

Intellectual Property Initiatives for Industrialization and Innovation

# Triatera



# Foreword

All businesses should have an intellectual property (IP) management strategy incorporated into their business plans from the earliest stages. Also, high-quality patents are the basis for strategic IP management. IP Trilateral offices are exploring collaborations to advance "IP for Business".

The Trilateral offices created a brochure that lists business resources that are provided by each of the Trilateral partner offices. Particular emphasis is placed on how the offices provide the necessary tools to enhance users' awareness and understanding of how to leverage IP strategically and ensure the granting of high-quality patents, which forms the foundation of effective IP management. The Trilateral Offices will continue to provide the required resources to enable enterprises to formulate IP strategies that align seamlessly with their business objectives, while enhancing the quality of services and patent examination through a shared understanding of what defines a high-quality patent.

These collective efforts on "IP for Business" stand as a testament to the power of coordinated action by the Trilateral Cooperation.

This document includes the information that was provided by the Trilateral Offices and WIPO at the 42nd Trilateral Conference on 14 October 2024 in Tokyo and subsequent updates made by each office.



Section 2 provides a list of initiatives of the Trilateral Ooffices that can be used to assist enterprises with developing IP strategies that are aligned with their business management. Section 3 contains relevant patent quality-related initiatives.



# IP Intelligence: How to enhance the strategic use of IP for business growth

All businesses should have an IP management strategy incorporated into their business plans from the earliest stages. They should develop an IP strategy that analyses technology trends, their competitors IP portfolios, estimates the value of their own IP assets, and also considers such points as open versus closed strategies. There is no single, or best, way to develop and implement an IP strategy. Determining how a particular company can get the most of IP, and how to go about doing so, depends on the type of company and its stage of development, the company's technology, and its overall business goals. This section shares the initiatives of the offices to assist enterprises in developing IP strategies that are aligned with their business management.





# 2.1 EPO

The European Patent Office (EPO) has introduced a series of initiatives aimed at enhancing the strategic use of intellectual property (IP) to support business growth, especially for small and medium-sized enterprises (SMEs) and startups. These initiatives focus on improving access to patent information, reducing barriers to IP protection, fostering investor connections, and providing tailored support to businesses at different stages of their IP journey. The key measures include:

### **EPO Observatory on Patents and Technology:**

- The EPO established the Observatory on Patents and Technology in October 2023 to support all actors in the innovation ecosystem with data, information and knowledge to be able to navigate the innovation landscape successfully, with small business community being a key stakeholder in its activities.
- $\cdot$  As a first port of call for anyone interested in the future of innovation, the Observatory quantifies and explores trends and challenges throughout the innovation ecosystem and makes resources available publicly and free of charge through its studies, platforms and tools. It also provides industry, innovators, investors, policymakers, researchers and IP professionals with reputable evidence for informed decision-making.
- **Deep Tech Finder:** The Observatory is well aware of the



importance of patents for deep tech innovation, not only as a means of protecting investments in new technologies, but also as way to signal potential value to prospective investors. The Deep tech finder was developed precisely for this purpose.

 $\cdot$  By enabling other companies and researchers active in deep tech, as well as investors, to search for European startups filing patent applications with the EPO, this new tool sheds light on

ventures that have the potential to bring new technology to market on a European scale. By harnessing the EPO's expertise in patent information, the tool also helps potential investors and business partners to find out what inventions are being developed in specific technology fields and assess their levels of protection by European patents.





# **Support and Training Initiatives**

- **PATLIB Network:** The EPO has established a network of over 320 PATLIB centres across Europe to support SMEs in managing their intellectual property. These centres provide localised support, such as patent searches, advisory services, and strategic guidance, to help businesses make informed decisions about their patents.
- EPO Patent Academy: The Academy unit offers training programmes focused on both the technical and legal aspects of patents. Designed for SMEs, these programmes equip participants with the skills needed to use patent information strategically, understand IP regulations, and learn how to draft, file, and manage patents effectively.
- In collaboration with partners in Europe, the Academy further trains on intellectual property management and technology transfer. It provides webinars, workshops, and courses helping businesses incorporate IP into their strategies and understand the patenting process.

# **Access to Patent Information**

**Espacenet:** Espacenet is a free tool providing access to over 120 million patent documents globally. It allows SMEs and startups to explore existing patents, understand the state of technology, and identify opportunities for innovation or partnerships, while also helping to avoid infringement.



# **Cost Reduction and Simplification of Patent Processes**

- **Revised Fee Structure:** The EPO has introduced a 30% discount on patent fees for micro-entities, making the patenting process more accessible. The reduction applies to all main fees in the patent grant procedure, lowering financial barriers for smaller businesses aiming to protect their innovations. For more information on which entities are eligible for this reduction, see the FAQ and OJ EPO 2024, A8.
- This fee reduction for micro-entities complements existing SME support measures, including the 30% reduction in filing and examination fees for an application made in a language other than English, French or German by an SME based in an EPC contracting state. For more information on language related fee reductions, see the FAQ and OJ EPO 2024, A8.
- Unitary Patent: The Unitary Patent system significantly simplifies the process of obtaining patent protection across Europe. It allows businesses, particularly SMEs, to secure patent coverage in multiple countries through a single application, reducing administrative burdens and associated costs. To support SMEs in accessing the Unitary Patent system, there is EUR 500 lump sum compensation available for the costs of translating the application.
- To be eligible for the compensation, the SME must have its



residence or principal place of business in an EU member state and, must have filed the European patent application or Euro-PCT application leading to the Unitary Patent in an official EU language other than English, French or German (for more information on the compensation scheme see the Unitary Patent Guide at https://www.epo.org/en/legal/guide-up). This compensation scheme complements above mentioned fee reduction scheme for micro-entities.

# **Recent Collaboration and Awareness** Initiatives

Joint Awareness Campaigns with the Directorate-General for **Research and Innovation (DG RTD):** In 2024, the EPO signed a

cooperation agreement with DG RTD to enhance joint awareness campaigns on the value of effective IP management. These campaigns focus on showing how intellectual assets can be converted into economic value, particularly benefiting startups and SMEs by emphasising the importance of strategic IP management.

• The initiatives introduced by the EPO aim to empower businesses, especially SMEs and startups, by offering better access to knowledge, simplifying patenting processes, and enhancing the strategic use of IP. These measures not only lower the barriers to innovation but also foster an environment where businesses can use IP as a powerful tool for growth and competitiveness in the market.





# 2.2 JPO

# **Initiatives to Support Business** Acceleration

As part of IP support for business acceleration, the Japan Patent Office (JPO) introduces here the initiatives implemented by the National Center for Industrial Property Information and Training (INPIT).

Project provides assistance for small and medium-sized enterprises (SMEs) by proposing solutions through experts' analysis of market, business and IP information. INPIT has experience with assisting company searches in areas including finding new markets where they can make the most of their own technologies; identifying their own strengths against competitors; and locating other companies that provide technologies they don't have.

#### IP Landscape Support Project: The IP Landscape Support

### **IP Acceleration programs for Startups and Universities:**

Startups based on cutting-edge technology have a high potential in light of business advantages, so it is significantly important for

business expansion to protect IP. Additionally, strategic IP management is crucial for utilizing intellectual assets generated in universities to produce outcomes that address social issues and lead to social implementation.

In IPAS (IP Acceleration program for Startups), INPIT dispatches an IP mentoring team of business and IP experts to startups, mainly during the early stages, in order to support the development of IP strategies incorporated into business strategies.

In iAca (IP Acceleration program for Academic R&D projects) and iNat (IP Acceleration program for National R&D projects), INPIT dispatches IP strategy experts who are experts in IP management in order to support the social implementation of R&D results within universities.

Specialized Consultation Desks: The INPIT has established five specialized consultation desks staffed by IP strategy experts who have advanced expertise and practical experience in IP strategies, and who are available to offer free consultations. These IP strategy experts also provide support for SMEs, startups and universities in coordination with IPAS, iAca and iNat.





# **Analysis of Patent Application Trends**

Green Transformation Technologies Inventory (GXTI): GXTI is a technology classification table related to Green Transformation (GX) published by the JPO in 2022. It allows for an overview of technologies across five technical categories and four cross-sectional perspectives.

A survey was conducted to summarize the patent application trends in various countries based on the technical categories of GXTI, identifying areas where Japan has strengths. The results of this survey were published in May 2023. In addition, <u>a feature that</u> <u>allows for easy searches based on GXTI</u> was announced on the JPO's website in February 2025.

• **Technology Trend Survey:** The JPO conducts surveys on technology themes that are expected to advance in the future based on patent information. These surveys clarify the direction of research and development and analyze areas where Japanese industry holds advantages or disadvantages. The results are then published.

These survey results are utilized as examination materials and are considered useful for companies when referenced alongside management information to assist in formulating strategies for R&D and business.

Note that these surveys are intended for the Japanese industrial sector, and an English version is not provided.



# 2.3 USPTO

### **Tools/Datasets**

- **AI Patent Dataset:** Has been updated to identify which of the 15.4 million U.S. patent documents (patents and pre-grant publications, or PGPubs) published from 1976 through 2023 contain AI. Using this dataset, businesses focused on AI can assess trends, evaluate competitive innovations, and craft strategies based on emerging technologies in the AI space.
- Patent Litigation Dataset: Provides detailed information on patent-related litigation cases in U.S. district courts filed during the period 1963-2020 (96,966 cases as of March 2024). With this, companies can analyze litigation trends and monitor high-risk patents to strengthen their patent enforcement strategies.
- Patent Trial and Appeal Board (PTAB) data tools and IT systems: Contains searchable decisions or documents in any publicly available publication, patent on appeal, or trial (<u>https://</u> <u>www.uspto.gov/patents/ptab/ptab-it-systems</u>). This can help companies stay informed about post-grant proceedings and opposition risks, which can inform defensive patent strategies.
- Patent assignment dataset: The USPTO maintains a patent assignment database that has been updated to contain detailed information on 10.5 million patent assignments and other transactions recorded at the USPTO since 1970. The USPTO also



permits recording of other documents that affect title (such as certificates of name change and mergers of businesses) or are relevant to patent ownership (such as licensing agreements, security interests, mortgages, and liens). The dataset can be searched with the assignor's or assignee's name, the patent number, application number, publication number, or other identifying information. The Office of Chief Economist of the USPTO has released both patent and trademark assignment datasets (also see next section) in formats more convenient for comprehensive statistical analysis than has been previously available. The USPTO Patent Assignment Dataset is an organized relational database of assignments and other transactions associated with US patent documents, available for download at: https://www.uspto.gov/ip-policy/economic-research/

#### research-datasets/patent-assignment-dataset.

• **TM assignment dataset:** The USPTO records assignments of trademark applications and registrations to maintain a complete history of claimed interests in a mark. The Office also records supporting documentation for transactions that affect title or otherwise pertain to mark ownership including mergers, name changes, security interest agreements, and licenses. The 2023 update to the Trademark Assignment Dataset contains detailed information on more than 1.38 million assignments and other transactions recorded at the USPTO between March 1952 and January 2024, involving 2.39 million unique trademark properties (an individual application or registration).



- Patents View: A tool for visualizing and exploring patent data, including granted patents and pre-grant publications through June 30, 2024. This tool can be used to track technological trends, identify innovation hotspots, and explore potential collaboration or competition in specific industries.
- Patent Center: Provides a centralized location to all users for electronic filing and management of patent applications. Patent Center incorporates filing and application management within a single user interface for enhanced user experience, and currently allows submission of the specification, claims, abstract, and drawings in a single DOCX document without the need to manually separate sections.
- **Global Dossier:** Global Dossier is a set of business services that provides intellectual property (IP) stakeholders free, secure, one-strop access to the dossier information of all applications that comprise a family and that have been filed in participating IP offices. The USPTO provides a link to Global Dossier that provides stakeholders with the ability to access the full file history information on a patent application family from the IP5 Offices.

Webpages Dedicated to Understanding the Patent System and Protecting intellectual property rights (IPR): Offers resources explaining the patent process, from filing to enforcement. Companies can educate their teams and decision-makers about patent rights and strategies, ensuring an informed approach to IP.

> Inventor & Entrepreneur Resource Webpage: Offers educational resources and tools to help inventors and entrepreneurs understand the IP system. Small businesses can access guidance on protecting their

innovations, forming the foundation of their IP strategy. This is the primary landing page for customers new to IP. It gets ~ 58K page views a year. It has an excellent 88% engagement rate (i.e. users on the page engage with links, actions, etc. - so this metric shows it's doing a great job directing customers to the right places). Total, these landing pages for people new to the IP process get around 73.6K views a year, or 6,000 views a month.

- international cooperation.
- initiatives.

 SME Resource Webpage: Provides tailored resources for small and medium enterprises (SMEs). SMEs can develop IP strategies that align with their growth and budgetary constraints, maximizing their competitive advantage. The USPTO shares resources from federal agencies and international organizations for SMEs to grow a business and to protect their IP abroad through

 Economic Research Page: Provides access to reports, studies, and data on the economic impact of intellectual property and innovation in the U.S. Companies can use this resource to understand the broader economic trends related to patents, trademarks, and innovation, helping them align their IP strategies with market realities and competitive pressures. Insights gained from this research can aid businesses in making data-driven decisions regarding their IP investments and R&D

• International IP Treaties: Provides information on international patent treaties such as the Patent Cooperation Treaty (PCT), Patent Law Treaty, Trademark Law Treaty, Trade-related treaties and agreements

(TRIPS). Enables businesses to secure IP protection abroad, crucial for companies operating in global markets.

- Protecting intellectual property rights (IPR) Toolkits: Offers IPR toolkits for companies seeking international IP protection, especially in foreign markets. It helps businesses develop IPR protection strategy, and register patents, trademarks, and copyrights in key foreign markets, including defensively in countries where IPR violations are common.
- · IP Identifier: This user-friendly, virtual resource enables users to identify whether they have IP and the IP protections they need to support and advance their business, invention, or brand. The IP Identifier serves as an important foundation for an innovator. entrepreneur or creator's IP journey. In addition to the tool helping identify a person's or company's intellectual property, it provides easily digestible information on intellectual property - patents, trademarks, copyrights, and trade secrets. The IP Identifier, which launched January 2023, has had ~715K page views in the past year. These numbers are phenomenal—and will likely increase with the recent launch of the third module.
- **Open Data Portal**<sup>beta</sup>: Billed as the "gateway to USPTO data", the Open Data Portal (ODP) is a unified platform that offers public patent and trademark data all in one place. ODP will fold several data dissemination services into one central website that empowers the user to rapidly discover and easily extract USPTO data in the way that they want. A new ODP is coming soon, but the current Developer Hub will continue to run in parallel with the new ODP through 2025.



# **Initiatives/Support Programs**

Global Intellectual Property Academy (GIPA): Provides education on global IP laws and best practices. This can help companies develop a comprehensive international IP strategy by understanding global IP frameworks.



· Invention-Con: An annual conference that brings together inventors, entrepreneurs, and IP experts to discuss innovation and IP protection. Provides networking opportunities and insights

into how businesses can align their IP strategies with broader innovation goals.

- · IP Attaché Program: Places intellectual property (IP) experts in U.S. embassies and consulates around the world to assist U.S. businesses with IP protection and enforcement in foreign markets. Companies can use the program to navigate IP challenges in international markets, get guidance on local laws, and address issues like counterfeiting or piracy, ensuring strong IP protection as they expand globally.
- **Co-Organized Programs with SBA:** Provides joint programs with the Small Business Administration (SBA), including Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs, to assist small businesses with IP education and strategy development. Small businesses can leverage these programs to better understand how to use IP as a tool for growth and competitive advantage.



### **USPTO Training for Stakeholders:**

- i. StART (Stakeholder Application Readiness Training): StART (https://www.uspto.gov/patents/training/start) is for independent inventors, entrepreneurs, and small business communities who want to file patent applications without the assistance of a registered patent agent or attorney. It provides training and one-on-one assistance to independent inventors in preparing their application packet materials and filing the application.
- ii. STEPP (Stakeholder Training on Examination Practice and Procedure Program): A free training program to provide insight into the examination process used by patent examiners. Businesses and inventors can attend specific STEPP sessions geared towards their knowledge level to learn about patent prosecution from the USPTO's perspective, which helps them craft more effective patent applications and build a robust IP strategy. For international agents and attorneys that are registered for the purpose of representing applicants before the USPTO, a four-day virtual course is also available. https://www.uspto.gov/patents/training/stepp
- iii.SOaR (Stakeholder Offerings and Resources): Offers a variety of training and educational resources for stakeholders to better understand USPTO practices and



policies. Companies can leverage SOaR resources to stay informed about the latest USPTO procedures and developments, enabling them to adjust their IP strategies accordingly. https://www.uspto.gov/patents/training/ soar

• Patent Pro Bono Program: The USPTO provides free patent legal assistance for eligible inventors or small business program in preparing and filing a patent application. The Patent Pro Bono Program is a nationwide network of independently operated

regional programs that matches volunteer patent attorneys and agents with qualified inventors and small businesses to provide free legal assistance in securing patent protection.

**Journeys of Innovation:** The USPTO shares relatable stories that chronicle the journeys of inventors and entrepreneurs to inspire and encourage innovation. The stories also emphasize the importance of creating and protecting intellectual property, and the critical role it plays in innovation. <u>https://www.uspto.gov/</u> learning-and-resources/journeys-innovation



# 2.4 WIPO

## Key developments in 2023-2024 by the IP for Business Division

WIPO's IP for Business Division (IPBD), under the IP and Innovation Ecosystems Sector, has been actively involved in implementing various initiatives and solutions to support entrepreneurship policies and strategies at national, regional, and international levels. These efforts have been geared towards empowering businesses, particularly SMEs and startups, to understand, manage, and leverage intellectual property effectively. Some of the key initiatives and solutions include:

• **Development of Comprehensive IP Tools and Materials:** The IPBD has developed a range of tools and materials designed to assist businesses in understanding and utilizing intellectual property. These resources include guides, diagnostic tools, podcasts, and other educational materials aimed at demystifying IP concepts and providing practical insights. To illustrate this, we can refer to the WIPO IP Diagnostics tool, an online free assessment tool, which is already available in more than 30 variations. This tool has been accessed by around 40 000 visitors since its launch in November 2021.

• **IP Management Clinics for SMEs/Startups:** This is a four-month program that supports innovative companies to formulate their IP strategies based on their business plan and IP portfolio. The





selected companies will benefit from combined business and legal mentoring from IP and business experts, across various sectors and industries This program covers a variety of sectors and industries from artificial intelligence to fashion, agribusiness, and creative fields. We work closely with IP Offices, innovation agencies, incubators, and accelerators across the globe to implement this program. In 2023-2024, we implemented 20 clinics across 41 countries.

Support to National IP Offices and SME Support Institutions: IPBD engaged in collaboration with 60 SME support institutions and five National IP Offices to enhance their portfolio of IP services for SMEs and strengthen their Business Support Units.

navigate the world of IP with ease.



### - Launch of the SME Support Institutions Platform (SSIP) (wipo.

int). The Platform connects small and medium enterprises (SMEs) with over 500 institutions across 140 countries, including patent offices, technology transfer hubs, business innovators, and Chambers of Commerce. It provides access to invaluable resources tailored to specific local contexts, helping businesses

• Support Starup funders: IPBD provided training and one to one session with IP experts to startup funders in LATAM (10), EPFL (7), Poland (5), Monaco (8)

## Activities of the IP Analytics Section, **Technology and Innovation Support** Division

- The biennial WIPO Technology Trends report, a flagship WIPO publication, offers data-rich IP analysis alongside relevant scientific literature, policy and economic impacts, and discussion from domain experts. This informs and supports business leaders, researchers and policy-makers in their decision-making. Previous editions of the WIPO Technology Trends series have included Artificial Intelligence and Assistive Technologies, and the latest edition, focusing on the Future of Transportaition, was published in February 2025.
- · Additionally, WIPO collaborates with Member State partners to produce Patent Landscape Reports, exploring patenting trends in specific technologies. Recent patent landscape reports in 2024 have looked at Agrifood technologies, Generative AI, Mapping patents to the UN SDGs, preceded by a landmark report in 2023 looking at COVID-19 vaccines and therapeutics.
- · WIPO also maintains a Patent Analytics Resource Hub which include various methodology resources such as the Guidelines for Preparing Patent Landscape Reports, the Patent Analytics Handbook, and a Manual on Open Source Patent Analytics.



# The importance of Offices' role in granting high quality patents



High-quality patents are the basis for strategic IP management. IP Offices position their initiatives to grant high-quality patents in their strategic plans, but "What are high-quality patents?" The Heads of the Trilateral Offices and WIPO will share their respective initiatives related to patent quality, with the aim of sharing successes and challenges.





# 3.1 EPO

# **EPO Quality Initiative**

In 2024, the European Patent Office (EPO) released its Quality Action Plan 2024 and introduced the Quality Dashboard, which provides regular updates into key performance indicators (KPIs) for quality. Additionally, the EPO published the Quality Report 2023, which offers a detailed overview of the activities and initiatives undertaken to maintain high patent quality. These developments reflect the EPO's ongoing commitment to transparency, excellence, and stakeholder engagement in the patent examination process.





# **Quality Action Plan 2024**

The Quality Action Plan 2024 consolidates the EPO's objectives and actions to uphold high standards in patent quality. Key highlights include:

- **Examiner Technical Training:** Technical training for examiners has been enhanced through collaboration with industry and academia. This ensures examiners remain up to date with emerging technologies, supporting consistency, clarity, and high standards in patent assessments.
- Active Search Divisions: The EPO's active search divisions initiative has shown significant progress, with users noting improvements in addressing fallback positions during the examination process. This approach promotes collaboration among examiners, resulting in clearer written opinions and greater legal certainty by identifying and addressing objections early.
- Ongoing Harmonisation: Efforts to harmonise examination practices across technical communities are ongoing, leading to improvements in consistency and alignment. These initiatives are informed by user feedback and ensure greater predictability and reliability in decision-making.
- Third-Party Observations Study: The EPO has reviewed and analysed feedback from third-party observations, with findings supporting further improvements in harmonisation. These efforts contribute to increased transparency and inclusivity within the examination process.



- Addressing clarity with Users: The EPO regularly engages with users to address clarity issues in examination processes. This year a workshop has specifically focused on clarity to share and align views and practice on such key requirement with users, helping to improve consistency in examination practices.
- **Improved Patent Processing Timeliness:** The EPO continues to focus on improving patent processing timeliness as part of its commitment to enhancing service delivery. By streamlining workflows and optimising examination processes, the EPO aims to provide businesses with predictable timelines, enabling them to plan effectively and secure timely IP protection for their innovations.
- **Digital Workflow and Collaboration Tools:** Investments in digital workflows have improved collaboration among examining divisions. Platforms like MyEPO enable seamless communication between examiners and applicants, making the patenting process more efficient and contributing to higher examination quality.
- Al Tools for Patent Examination: The EPO uses artificial intelligence to classify applications and allocate search tasks to the appropriate examiners. This ensures that each application is examined by an expert with the relevant skills, maintaining consistency and a high standard of patent quality.
- **Future planning:** The Quality Action Plan 2025 is in preparation, incorporating feedback from stakeholders and building on the initiatives of the 2024 plan. The focus remains on continuous improvement in patent quality and alignment with evolving user needs.



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# **Quality Dashboard**

overarching goal of maintaining excellence.

View the Quality Dashboard

# **Quality Report 2023**

Stakeholder Engagement and User Feedback: The EPO places significant emphasis on engaging with its stakeholders to refine and improve its processes. The Quality Report 2023 stands as the most comprehensive report to date, detailing the EPO's extensive efforts in stakeholder engagement, including feedback from applicants, user satisfaction surveys, and collaborative meetings. These initiatives underscore the EPO's dedication to incorporating real-world insights into its examination practices, ensuring that its services remain responsive to user needs and expectations.

· The Quality Dashboard provides a transparent overview of the EPO's performance, offering regular updates on key quality indicators. By presenting stakeholders with clear insights into progress and quality outcomes, the dashboard reinforces the EPO's commitment to accountability and continuous improvement. It ensures users can track the impact of quality initiatives, aligning examination processes with the EPO's

More on Stakeholder Quality Assurance Panels (SQAPs): The Quality Report 2023 highlights the pivotal role of Stakeholder

Quality Assurance Panels (SQAPs), which involve European patent attorneys and internal EPO experts in assessing the quality of randomly selected patent searches and decisions. These panels provide external validation, fostering transparency and reinforcing trust in the patent system. The report also includes an annex detailing the specific findings of the SQAPs and outlines the development of the programme, showcasing the EPO's commitment to continuously enhancing its quality assurance measures and aligning them with stakeholder expectations.

### Read the Quality Report 2023

# **Comprehensive Approach to Quality**

• The Quality Action Plan 2024, the Quality Dashboard and the yearly Quality Report showcase the EPO's comprehensive approach to maintaining and improving the quality of patents granted. Through continuous examiner training, enhanced access to prior art, digital tools, and direct stakeholder engagement, the EPO aims to provide businesses with reliable, high-quality patents that support growth and innovation. These initiatives are guided by the EPO's Quality Charter, which commits to transparency, excellence, and service improvement in all aspects of the patent examination process.

Explore more about Quality at the EPO



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# 3.2 JPO

### World's Fastest and Highest Quality Patent Examination

In March 2024, the JPO achieved its long-term goal of reducing the average first action (FA) period to 10 months and a period until patent granting (STP) to 14 months—thereby achieving the world's fastest and highest quality patent examinations. In addition to accelerating the examination process, the JPO has also made many efforts over the past 10 years to significantly improve its quality, which have clearly borne fruit. Recent years in particular have seen calls for Digital Transformation (DX) of the examination process and the use of AI to enhance the quality and efficiency of patent examinations; as well as the development of a high-quality examination system for AI-related technologies. This section explains how the JPO has been working toward achieving the world's fastest and highest quality patent examinations.







# **Quality Management System of the** JPO

Quality Policy and Quality manual: In 2014, the JPO established a "Quality Policy" and "Quality Manual," which outline the basic principles of quality management in examinations. In 2022, the Quality Manual was revised to incorporate changes in the social environment during the With-COVID and Digital Transformation (DX) era, including the use of online tools for audits.

- steady improvement in examination quality.
- quality in subsequent years.

#### **Director's Approval and Quality Verification by Quality Audit:**

The examination workflow includes consultations among multiple examiners, approvals by management, and random quality audits of notifications before they are sent out. These measures aim to improve quality. Over the past decade, the detection rate of deficient cases in quality audits has decreased, indicating a

#### Subcommittee on Examination Quality Management (since

**2014):** The JPO has established an external organization called the Subcommittee on Examination Quality Management, which receives evaluations from external experts on quality management. The improvement suggestions are used to consider examination-related measures for maintaining and improving

- · Annual User Satisfaction Survey: The JPO has conducted an annual user satisfaction survey since fiscal 2012, receiving evaluations of the examination process on a five-point scale from "Satisfied" to "Unsatisfied". The survey targets not only domestic applicants and representatives, but also overseas users; thereby obtaining a wide range of responses. As a result of various initiatives, satisfaction with examination quality has improved significantly compared to the initial survey.
- Al Utilization to Improve Quality and Efficiency: The JPO is exploring the use of AI to enhance the quality and efficiency of patent examinations. Patent Office staff are actively involved in considering and verifying AI tools for classification and searches, while also exchanging information with external experts.
- AI Examination Support Team: The JPO has established an AI Examination Support Team for AI-related technologies, which is composed of experts on AI examination and management officials and which aims to deepen examiners' understanding of technical content. Additionally, Al advisors (external experts) provide training and advice to experts on AI examination, enhancing their knowledge of the latest AI technologies. These efforts ensure that examiners can appropriately understand and evaluate new technologies.



## **Initiatives to Address User Needs and Business Strategies**

- Maintaining Examination Speed: The JPO is currently working to maintain an average first action (FA) period of 10 months and a period of 14 months until patent granting (STP). This effort aims to enhance the predictability of when applicants will receive examination results, thereby allowing them to secure their rights at the intended timing—something that is recognized as a significant benefit for applicants.
- **Communication with Examiners:** The JPO places great importance on dialogue with applicants during the patent examination process. Through interviews, the JPO focuses on establishing strong, broad, and useful patent rights. To improve the convenience of interviews, the JPO is making efforts to allow interview requests via email, and to facilitate interviews online or outside of the Patent Office. Additionally, the JPO generally accepts at least one interview request per application.



**Collective Examinations for IP Portfolio Supporting Business Strategy (CEIP):** The JPO conducts collective examinations in order to provide patent examinations that align with the business strategies of various companies. This approach involves examining multiple applications across different fields in a coordinated manner, wherein examiners from various fields receive direct explanations from companies about their business

strategies and technologies through interviews. After gaining a thorough understanding of the business and technologies, the examiners then collaborate to conduct the examinations. This process enables applicants to obtain rights that are useful for their business at the desired timing.



# 3.3 USPTO

## Improvement of Examination Tools (including Al tools)

The use of AI is showing broader consideration of prior art. Those examiners using USPTO AI tools cite foreign patents three times

more frequently than those that do not. And while we have early indicators that use of AI tools is reducing rework and improving quality, that data is not yet mature enough to share.

#### • PE2E Search

In an effort to modernize the Patents Automated Information Systems, the USPTO launched PE2E, a single web-based system that provides examiners with a unified and robust set of tools to use in the examination process. PE2E Search is a system within PE2E that presents a modern interface design and introduces new tools and features, such as AI search capabilities. PE2E



Search contains both U.S. and foreign published patent documents. The USPTO added the new artificial intelligence (AI)-based "Similarity Search" feature to the Patents End-to-End (PE2E) search suite as a tool to further assist patent examiners in conducting a search of the prior art. The Similarity Search feature receives examiner-selected application information, including the specification, as input and uses trained AI models to output a list of domestic and foreign patent documents that are similar to the patent application being searched. When a search is performed using Similarity Search, it will be reflected in the search history recorded in the file wrapper. In PE2E Search, USPTO plans to add three new features powered by AI. For example, AI features that generate suggestions for prior art references, refine document sorting, add insight into AI reasoning, and provide additional Cooperative Patent Classification suggestions.

- Synonym suggestions In Enhanced mode in PE2E-Search, examiners can input a search query, then highlight a term they would like synonym suggestions for, and the system will provide context suitable suggestions.
- 2) CPC Recommendations In Enhanced Mode in PE2E-Search, examiners can identify a single or collection of CPC symbols and request a recommendation of other CPC symbols that may be relevant.
- **3)** Al relevance ranking In Enhanced mode in PE2E-Search, examiners can identify an existing search query for a patent application. Al will then take the results from that query and compare it to the application identified and order the results based on relevance to the patent application.



# Initiatives to keep granting high-quality patents etc.

### Partnership meetings

The 2024 Business Methods Customer Partnership Meeting (CPM) was held September 10, 2024. At this meeting, TC 3600 Business Methods Group Directors, along with Supervisory Patent Examiners, Quality Assurance Specialists, and external stakeholders, lead interactive and informational sessions covering a range of topics, including:

- 1. Artificial Intelligence (AI) and use of AI tools guidance
- 2. Optimizing America's innovation portfolio
- 3. Strategies for protecting intellectual property generated by AI
- 4. Business methods quality initiatives
- 5. Educational and outreach programming at the USPTO
- 6. A "fireside chat" with the business methods group directors

Biotechnology, Chemical and Pharmaceutical (BCP) Customer Partnership meetings are part of a long-standing partnership between the USPTO and our valued stakeholders that works to improve the quality of our BCP products and services. The recent partnership meeting held September 18, 2024, focused on Artificial Intelligence and biotechnology. The topics included:

- 7. Artificial Intelligence (AI) Guidance Updates from the Office of Patent Legal Administration
- 8. Machine Learning Use Cases and Example Model Types
- Artificial Intelligence and Subject Matter Eligibility under 35 USC 101
- 10. AI in Biotechnology: An Analysis of USPTO patent applications, 2002-2023



The 2024 Technology Center (TC) 2600 Customer Partnership Meeting (CPM) was held on April 16, 2024. The USPTO's TCs are patent application examination units, with each TC assigned to different fields of technology. The TC2600 examines the technology of communications applications, and this CPM focused on the electrical arts. The event was held virtually and designed to help enhance stakeholders' direct engagement with USPTO leaders and to learn about topics that affect the prosecution of patent applications. The theme of the 2024 event was "Interview Practice" and the topics included:

- Learning about quality improvement strategies and interview practice
- 2. Gaining insight on how examiners make decisions
- 3. Providing valuable feedback
- 4. Developing positive working relationships with TC2600 personnel





### Interagency Collaborations

The USPTO has worked closely with the U.S. Food and Drug Administration (FDA) on a number of collaboration initiatives, including providing training to patent examiners so they have the key information needed when deciding whether to grant patent rights.

As part of the USPTO's commitment to ensure robust and reliable patent rights for biotech and pharmaceutical inventions, the USPTO developed training materials on searching for prior art in FDA and National Institutes of Health (NIH) databases.

## · PTAB:

The PTAB provides various resources to assist inventors, particularly those that are under-resourced, in putting their best evidence and arguments before the PTAB.

- The PTAB Pro Bono Program was established in collaboration with the PTAB Bar Association. • The program matches volunteer patent professionals
- proceedings at the PTAB.
- AIA proceedings.

- with qualified inventors, inventor groups, and inventor-
- owned small businesses to provide free legal
- assistance in preparing ex parte appeals to the PTAB.

• The PTAB Education Clinic provides education to members of the public who have questions about

• Volunteer patent practitioners will meet one-on-one at no cost to answer questions about ex parte appeals and

• The PTAB Boardside Chat webinar series addresses best practices before the Board and answers

questions raised by attendees. It is free, bi-monthly, and open to all.

- The PTAB Inventor Hour webinar series are for independent inventors and those new to PTAB practice, and covers PTAB proceeding basics, i.e., ex parte appeals and AIA trials, as well as other useful information for practicing before the Board such as oral hearing protocols, statistics, and more.
- The PTAB has provided resources for Preparing an ex parte appeal brief, including a Word document template, a pdf of general guidance on the information required, and an instructional video.
- The PTAB has established a New to PTAB? webpage so that independent inventors, new practitioners, and others can explore and better understand the PTAB's role during and after the patenting process.
- The PTAB Consolidated Trial Practice Guide (November 2019) offers detailed information about all aspects of an AIA trial proceeding and is an excellent resource for questions about trial nuances.
- The PTAB Hearings Guide (June 2024) contains information for the parties and the public about oral hearings in ex parte appeals and AIA trial proceedings.
- Statistics and PTAB data tools and IT systems. PTAB provides a new quarterly "Outcome Roundup" statistics format for AIA trials since FY21. The current and previous Statistics are available for trials and appeals at https://www.uspto.gov/patents/ptab/statistics. PTAB also provides searchable decisions or documents in any publicly available application, patent on appeal, or trial at Decisions.



### · Office of Patent Quality Assurance

The Office of Patent Quality Assurance (OPQA) is committed to ensuring that the USPTO provides the highest quality in patent examination. To that end, it provides assessment and analysis of quality at the USPTO through work product reviews for compliance, clarity and best practices, defining and standardizing quality metrics and providing feedback to Technology Centers with respect to their reviews and training.

### Random Reviews of Examiner Work Product

As part of the USPTO's quality assurance efforts, each Technology Center (TC) has supervisors and TC reviewers who conduct numerous quality reviews of work products each year for evaluations of employee quality as well as to provide coaching and mentoring based on their findings. In addition to these TC reviews, the Office of Patent Quality Assurance (OPQA) audits a random sample of work products each fiscal year. Currently, this sample size is 12,000 Office actions including non-final rejections, final rejection and allowances. The results from the OPQA random reviews are used to generate the USPTO's statutory compliance measures.

The random sample of Office actions reviewed by OPQA for statutory compliance generates an overall compliance metric for each statute. The metrics are calculated by dividing the total number of Office actions that properly evaluated all pending claims in light of the patentability statutes by the total number of Office actions reviewed. The statutory compliance metrics are then expressed as a percentage of Office actions reviewed that properly handled all claims in the application and can be further broken by relevant statute.

The compliance metrics generated by OPQA are validated in part through TC feedback as part of the rebuttal process, by comparisons to quality reviews performed in the TCs and data collected from external perception surveys. In addition, OPQA does not have any targets or incentives based on the findings of noncompliance, but does monitor the consistency of OPQA reviews as an additional validation.

The granularity of data obtained by reviewing all claims in an Office action for statutory compliance provides meaningful feedback to TC management and quality assurance specialists and facilitates the identification of quality trends, training opportunities, as well as an evaluation of recent training at the corps level and below. The results are made available publicly at the following link: <u>https://</u> www.uspto.gov/patents/quality-metrics



### Process measures

The USPTO's quality metrics also include process measures that assist the agency in tracking the efficiency and consistency of the examination processes. With respect to the examination process, the USPTO's current focus is on preventing reopening of prosecution, reducing rework, and ensuring consistency of decision-making. The USPTO does not set consistency targets for particular transactions but instead focuses on conducting a root-cause analysis on the trends and behaviors to either capture identified best practices or correct issues, as appropriate.

#### Perception measures

The USPTO has conducted both internal and external stakeholder perception surveys semi-annually since 2006. The results of these surveys are a vital quality indicator, and they are useful for validating other USPTO quality related metrics. For example, the



results of the external perception surveys assure alignment of the data underlying our metrics and our stakeholders' perceptions and assure that the quality metrics we report are useful for our stakeholders. The perception survey results are also made publicly available through the link above.

(1) Internal Stakeholder Perception Survey: The internal survey is sent to 750 randomly selected patent examiners on a semi-annual basis.

The internal quality survey administered to patent examiners focuses on internal and external factors impacting examiners' ability to provide high-quality patent examination. Internal factors address examiner satisfaction with topics such as patent examination tools, training, and the coaching and mentoring they receive. External factors address examiner satisfaction with incoming patent applications and applicant interactions during prosecution.

(2) External Stakeholder Perception Survey: The external survey is sent to 3,000 of our frequent-filing customers on a semi-annual basis. A rotating panel effect is used to minimize respondent burden but still facilitate comparisons across surveys. Respondents are stratified into panels and asked to participate in two consecutive survey periods, with two unique panels participating in each survey. Each collection period, 50% of the respondents (or one panel) are rotated out and replaced with a new panel. Customers rotating out of the survey are not selected for further participation until the sample frame is refreshed and new panel assignments are made, which occurs approximately every three years.

The external quality survey is designed to provide customer

perspectives on the correctness, clarity, and consistency of rejections made by examiners. The survey also gathers perceptions about examiners' adherence to rules and procedures and satisfaction with search and prior art. While the survey questions remain static to facilitate longitudinal analyses, a single open-ended question is incorporated during each enumeration to explore current topics of interest to the USPTO, such as specific effects of recent quality efforts or considerations for pending quality initiatives.

The survey results are available at Quality metrics. years include the following:

- In terms of rejections made, consistency and clarity of office actions are more important than correctness. Customers desire predictability in the patent system and want to readily know what next steps to take.
- Ability of the USPTO to thoroughly respond to applicant arguments is a key driver of quality perceptions. If customers feel we adequately consider and respond to their arguments, they are roughly 5 times more likely to say quality is good or excellent instead of poor or very poor.

Key findings obtained from our external customer survey in recent

• 103 rejections are significantly more important to customer perceptions than 101 rejections. While 101 rejection rates dominate most blogs and criticism about USPTO decision making, customers are more likely to base their overall perceptions on 103 rejections they receive. Which makes sense given that customers see 103 rejections in roughly 70% of office actions, compared with only 10% containing 101 rejections.

### **Customer Satisfaction Report**

The PTO is making efforts to improve customer satisfaction and will continue to survey customers on an annual basis to obtain satisfaction levels on customer service standards.

# **Technical training for examiners** - PETTP/SEE

- Patent Examiner Technical Training Program (PETTP): The USPTO's Patent Examiner Technical Training Program (PETTP) invites technologists, scientists, engineers, and other experts from industry and academia to participate as guest lecturers and provide technical training and expertise to patent examiners regarding the state of the art. Guest lecturers provide relevant, historic and current technical knowledge, including industry practices/standards in technological areas of interest. Guest lecturers must also have relevant technical knowledge and industry practices/standards in areas of technologies where such lectures would be beneficial. Patent Examiner Technical Training Program
- Site Experience Education Program (SEE): The SEE Program presents an opportunity for organizations to provide patent examiners with technical training first-hand from innovators, scientists, engineers, and experts working directly in the various technologies examined throughout the USPTO. Organizations who participate in the SEE Program give patent examiners an opportunity to visit real-world sites, learn about new and evolving technologies, and experience how these technologies are developed and operate in the field. https://www.uspto.gov/ patents/initiatives/site-experience-education-see-program





# **New Patent Public Search tool**

The USPTO provides a free, cloud-base new platform, <u>Patent</u> <u>Public Search tool</u>, that provides more convenient, remote, and robust full-text searching of all U.S. patents and published patent publications, based on the advanced Patents End-to-End (PE2E) search tool USPTO examiners use to identify prior art. The new tool for remote searching is now available to all users with internet access, including the additional benefits.

- 1) **Layout:** Multiple layouts with multiple tools to provide more data at once
- 2) **Highlighting:** Multi-color highlighting that can be viewed across multiple gadgets and turned on or off
- 3) **Tagging:** Ability to tag documents into multiple groups that can be renamed and color coordinated
- 4) **Notes:** Ability to add notes to an image with options to include tags, relevant claims, and highlights
- 5) **Quality:** Robust full-text searching of U.S. Patents and published applications
- 6) **Familiar usability:** Same searching syntax as previous tools PubEAST and PubWEST





# 3.4 WIPO

# **Technical Assistance to the Member States**

WIPO believes that high-quality prior art search and patent examination are essential to building healthy and functioning IP ecosystems, and it has the Cooperation and Examination and Training Section dedicated to assisting its Member States in this area.

WIPO Funds-in-Trust programs.

#### National, sub-regional and regional training programs are

provided to strengthen the capacity of the States with small or medium sized Offices. The programs are both online and on-site, and often aim to provide practical knowledge and actual case exercises so that patent examiners are better equipped with the knowledge and skills to conduct search and examination. Many of the programs are organized with assistance of WIPO Member States, for example, by providing speakers or funding through

- WIPO International Cooperation on Examination (ICE) provides search and examination reports for patent applications submitted to industrial property offices with limited substantive examination capacity. These reports are generously prepared and provided by various Donor Offices on a pro bono basis. WIPO plans to expand the program and is seeking additional Donor Offices.
- · WIPO reports to the PCT Working Group meetings on its technical assistance activities on search and examination and receives guidance from the States. At the most recent meeting in February 2024, the findings from an extensive survey were reported, including information on the current status of Offices with search and examination capabilities and where assistance is needed.



### **Efforts with PCT International Authorities**

 With the PCT International Searching Authorities (ISAs) and International Preliminary Examining Authorities (IPEAs), Chapter 21 of the PCT International Search and Examination Guidelines requires a quality report each year, which is then discussed within the PCT/MIA (Meeting of international Authorities under the PCT) Quality Subgroup and, where the Authorities are willing, in paired review sessions each year, allowing Authorities to learn from each other's experience.

 More actively, the work implementing the amendments to PCT Rule 34 on the minimum documentation (due to enter force 1 January 2026) aims to increase the scope and quality of search information available to examiners at ISA/IPEAs – and hopefully also to examiners in other Offices too (the International Bureau under the PCT encourages Offices to share patent documentation freely, though PCT Rules 36 and 63 in the associated amendments only require Authorities to be share with other Authorities).

# Services relating to prior art search and patent examination

Many WIPO services are related to search and examination. Some of the highlights are the **WIPO CASE (Centralized Access to Search and Examination)** system which enables patent offices to securely share search and examination documentation related to patent applications in order to facilitate work sharing programs, **WIPO IPAS (Industrial Property Administration System)**, a tool for electronic administration of data, process and documents associated with IP applications, **WIPO DAS (Digital Access Service)** for electronic exchanges of prior art documents, and **PATENTSCOPE** which provides free access to vast amount of patent documents and non-patent literature.

