)	**1,036 (1,042)**
Cancellation trials on trademark registration	Patents	-	-	-	-	**-**
	Utility models	-	-	-	-	**-**
	Designs	-	-	-	-	**-**
	Trademarks	2,574 (3,193)	2,497 (3,003)	2,395 (2,827)	2,411 (2,802)	**2,459 (2,782)**
	Subtotal	2,574 (3,193)	2,497 (3,003)	2,395 (2,827)	2,411 (2,802)	**2,459 (2,782)**
Opposition of patent/ utility model	Patents	174	146	154 (154)	149 (149)	**186 (186)**
	Utility models	1	9	6 (6)	2 (2)	**1 (1)**
	Designs	-	-	-	-	**-**
	Trademarks	-	-	-	-	**-**
	Subtotal	175	155	160 (160)	151 (151)	**187 (187)**
Grand total	Patents	3,947	3,132	3,353 (3,353)	2,521 (2,521)	**3,117 (3,117)**
	Utility models	167	108	66 (66)	55 (55)	**49 (49)**
	Designs	412	410	360 (360)	344 (344)	**316 (316)**
	Trademarks	4,482 (5,728)	3,998 (5,180)	3,903 (5,017)	3,512 (4,345)	**3,895 (4,765)**
	Grand total	9,008 (10,254)	7,648 (8,830)	7,682 (8,796)	6,432 (7,265)	**7,377 (8,247)**

Note1: Figures in parentheses include multiple applications.

Note2: Opposition of patents / Utility model has been enforced from March, 2017

* Rejection refers to appeals against examiners' decisions of refusal and appeals against examiners' decisions to dismiss utility models.

** Invalidation refers to invalidation trials and trials for invalidation of corrections.

Successful petitions

(unit: cases)

Category		2019		2020		2021		2022		2022	
		Acceptance	Ratio	Acceptance	Ratio	Acceptance	Ratio	Acceptance	Ratio	**Acceptance**	**Ratio**
Ex partes	Patents	1,977	36.3	1,341	39.9	1,008	36.8	747	33.2	**578**	**29.9**
	Utility models	48	24.2	45	24.9	16	28.1	11	29.7	**7**	**25.0**
	Designs	27	32.5	20	40.8	8	26.7	27	33.8	**9**	**29.0**
	Trademarks	1,017 (1,607)	55.2 (60.4)	693 (1,063)	55.9 (60.4)	536 (884)	57.0 (61.0)	456 (733)	56.0 (56.9)	**477 (821)**	**55.4 (64.0)**
	Subtotal	3,069 (3,659)	40.5 (43.6)	2,099 (2,469)	43.4 (46.1)	1,568 (1,916)	41.6 (44.8)	1,241 (1,518)	39.0 (41.5)	**1,071 (1,415)**	**37.5 (43.2)**
Inter partes	Patents	653	53.4	382	42.8	361	47.5	382	52.0	**355**	**52.4**
	Utility models	16	35.6	8	24.2	13	37.1	10	45.5	**11**	**37.9**
	Designs	142	48.3	140	53.8	141	46.2	154	46.7	**177**	**51.8**
	Trademarks	2,753 (3,173)	74.0 (73.6)	1,877 (2,351)	70.6 (72.4)	2,268 (2,627)	78.8 (79.1)	1,792 (2,030)	77.7 (77.4)	**2,463 (2,718)**	**81.9 (81.5)**
	Subtotal	3,564 (3,984)	67.5 (67.8)	2,407 (2,881)	62.6 (65.0)	2,783 (3,142)	69.9 (71.1)	2,338 (2,576)	68.9 (69.5)	**3,006 (3,261)**	**74.1 (74.4)**
Grand total	Patents	2,630	39.4	1,723	40.5	1,369	39.1	1,129	37.8	**933**	**35.7**
	Utility models	64	26.3	53	24.8	29	31.5	21	35.6	**18**	**31.6**
	Designs	169	44.8	160	51.8	149	44.5	181	44.1	**186**	**49.9**
	Trademarks	3,770 (4,780)	67.8 (68.5)	2,570 (3,414)	65.9 (68.2)	2,804 (3,511)	73.4 (73.6)	2,248 (2,763)	72.0 (70.6)	**2,940 (3,539)**	**76.0 (76.6)**
	Total	6,633 (7,643)	51.6 (53.6)	4,506 (5,350)	51.9 (54.7)	4,351 (5,058)	56.2 (58.1)	3,579 (4,094)	54.4 (55.6)	**4,077 (4,676)**	**59.0 (61.0)**

Note1: Figures in parentheses include multiple applications.

Note2: The successful petitions refer to the number of petitions granted. These figures exclude cases where the registration was decided on the basis of an examiner's reconsideration before a trial and invalidation of a patent process. The figures in parentheses indicate the percentage of the petitions granted.

· Ex partes: Appeals against examiners' decisions of refusal / Appeals against examiners' decisions of cancellation / Appeals against examiners' decisions to dismiss amendments / Trials for correction

· Inter partes: Invalidation trials / Trials to confirm scope of IP rights / Trials for invalidation of correction / Trials for granting non-exclusive licenses / Trials for invalidation of registrations for extension of patent right term / Trials for invalidation of registration for renewals of trademark right term / Cancellation trials on trademark registrations / Cancellation trials on registrations of exclusive or non-exclusive licenses / Trials for invalidation on registrations for conversion of classification of goods

Comparison of domestic and foreign trial requests

(unit: cases)

Category		2019	2020	2021	2022	**2023**
Patents	Domestic	2,545	2,064	2,293	1,633	**2164**
	Foreign	1,402	1,068	1,060	888	**953**
Utility models	Domestic	164	102	63	51	**48**
	Foreign	3	6	3	4	**1**
Designs	Domestic	381	386	337	323	**286**
	Foreign	31	24	23	21	**30**
Trademarks	Domestic	2,939	2,780	2,726	2,512	**2,807**
	Foreign	1,543	1,218	1,177	1,000	**1,088**
Total		9,008	7,648	7,682	6,432	**7,377**

Note: Multiple applications for trademarks and designs are treated as single applications.

Income and Expenditures / KIPO Staff

Income

(unit: USD)

Category	2019	2020	2021	2022	2023
Income from fees	443,443,731	484,871,681	533,627,760	471,906,646	**475,832,558**
Income carried over from the previous year	17,542,755	9,997,345	48,094,637	78,923,259	**45,039,535**
Internal income and others	115,788,238	109,041,593	70,221,721	116,525,316	**139,237,984**
Total	576,774,723	603,910,619	651,945,020	667,356,804	**660,110,078**

Expenditures

(unit: USD)

Category	2019	2020	2021	2022	2023
Non-personnel resources (projects)	413,003,996	400,492,035	426,200,090	477,916,930	**503,641,085**
Personnel resources	116,951,668	122,678,761	130,149,617	119,738,924	**120,303,101**
Deposit for special fund	37,046,713	33,516,814	5,680,937	23,734,177	**23,255,814**
Total	567,002,377	556,687,611	562,030,644	621,390,823	**647,200,000**

KIPO staff

(unit: number of positions)

Category		2019	2020	2021	2022	2023
Examiners	Patents and utility models	818	830	861	876	**876**
	Designs and trademarks	195	198	194	214	**213**
Administrative judges		107	107	107	107	**106**
Administrative staff		621	632	649	597	**596**
Total		1,741	1,767	1,811	1,804	**1,791**

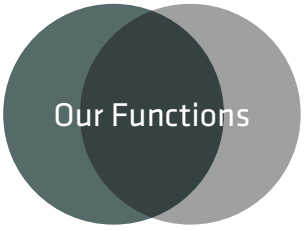
Academic and professional credentials of KIPO examiners

(unit: number of staff)

Category		Ph. D	Master's degrees	Patent attorney certificate only	Lawyer certificate only	Professional engineer certificate only
Examiners	Patents and utility models	279	143	27	2	19
	Trademarks	6	9	4	2	0
	Designs	3	6	0	0	0
	Total	**288**	**158**	**31**	**4**	**19**

About KIPO

The Korean Intellectual Property Office is the governmental authority in charge of affairs regarding patents, utility models, industrial designs, and trademarks. It was established in 1949 as an external bureau of the Ministry of Commerce and Industry under the name of Patent Bureau. In 1977, the Patent Bureau became an independent office of the Ministry of Commerce and Industry and took the name of Korean Industrial Property Office. In 2000, it was renamed the Korean Intellectual Property Office (KIPO).



The main functions of KIPO include: the examination and registration of intellectual property rights; the conducting of trials on intellectual property disputes; the management and dissemination of information on intellectual property rights; the promotion and enhancement of public awareness of invention activities; the advancement of international cooperation; and the training of experts on intellectual property rights.

In response to the competitive global environment where intellectual property is becoming increasingly valuable, we aim to advance Korea and its position in the world through innovative intellectual property.

We support technological innovation and industrial development by promoting the creation, protection, and utilization of intellectual property. We strive to provide world-class intellectual property services; to promote the economic and industrial use of intellectual property; and to create an environment respectful of the intellectual property system.

Korean Intellectual
Property Office

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