

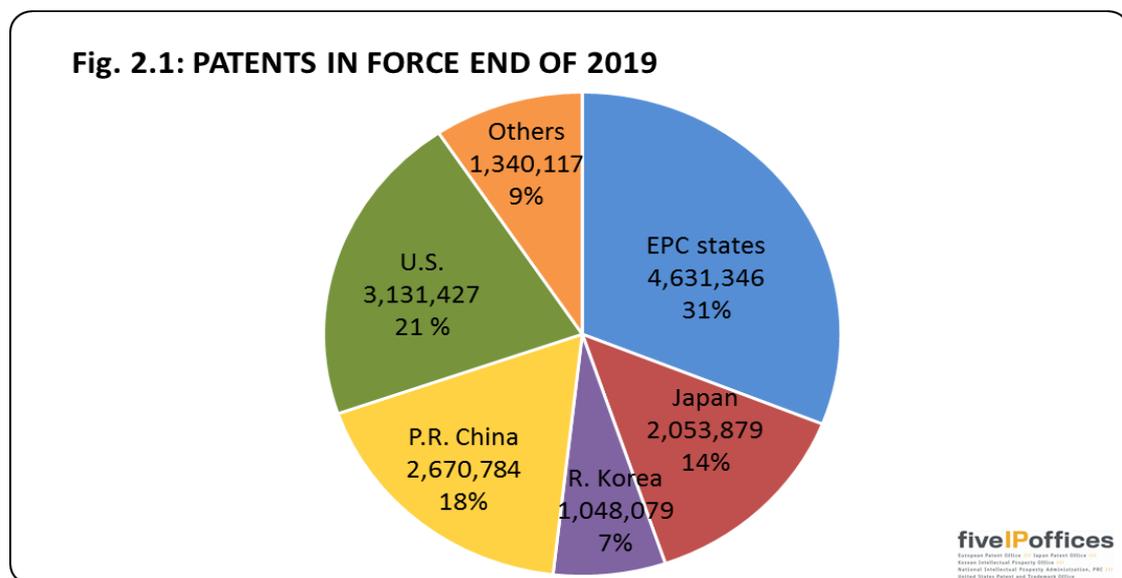
## Chapter 2

# THE IP5 OFFICES

This chapter details developments at each of the IP5 offices<sup>8</sup>.

International trade and markets continue to be of great importance, so innovators want their intellectual creations to be protected concurrently in multiple major markets.

Patents are used to protect inventions and their counts are recognized as a measure of innovative activity. Fig. 2.1 shows the number of patents in force worldwide at the end of 2019. The data are based on worldwide patent information available from the WIPO Statistics Database<sup>9</sup>.

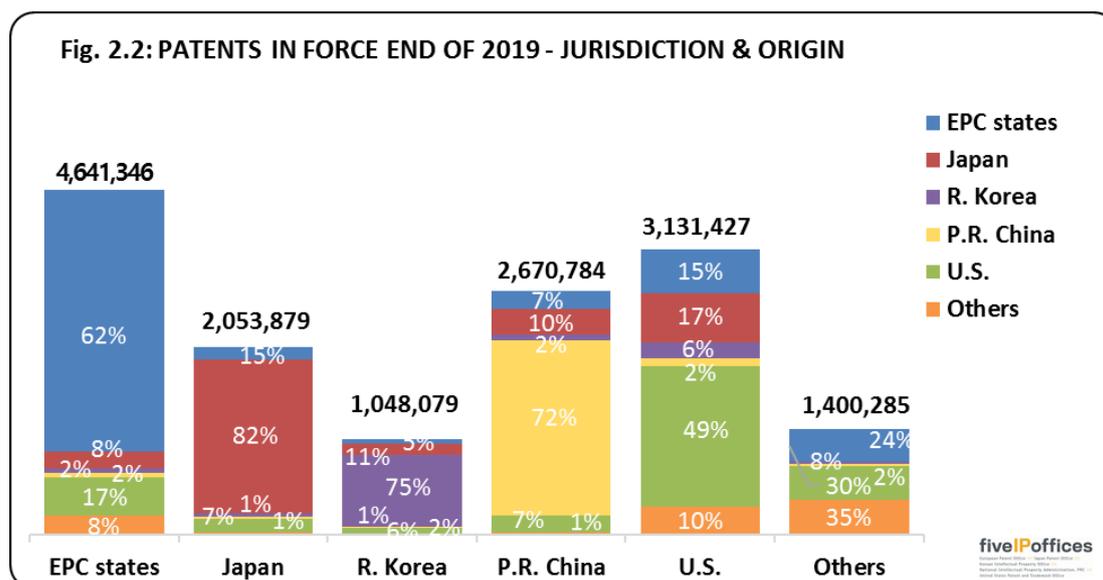


At the end of 2019, 91 percent of the 14.9 million patents that were in force were valid in one of the IP5 Offices jurisdictions. This demonstrates the prominent role that is played by the IP5 Offices.

<sup>8</sup> The statistical tables file found in the web version of this report includes extended time series for some of the data included in this chapter. <https://www.fiveipoffices.org/statistics/statisticsreports>

<sup>9</sup> <https://www.wipo.int/ipstats/en/index.html> Data for patents in force for 2019 are missing for some countries in the WIPO data. Where available, the most recent previous year's data were substituted for missing 2019 data. Data for 2020 are not yet available from WIPO.

Fig. 2.2 shows the residence of the holders of the patents in force at the end of 2019 in the regions of the IP5 Offices.



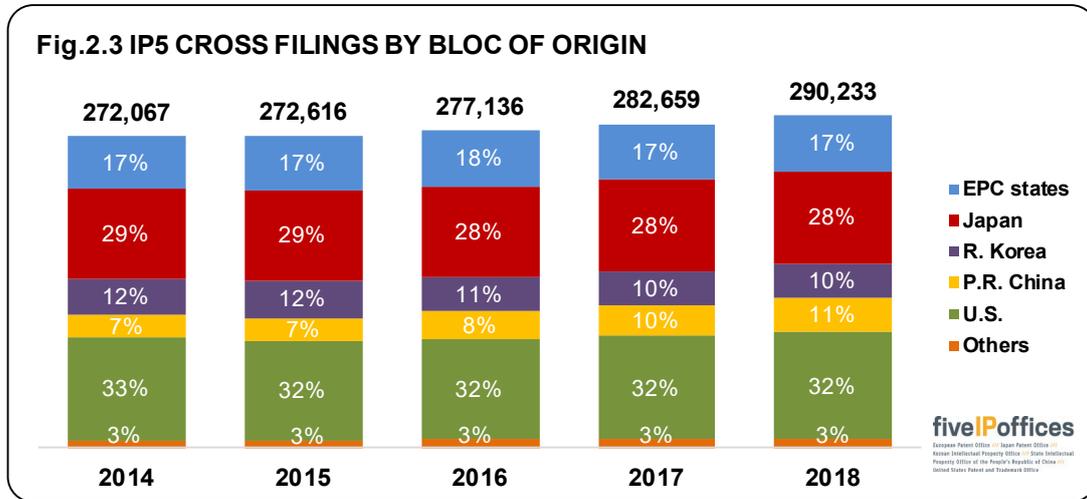
At the end of 2019, of the 14.9 million patents in force, 31 percent were valid in the EPC states, 21 percent in the U.S., 18 percent in P. R. China, 14 percent in Japan, and 7 percent in R. Korea.

In 2019, while 82 percent of the patents valid in Japan originated in Japan<sup>10</sup>, 49 percent of the U.S. patents had a U.S. origin. For EPC States, the corresponding shares was 62 percent, it was 75 percent for R. Korea, and 72 percent for P.R. China.

It is estimated that each year more than 250,000 first filings from the IP5 Offices result in subsequent patent applications to at least one other IP5 Office, accounting for over 500,000 applications including the resulting duplicates for the same inventions. To address the issue of the backlogs that can build up as a result of this, the IP5 Offices are working together to try to reduce the amount of repetition of similar work that takes place between offices for these patent applications.

<sup>10</sup> Patent origin is based on the patent's first-named inventor or applicant.

Figure 2.3 shows the development of the number of cross filings between the IP5. Offices over the period 2014 to 2018 according to the bloc of the corresponding first filing.



The Figure 2.3 is based on published applications data allowing to track subsequent applications in other jurisdictions. As a consequence, data beyond 2018 are not yet complete.

## EUROPEAN PATENT OFFICE

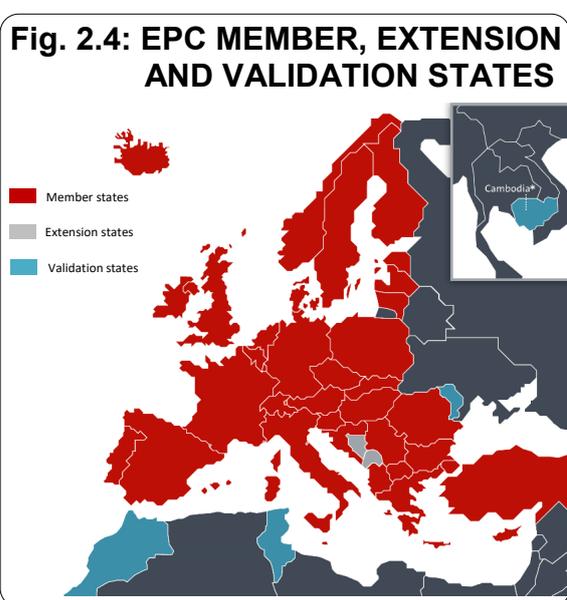
The EPO's mission is to deliver high-quality patents and efficient services that foster innovation, competitiveness and economic growth. Its main task is to grant European patents according to the EPC. Under the PCT, the EPO also acts as a receiving office, as well as a searching and examining authority. A further task is to perform, on behalf of the patent offices of several member states (Belgium, Cyprus, France, Greece, Italy, Latvia, Lithuania, Luxembourg, Malta, Monaco, the Netherlands and San Marino), state-of-the-art searches for the purpose of national procedures. The EPO also plays a major role in the patent information area, by developing analytics tools and hosting the world's largest databases of patent literature.

### Member states

The EPO is the central patent granting authority for Europe, providing patent protection in up to 44 countries based on a single patent application and a centralised grant procedure.

At the end of 2020, the 38 members of the EPO were:

Albania	Austria	Belgium	Bulgaria	Croatia
Cyprus	Czech Republic	Denmark	Estonia	Finland
France	Germany	Greece	Hungary	Iceland
Ireland	Italy	Latvia	Liechtenstein	Lithuania
Luxembourg	Malta	North Macedonia	Monaco	Netherlands
Norway	Poland	Portugal	Romania	San Marino
Serbia	Slovakia	Slovenia	Spain	Sweden
Switzerland	Turkey	United Kingdom		



Bosnia-Herzegovina and Montenegro, have agreements with the EPO to allow applicants to request an extension of European patents to their "territories" and "Cambodia"

Moldova, Morocco and Tunisia have agreements to validate European patents in their territories. Similar agreements with other states are under negotiations.

The national patent offices of all the above states also grant patents. After grant, a European patent becomes a bundle of national patents to be validated in the states that were designated at grant. The 44 countries for which European patents provide protection represent a population of around 730 million people.

## Highlights of 2020

Demand for patents remained high in 2020, despite the pandemic. The EPO received 180,250 European patent applications last year, which was just 0.7 percent below the 2019 figure.

Rising to the multiple challenges created by the pandemic, the EPO continued to perform strongly in 2020. In fact, it successfully tackled a slightly higher workload than in 2019, while achieving steady improvements in timeliness. By the end of the year, the examination stock (80 percent of total stock) was 4 percent lower than in 2019 and the pending workload represented 11.7 months of work, while overall stock levels fell by 1 percent compared with 2019. Overall, the EPO published some 133,700 European patents in 2020, or 3 percent lower than the 2019 figure.

This was largely possible thanks to the digitalisation of tools and workflows, a process that is deeply embedded in the EPO's Strategic Plan 2023 launched in July 2019, but was significantly accelerated by the pandemic. As part of the drive to go digital, 5 800 laptops were rapidly rolled out to staff to facilitate remote working, and new digital tools introduced into the patent granting process. To maximise effective workload rebalancing, the EPO also launched two new digital platforms: the Digital File Marketplace to facilitate file exchange between examiner teams; and the Digital Talent Marketplace, which makes it easier for examiners to switch specialist fields and acquire new expertise.

Digitalisation led to efficiency gains across the board that were reflected in the timeliness of the EPO's products and services. Improvements in search timeliness seen in recent years were consolidated in 2020, with the mean time for search completion reaching 4.5 months. The mean time for issuing the intention to grant was 25.4 months from the valid examination request, while 75 percent of intentions to grant were issued within 36 months. The overall time to grant for EP first filings was 44.8 months on average, from filing to the intention to grant. The percentage of EPO PCT international search reports published along with the application (i.e. A1 publications) remained high at above 97 percent in 2020.

In terms of sustainability, digitalisation also delivered tangible benefits in 2020. The EPO's total annual paper consumption, for example, plummeted by 47.5% percent last year, dropping by 58.6 million to 65 million sheets of paper. These savings, equivalent to the carbon dioxide offset by 14,000 fully grown trees, were largely due to printing on demand and the launch of new digital workflows. Carbon emissions also fell by 20% last year, or 600 tonnes, which is equivalent to the carbon captured by 50 hectares of forest. This was partly due to lower emissions from heating, but also thanks to video conferencing and the fact that the EPO replaced all business travel with virtual meetings as of March. Overall, last year saw a significant reduction in the EPO's environmental footprint, with further improvements targeted for 2021.

## EPO Production information

Activities associated with searches, examinations, oppositions, appeals and classifications are all performed by EPO staff. The EPO does not outsource any of its core activities. The decision to grant or refuse a patent is taken by a division of three examiners. In Table 2.1, production figures for filings, applications, searches, examinations, oppositions and appeals in the European procedure are given for the years 2019 and 2020.

**Table 2.1: EPO PRODUCTION INFORMATION**

<b>EPO PRODUCTION FIGURES</b>	<b>2019</b>	<b>2020</b>	<b>Change</b>	<b>%Change</b>
<b>Patent applications (Euro-direct &amp; Euro-PCT regional phase)</b>	181,532	180,250	-1,282	- 0.7%
<b>Searches carried out</b>				
European (including PCT supplementary)	123,722	122,804	- 918	+ 0.7%
PCT international	83,960	85,186	+1,226	+1.5%
On behalf of national offices	25,380	27,577	+2,197	+ 8.7%
<b>Total production search</b>	<b>233,062</b>	<b>235,567</b>	<b>+ 2,505</b>	<b>+ 1.1%</b>
<b>Examination-Opposition (final actions)</b>				
European	177,872	158,955	- 18,917	- 10.6%
PCT Chapter II	6,339	5,619	-720	- 11.4%
Oppositions	3,977	1,855	-720	-53.4%
<b>Total final actions examination- opposition</b>	<b>188,188</b>	<b>166,429</b>	<b>-21,759</b>	<b>-11.6%</b>
<b>European granted patents</b>	<b>137,784</b>	<b>133,715</b>	<b>- 4 069</b>	<b>- 3.0%</b>

### Patent knowledge

Providing the public with patent data has always been central to the EPO's mission. The EPO's patent databases remain the most comprehensive collection of patent literature in the world. The total number of records in the EPO worldwide bibliographic database (DOCDB) recently passed the 130 million patent publications mark; and EPO worldwide legal event data (INPADOC) features over 330 million publications.

EPO databases are accessible through services such as Espacenet, as well as via numerous commercial providers and partner institutions. The enriched version of the Espacenet patent search service makes the EPO's patent information easily accessible to users, with advanced functions such as a dynamic query builder, an enhanced result list, an improved legal status overview and a responsive design.

Users interested in performing statistical analyses of patent data can take advantage of the EPO's PATSTAT database and the PATSTAT online services. Both form a unique basis for conducting sophisticated analyses of bibliographic and legal status data for patent intelligence and analytics. In 2020, over three million users per month accessed the EPO's broad range of patent information services, marking a 10% increase in uptake versus 2019.

The EPO's [Patent Index 2020](#) provides a comprehensive overview of the figures representing recent activity in the global patent system and insights into emerging technology trends. Users wishing to explore the statistics behind the Patent Index, customise their own graphs and download selected data, can do so by visiting our online [Statistics & Trends Centre](#).

In 2020 the EPO started realising its ambition to go a step further and help users to turn its raw data into patent knowledge that can give them a competitive edge in their respective markets. The EPO's goal is to take users on a journey that starts with patent information and ends with in-depth IP knowledge, while enabling them to take informed IP-related decisions with confidence at every step of the way.

As part of this endeavour, 2020 saw the launch of the PATLIB 2.0 project aimed at revamping the EPO's network of over 300 patent information centres. The project will incentivise all PATLIB centres to provide a broader, enhanced range of services and play their role in supporting Europe's innovators and promoting technology transfer. In 2020, an in-depth survey of the network was completed, along with a study of Europe's technology transfer offerings.

Last year the EPO also launched a new, regularly updated "Fighting coronavirus" platform, which is designed to help researchers and decision-makers benefit from patent information in their fight against new coronaviruses. Initial data sets released on this platform cover antiviral vaccines, pharmaceutical therapeutics and diagnostics tools. Expert EPO patent examiners and data analysts have compiled over 300 search strategies that allow data extractions via Espacenet and the platform is expanding constantly.

As a result of co-operation with patent offices worldwide, full-text patent collections in languages such as Chinese, Japanese, Korean and Russian are being added. Patent Translate is the EPO's free online machine translation service. Integrated into the EPO's Espacenet worldwide patent database and European publication server, it provides translations for a total of 32 different languages. There are currently approximately 20,000 translation requests per working day on Patent Translate from around the globe.

Despite the difficult circumstances in 2020, the EPO regularly updated users on all developments in its tools and products to ensure efficient, easy access to its services. After in-person events and training were rendered impossible by the pandemic, a great deal of effort went into digitalising events and training. The EPO successfully organised several high-level online events in 2020, including the European Inventor Award, EPO Tech Day, conferences on 3D printing and artificial intelligence, together with a whole range of online seminars and meetings. Its major online events attracted a total of almost 20,000 viewers worldwide in 2020.

### **International and European Cooperation**

High-level bilateral and multilateral interactions proliferated in 2020, thanks to virtual exchanges facilitated by the widespread use of video conferencing. The EPO also continued to expand its geographical reach by signing a reinforced partnership agreement with the Superintendence of Industry and Commerce of Colombia in November.

The EPO's geographical coverage has grown substantially since June 2019, increasing to a total of 1.965 billion inhabitants by the end of 2020 through 38 Member States, 2 extension states, 4 validation states and 9 reinforced partnerships.

Another milestone was reached on 1 December 2020, when the EPO and the China National Intellectual Property Administration (CNIPA) officially launched a two-year pilot, which enables Chinese applicants filing their international applications in English (with the CNIPA or the World Intellectual Property Organization (WIPO) as receiving Office) to select the EPO as their International Searching Authority (ISA). This makes

the EPO the first patent office outside of China that can be designated as an ISA for Chinese applicants.

Within the framework of the Cooperative Patent Classification (CPC) with the United States Patent and Trademark Office, a major new harmonisation exercise was launched in 2020. At the same time, the CPC revision backlog was brought down to virtually zero and a streamlined CPC revision process was also defined. This reduced the time from request to publication to just nine months. The number of patent offices classifying in the CPC increased to 30 in 2020 with the addition of the Romanian office. By the end of the year, around 61 million patent documents were classified in the CPC, of which 9.5 million were classified by the publishing offices themselves.

The EPO's Patent Prosecution Highway (PPH) network, which comprises 16 partner offices worldwide, enables European applicants to obtain patents more quickly and efficiently elsewhere through a fast-track procedure allowing for the re-use of the EPO's high-quality work products. In response to growing uptake and positive user feedback, the EPO started implementing the PPH programme as a permanent procedure in early 2020.

To date EPO PPH working arrangements with twelve partner offices are operating on a non-trial basis. This includes the offices of Canada, China, EAPO, Israel, Japan, Korea, Malaysia, Mexico, the Philippines, Russia, Singapore and the USA. The remaining four trials, i.e. with Australia, Brazil, Colombia and Peru, are expected to be completed and exit pilot phase in the course of the coming years.

The EPO also hosts the Common Citation Document (CCD), which encompassed some 390 million citations from 39 patent offices worldwide in 2020. The CCD currently contains enriched citation data from 23 patent offices, including the EPO, CNIPA, JPO, KIPO, USPTO and WIPO. This enriched data indicates the claims to which the citation is relevant in the patent application for which the search was done and the pertinent passage in the cited document.

## **Economic studies**

To demonstrate the value of patent information, the EPO's Chief Economist Unit published four studies in 2020 covering a diverse range of cutting-edge technologies and exploring the economic impact of patents. Three of those studies document recent technology trends in additive manufacturing; batteries and electricity storage technologies; and technologies of the Fourth Industrial Revolution. The study on batteries (published in September) was the first EPO study produced in collaboration with the International Energy Agency, with which the EPO signed a memorandum of understanding in 2020. The other two studies were launched to mark EPO conferences in July and December. The last study, published in November 2020, was a Patent Commercialisation Scoreboard for universities and public research organisations, showing that these institutions commercialise around one third of their European patents. All of these studies can be consulted online on the [EPO website](#).

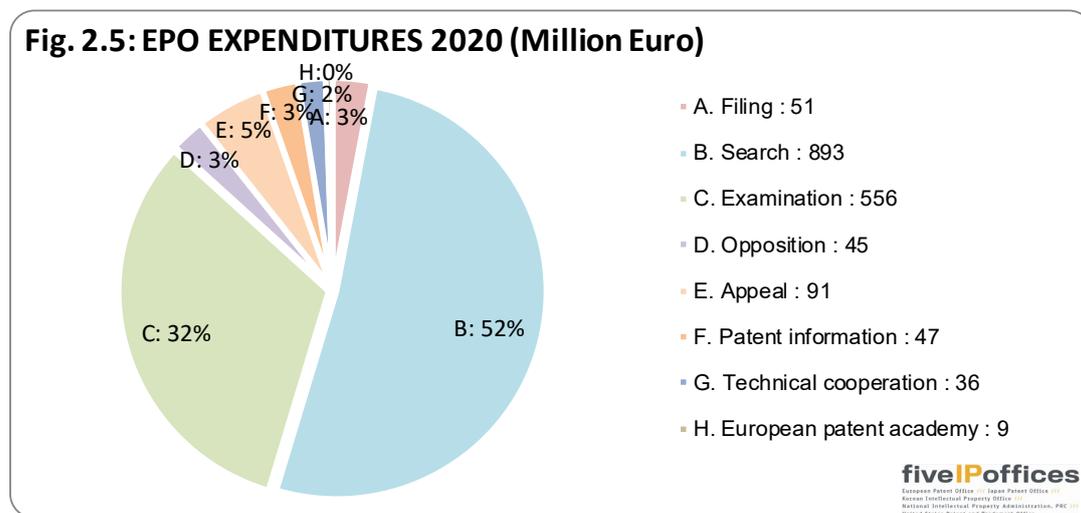
## **EPO budget**

The EPO is financially autonomous and does not receive any subsidies from the Contracting States of the Organisation. Its expenses are therefore mainly covered by revenue from fees paid by applicants and patentees. In 2020, the EPO budget amounted to 2.5 billion euros

Fees related to the patent grant process—including filing, search, examination, and appeal fees as well as renewal fees for European patent applications (i.e. before grant) are paid to the EPO directly. 50 percent of the renewal fees for European patents (i.e. after grant) are retained by the Contracting States of the Organisation where the European patent is validated after the central grant process.

On the expenses side, the EPO not only pays for staff salaries and allowances, but also finances other social expenses such as pensions, healthcare insurance and long-term care fees, as well as contributing to the education costs of its employees' children. The EPO community currently consists of around 23,500 persons (active staff, pensioners, and their respective family members).

Fig. 2.5 shows EPO expenses<sup>11</sup>, based on the International Finance Reporting Standards (IFRS) by category in 2020.



A description of the items in Fig. 2.5 can be found in Annex 1.

## EPO Staff

At the end of 2020, the EPO's staff totalled 6,403 employees (-3.1 percent) from 35 different European countries<sup>12</sup>. This figure includes 4,099 examiners working in search, examination, and opposition and 196 Boards of Appeal members.

After their recruitment, all new examiners complete a three-year training programme and are tutored by more experienced colleagues. All staff at the EPO work in its three official languages: English, German, and French.

## More information

Further information can be found on the EPO's Homepage.

[www.epo.org](http://www.epo.org)

<sup>11</sup> The EPO uses the word “expenses” in accordance with the IFRS reporting approach.

<sup>12</sup> For more details, see the 2020 EPO social report at [www.epo.org/about-us/annual-reports-statistics.html](http://www.epo.org/about-us/annual-reports-statistics.html)

## JAPAN PATENT OFFICE

The JPO has been aiming to achieve the “world’s fastest and utmost quality patent examinations”. To this end, the JPO has been implementing various measures focused on “maintaining speed”, “granting high quality rights”, and “cooperating and collaborating with foreign IP offices”.

### 1) Examination Performance

With the acceleration of the intellectual property creation cycle, there is a need to shorten total pendency, and the JPO has been engaging in initiatives to speed up examinations.

### 2) Accelerated Examination System

Under certain conditions, the JPO offers an accelerated examination system/super-accelerated examination system that, upon the request of an applicant, expedites the commencement of an examination. An accelerated examination system for patent applications may be applied for applications that are also filed in one or more other countries and applications by small and medium-sized entities, etc.

In 2020, first action pendency from request for accelerated examination was 2.7 months on average. Furthermore, The JPO is running pilot programs for a super-accelerated examination system for highly important applications, such as applications for inventions that have already been put into practice and that are also filed in one or more other countries. First action is issued within one month from the request, in principle (within two months, in principle, in the case of designated office applications).

### 3) Quality Management Initiatives

Under the “Quality Policy on Patent Examination”, which constitutes the JPO’s fundamental principles of quality management, and the “Quality Management Manual for Patent Examination” (Quality Management Manual), the JPO has been engaging in the following initiatives in order to realize the utmost quality of patent examinations in the world.<sup>14</sup>

#### Quality Assurance

Before sending applicants and agents documents by examiners regarding notices and decisions, etc., managers in the examination office check substantive and formal aspects of such documents for all cases. Examiners consult with other examiners in order to share search know-how and knowledge, etc., in order to curb search and decision discrepancies among examiners.

#### Quality Verification

Decisions and notices, etc. prepared by examiners are audited by quality management officers to check compliance and validity in terms of content and format before sending official documents to applicants and agents. In order to ascertain various user needs, the JPO conducts interviews at informal meetings with businesses, accepts information provided in relation to individual cases, and user satisfaction surveys.

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<sup>14</sup> For more details about Quality Management Initiatives, please visit the following:  
<https://www.jpo.go.jp/e/introduction/hinshitu/shinsa/index.html>

#### 4) International Cooperation on Examination

##### Patent Prosecution Highway (PPH)

The PPH is a framework that allows an application determined to be patentable by the Office of Earlier Examination (OEE) to undergo, at the request of the applicant, accelerated examination with simplified procedures at the Office of Later Examination that is a PPH partner of the OEE. The world's first PPH, advocated by the JPO, and was launched between Japan and the U.S. in July 2006 as a pilot program.

- As of January 2021, the number of IP offices participating in the PPH has increased to 55.
- As of January 2021, the JPO has been implementing the PPH with 45 IP offices, including new PPH collaboration with the National Institute of Industrial Property (Institut national de la propriété industrielle (INPI)) of France from January 2021.
- With regard to the PPH program between the JPO and the National Institute of Industrial Property (INPI) of Brazil, the INPI relaxed the maximum annual number of PPH requests to the INPI in January 2021.
- The PPH Portal Site provides one-stop access to the PPH implementation status and statistical information of participating IP offices.<sup>15</sup>
- The JPO serves as the secretariat of the "Global Patent Prosecution Highway (GPPH)", a multinational framework launched in January 2014.
- In the GPPH, all types of PPH, including PPH-MOTTAINAI and PCT-PPH,<sup>16</sup> are available among the participating IP offices.
- In July 2020, the National Institute of Industrial Property (INAPI) of Chile joined the GPPH framework, bringing the number of IP offices participating in the GPPH to 27.

##### Patent Prosecution Highway Plus (PPH Plus)

PPH Plus is a framework that enables accelerated right for a patent application of the same invention which has already been granted in Japan, by utilizing the examination results by the JPO. The JPO is currently implementing this framework with the Brunei Intellectual Property Office (BrUIPO). While the ordinary PPH is a framework for mutual sharing of examination results between the IP offices, PPH plus is intended to allow applicants that have requested PPH plus to acquire rights in an accelerated manner in Brunei by using the JPO's examination results, but the request for PPH cannot be filed with the JPO based on BrUIPO's examination results.

##### Cooperation for facilitating Patent Grant (CPG)

CPG is a framework that accelerates patent grant without conducting substantial examination, for an application of the same invention which is already granted a patent in Japan. The JPO is currently implementing this framework with the Ministry of

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<sup>15</sup> The PPH Portal Site provides one-stop access to the PPH implementation status and statistical information for participating IP offices.

<https://www.jpo.go.jp/e/toppage/pph-portal/index.html>

<sup>16</sup> PPH-MOTTAINAI is a framework that enables an applicant to request PPH for an application determined to be patentable by the OEE, regardless of which of the two partner offices first receives the patent application. PCT-PPH is a framework that enables an applicant to request PPH for an application whose patentability is positively assessed in a written opinion or international preliminary examination report at the PCT international phase.

Industry, Science, Technology and Innovation of Cambodia, and the Department of Intellectual Property, Ministry of Science and Technology of Lao PDR.

#### 5) Recent Trends in Artificial Intelligence (AI)-related Inventions

Taking into account recent advances in AI technology centering on deep learning, the JPO studied the status of patent applications for AI-related inventions in Japan and overseas and updated the report and previous data in July 2020.<sup>17</sup>

This study covered “AI-related invention”<sup>18</sup> as (1) AI core technologies and (2) inventions in which AI has been applied to various technical fields. An overview of the study findings is as follows.

- Domestic patent applications for AI-related inventions have increased rapidly since 2014 due to the impact of the third AI boom.
- Applications for AI-related inventions referring to deep learning have increased rapidly since 2014. In 2018, nearly half of domestic patent applications for AI-related inventions referred to deep learning.
- For AI-applied areas, applications stand out in the fields of image processing, information retrieval and recommendation, business-related and control and robotics. This year's study shows a particular increase in application of AI to the field of medical diagnosis. Applications related to AI core technology are on the rise, both to the IP5 Offices and PCT. Among them, the number of applications to the USPTO and the CNIPA is particularly high. In particular, the number of applications to the CNIPA has continued to grow.

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<sup>17</sup> For more information on Accelerated Examination System, please visit the JPO website [https://www.jpo.go.jp/e/system/patent/gaiyo/ai/ai\\_shutsugan\\_chosa.html](https://www.jpo.go.jp/e/system/patent/gaiyo/ai/ai_shutsugan_chosa.html)

<sup>18</sup> The above definition of “AI-related invention” is used only in this research, and does not represent an official definition by the JPO.

## JPO Production information

Table 2.2 shows production figures for applications, examinations, grants, appeals or trials and PCT activities in the Japanese procedure in 2019 and 2020.

**Table 2.2: JPO PRODUCTION INFORMATION**

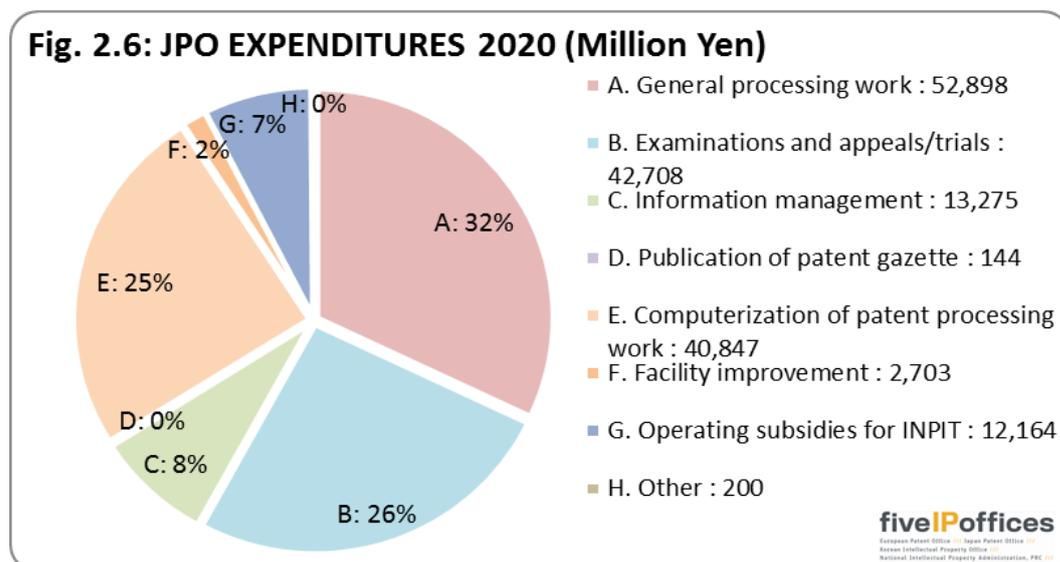
JPO PRODUCTION FIGURES	2019	2020	Change	%Change
<b>Applications filed (by Origin of Application)</b>				
Domestic	245,372	227,348	-18,024	- 7.3%
Foreign	62,597	61,124	- 1473	- 2.4%
<b>Total</b>	<b>307,969</b>	<b>288,472</b>	<b>- 19,497</b>	<b>- 6.3%</b>
<b>Applications filed (by Type of Application)</b>				
Divisional <sup>19</sup>	27,665	26,827	838	- 3.1%
Converted <sup>20</sup>	92	59	- 33	- 35.9%
Regular	280,212	261,586	18,626	- 6.7%
<b>Total</b>	<b>307,969</b>	<b>288,472</b>	<b>-19,497</b>	<b>- 6.3%</b>
<b>Examination</b>				
Requests	235,182	232,215	-2,967	+ 1.3%
First Actions	227,293	222,344	-4,949	- 2.2%
Final Actions	224,375	221,486	-2,889	- 1.3%
<b>Grants</b>				
Domestic	140,865	140,322	-543	- 0.4%
Foreign	39,045	39,061	+16	+ 0.0%
<b>Total</b>	<b>179,910</b>	<b>179,383</b>	<b>-527</b>	<b>- 0.3%</b>
<b>Appeals/Trials</b>				
Demand for Appeal against refusal	16,699	16,899	+ 200	+ 1.2%
Demand for Trial for invalidation	113	121	+8	- 7.1%
<b>PCT Activities</b>				
International searches	51,666	50,383	-1,328	- 2.6%
International preliminary examinations	2,000	1,806	- 194	- 9.7%

<sup>19</sup> Divisional application(s) is/are one or more new patent application(s) which is/are filed by dividing a part of the patent application that includes two or more inventions under certain conditions.

<sup>20</sup> Converted applications include patent applications which are converted from an application for utility model registration or design registration (under Article 46 of Patent Act), and patent applications filed based on a registration of utility model (under Article 46bis).

## JPO budget

Fig. 2.6 shows JPO expenditures by category in 2020.



A description of the items in Fig. 2.6 can be found in Annex 1.

## JPO Staff Composition

As of the end of FY 2020, the total number of staff at the JPO was 2,789.

Examiners		
Patent / Utility model		1,666
Design		50
Trademark		161
Appeal examiners		380
General staff		532
Total		2,789

## More information

Further information can be found on the JPO's Homepage:

<https://www.jpo.go.jp/e/>

## KOREAN INTELLECTUAL PROPERTY OFFICE

### Overview

As the Korean governmental agency primarily responsible for overseeing IPRs, the KIPO strives to IP administration in accordance with the national paradigm of creative economy, which seeks to foster innovation and new engines of economic growth to drive Korea's future prosperity.

Domestically, KIPO has put as great an emphasis as possible on further developing its examination services, as well as promoting economic sustainability through a virtuous cycle of IP creation, utilization, and protection. On the international front, KIPO strengthened our cooperative ties with foreign IP offices and other international organizations.

### Premium Examination Services

KIPO aims to provide fast, high-quality, and customer-oriented examination services by continuing to improve examination systems, raise the quality of IP administration, and reduce first action pendency.

The average first office pendency in 2020 was 11.1 months for patents and utility models, 8.9 months for trademarks, and 4.6 months for industrial designs.

### IP Competitiveness

In 2020, the KIPO received a preliminary total of 557,256 applications filing for patents, utility models, industrial designs, and trademarks. Out of that number, 79,054 applications were filed by residents of foreign countries.

### PCT Applications

The number of PCT applications from Korea has continually grown every year. We have the fourth largest amount of PCT applications by country of origin. There were 19,675 PCT applications in total for 2020 which is a 4.2 increased from 18,885 applications in 2019.

The Korean language is also the fifth most commonly used language as an official PCT publication language

## PROVIDING IP SERVICES

### 1. Response to COVID-19 : Adjustment of Examination & Trial Services

#### 1) Patent Fee Reduction for Special Disaster Zones

In the R. Korea, early cluster outbreaks of COVID-19 had severely affected specific regions such as Daegu City and Gyeongsangbuk-do Province. As the Korean government designated these regions as special disaster zones on March 15, 2020, the KIPO declared a one-year patent fee reduction for residents of these regions until March 14, 2021.

More specifically, individuals and businesses with their resident address in these special disaster zones were eligible for a reduction of their patent fees. A 30 percent fee reduction was provided for trial requests, registration for establishment of rights, annual registrations and applications for patents, utility models, and designs. Also, a 75 percent fee reduction was provided for the international search requested by SMEs filing international patent applications under the PCT.

### 2) Ex Officio Extension for Patent Document Submission

Considering the global impact the epidemic, it was anticipated that domestic and overseas applicants would have difficulties meeting the submission deadline of patent applications designated by KIPO. Under the Korean Patent Act, KIPO was able to *ex officio* extended document submission deadlines for 82,795 cases in total.

Initially, any deadline for document submission falling within March 31 to April 29, 2020 was *ex officio* extended to April 30, 2020. Afterwards, any deadline falling within April 30 to May 30, 2020 was again extended to May 31, 2020 for a second time. These particular extensions did not require applicants or agents to file for the extension nor to pay the fees arising therefrom. By alleviating this burden, applicants were able to proceed with their IPR acquisition. The same arrangement was extended to patent applications from overseas where the spread of COVID-19 was severe, such as Europe and the U.S.

### 3) Additional measures for Court Proceedings in response to COVID-19

In response to the new challenges of the COVID-19 pandemic, KIPO adopted additional measures so that cases can continue to be heard in a safe environment. Previously, the Intellectual Property Trial and Appeal Board (IPTAB) of KIPO only allowed videoconference oral hearings in which parties needed to be physically present in the videoconference oral hearing rooms in Seoul or Daejeon. However, KIPO has implemented telephonic hearings to prevent parties and representatives from having to physically attend oral proceedings and instead participate by telephone, a measure that accommodates social distancing in the effort to contain the pandemic. Telephonic hearings could potentially provide benefits in situations where Internet access is not secure. Furthermore, online interviews were introduced in order to enable parties to participate remotely from their home or offices via Internet ([vc.on-nara.go.kr](http://vc.on-nara.go.kr)).

## 2. Cutting-edge Technology Used to Create Mobile e-filing, the World's First for Trademark Applications

The e-filing website of KIPO, *Patent-ro* ([www.patent.go.kr](http://www.patent.go.kr)), was upgraded in 2020 with focus on enhancing user access and functionality. It is now possible to carry out a wide range of services through a mobile device from filing trademark applications to receiving notifications, paying fees, viewing examination progress, obtaining registration certificates, etc. Also, users are able to customize their homescreen for quick access to their most used features.

Additionally, the website allows a simple authentication process through browser-embedded authorization certifications or “Digital Onepass,” which is a system that

gives access to a wide range of Korean government services through a single username and verification tool. Furthermore, by utilizing a blockchain-based proxy service to distribute and share filing data, users can benefit from a 24/7 uninterrupted submission services for their IPR application.

### **Promoting IP Creation and Utilization**

#### **1. Korean Patent Big Data Center Opened**

In June 2020, KIPO and the Ministry of Trade, Industry and Energy launched the "National Patent Big Data Center" under the Korea Intellectual Property Strategy Agency (KISTA). Multilateral analysis of patent big data will allow examination of patent competitiveness each by company and by country as well as identify future technologies to guide direction of R&D. Furthermore, it is expected that the utilization of patent big data in the IP market will extend even to the private sector, such as patent consultations for companies.

#### **2. IP Finance Surpasses KRW 2 trillion in the R. Korea**

Soon after reaching KRW 1 trillion in 2019, the total amount of Korea's IP-backed financing transactions rapidly increased by 52.8 percent to record KRW 2.064 trillion by 2020. Loans collateralized by IP accounted for KRW 1.093 trillion and loans guaranteed by IP accounted for KRW 708.9 billion. IP-based investment, which is the investment in companies that own outstanding IP rights or a direct investment for IP rights, accounted for KRW 262.1 billion.

### **Establishing Global IP Cooperation**

#### **1. RCEP Signing among Nations of the Asia-Pacific Region**

The representatives of fifteen countries including the R. Korea, Australia, China, Japan, and New Zealand and the ten countries of the ASEAN region gathered virtually on November 15, 2020 to witness the signing of the Regional Comprehensive Economic Partnership (RCEP) during the fourth RCEP Summit.

The partnership will create a foundation for IPR protection in a considerable market that accounts for 2.26 billion people or 30 percent of the world's population, USD 26.3 trillion or 30 percent of the world's GDP, and USD 5.4 trillion or 28.7 percent of global trade. The Agreement contains 20 Chapters, 17 annexes and 54 schedules of commitments of which specifically defines a total of 83 provisions with respect to trademarks, patents, and designs.

#### **2. 10-Year Vision for Trilateral IP Cooperation**

KIPO, CNIPA and JPO have come together to establish a trilateral cooperation on IP, called the TRIPO cooperation, with the goal of facilitating exchange and utilization of patent examination information, harmonizing patent examination practices, and establishing international norms. In celebration of the 20th anniversary of the TRIPO

cooperation, a 10-year vision for trilateral IP cooperation was established with a view to adopting it at a next trilateral Summit Meeting.

Under the new vision, the TRIPO will make concerted efforts for joint responses to address new challenges, such as digital transformation and the spread of pandemic, by improving relevant laws, examination practices and systems for facilitating the creation and protection of innovative technologies. Also, they will cooperate to improve public access and encourage utilization of patent information by the private sector and to expand cooperation to include other countries or regions, thereby supporting other countries' endeavours to achieve technological development and innovation-driven growth. Furthermore, the meeting was especially meaningful in that each country shared information on their respective cooperative programs implemented with ASEAN countries. The TRIPO cooperation will continue to advance the range and depth of cooperation based on mutual trust.

### KIPO Production information

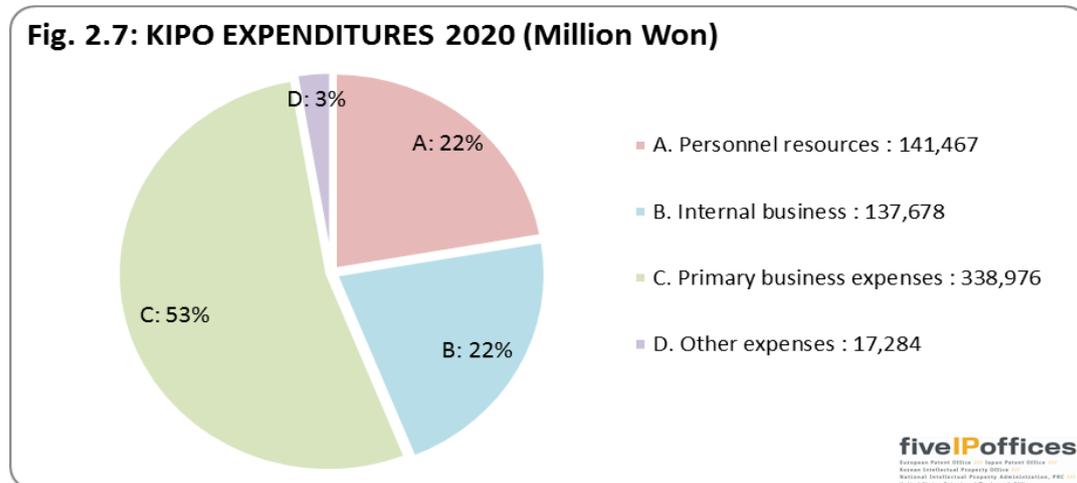
Table 2.3 shows production figures for applications, examinations, grants, appeals or trials and PCT activities for 2019 and 2020.

**Table 2.3: KIPO PRODUCTION INFORMATION**

<b>KIPO PRODUCTION FIGURES</b>	<b>2019</b>	<b>2020</b>	<b>Change</b>	<b>%Change</b>
<b>Applications filed (by Origin of Application)</b>				
Domestic	171,603	180,477	+ 8,874	+ 5.2%
Foreign	47,372	46,282	- 1,090	- 2.3%
<b>Total</b>	<b>218,975</b>	<b>226,759</b>	<b>+ 7,784</b>	<b>+ 3.6%</b>
<b>Examination</b>				
Requests	183,816	223,842	+ 40,026	+ 21.8%
First Actions	172,371	186,495	+ 14,124	+ 8.2%
Final Actions	170,160	177,556	+ 7,396	+4.3%
<b>Grants</b>				
Domestic	94,852	103,881	+ 9,029	+ 9.5%
Foreign	30,809	30,885	+76	+ 0.3%
<b>Total</b>	<b>125,661</b>	<b>134,766</b>	<b>+ 9,105</b>	<b>+ 7.2%</b>
<b>Appeals/Trials</b>				
Demand for Appeal against refusal	2,820	2,110	- 710	- 25.2%
Demand for Trial for invalidation	477	383	- 94	- 19.7%
<b>PCT Activities</b>				
International searches	27,154	28,536	+ 1,382	+ 5.1%
International preliminary examinations	131	100	-31	- 23.7%

## KIPO budget

Fig. 2.7 shows KIPO expenditures by category in 2020



A description of the items in Fig. 2.7 can be found in Annex 1.

## KIPO Staff Composition

At the end of 2020, the KIPO had a total staff 1,819. The breakdown is as follows.

Examiners	
Patents and Utility Model	932
Designs and Trademarks	197
Appeal examiners	107
Other staff	583
Total	1,819

## More information

Further information can be found on KIPO's Homepage:

<https://www.kipo.go.kr/en/MainApp>

## **China National Intellectual Property Administration**

### **Statistical Overview of 2020**

#### **1) Patent Applications in 2020**

In 2020, a total of 1,497,159 invention patent applications were filed in China, as increased by 6.9 percent compared with the previous year. Among them, 1,344,817 were domestic invention patent applications, with an annual increase of 8.1 percent, while 152,342 originated from abroad, with a year-on-year decrease of 3.0 percent. Up to 66.8 percent of domestic invention patent applications were filed by enterprises.

In 2020, 2,926,633 utility model patent applications and 770,362 design patent applications were filed in China, with annual increase of 29.0 percent and 8.3 percent respectively.

#### **2) Patents Granted in 2020**

In 2020, 530,127 invention patents were granted, a year-on-year increase of 17.1 percent, among which 440,691 were granted to domestic patentees. In 2020, 2,377,223 utility model patents and 731,918 design patents were granted, with a year-on-year increase of 50.2 percent and 31.5 percent respectively.

#### **3) Valid invention patents in 2020**

As of the end of 2020, invention patents granted and maintained valid totalled 3,057,844, a year-on-year increase of 14.5 percent. Among them, 2,279,123 were domestic invention patents, accounting for 74.5 percent of the total, an increase of 18.3 percent; the number of foreign invention patents in force in China was 778,721, accounting for 25.5 percent of the total, an increase of 4.6 percent. By the end of 2020, the number of invention patents in force per 10,000 persons in China (HKSAR, MSAR, and Taiwan Province of China not included) was 15.8.

### **CNIPA production information**

Table 2.4 shows production figures of patent applications, examination, grants, re-examination and invalidation, and PCT activities in the years 2019 and 2020. The data in table 2.4 concentrate only on patents for invention.

**Table 2.4: CNIPA PRODUCTION INFORMATION**

<b>CNIPA PRODUCTION FIGURES</b>	<b>2019</b>	<b>2020</b>	<b>Change</b>	<b>% Change</b>
<b>Applications filed</b>				
Domestic	1,243,568	1,344,817	+101,249	+ 8.1%
Foreign	157,093	152,342	-4,751	- 3.0%
<b>Total</b>	<b>1,400,661</b>	<b>1,497,159</b>	<b>+ 96,498</b>	<b>+ 6.9%</b>
<b>Examination</b>				
First actions	1,069,288	1,177,540	+ 108,252	+ 10.1%
Final actions	1,023,221	1,093,942	+ 70,721	+ 6.9%
<b>Grants</b>				
Domestic	360,919	440,691	+ 79,772	+ 22.1%
Foreign	91,885	89,436	-2,449	- 2.7%
<b>Total</b>	<b>452,804</b>	<b>530,127</b>	<b>+ 77,323</b>	<b>+ 17.1%</b>
<b>Re-examination and invalidation</b>				
Re-examination requests	44,138	49,988	+ 5,850	+ 13.3%
Invalidation request	1,403	1,442	+ 39	+ 2.8%
<b>PCT activities</b>				
International searches	55,776	70,068	+14,292	+ 25.6%
International preliminary examinations	527	456	-71	-13.5%

#### 4) Examination Period

The CNIPA adopted time-sliced segment management (where the whole procedure was monitored and managed by divided time point and period) in the whole examination procedure for examination period management by objectives to ensure well-distributed and reasonable examination period. In 2019, the pendency period for the granting of invention patents was approximately 22.2 months.

#### Information and Documentation

In order to support the national technological innovation, the national economic growth and the patent examination, the CNIPA has always highly valued the construction of its patent documentation and information system. Its unremitting efforts for years have resulted in the current various patent information resources, and automatic search and management system.

##### 1) Patent Information Public Service System

In 2019, the CNIPA completed the catalogue on basic IP Information, developed a management system, issued the Measures for the Management of IP Basic Information and Data. The CNIPA made the IP basic data further available, continued to improve the patent data service test system, and added five types of data resources, such as the status of the Chinese laws, invalidation, and re-examination. The types of data available for the public to download rose to 34 with the download bandwidth

doubled, and the paper agreements were replaced by electronic protocols. In 2019, the number of registered users of the patent data service test system reached 15, 000, with an increase of 10 percent, and the total amount of data downloaded accumulatively by users exceeded 478TB, with an increase of 59 percent. The international data exchange and the data sharing among domestic ministries and commissions were actively advanced.

## **1) Examination Period**

In 2020, the average examination pendency for invention patents was shortened to 20 months, and the examination pendency for high-value patents was shortened to 14 months. Throughout the year, over 4,520,000 patent applications were examined and concluded, with a year-on-year increase of twenty percent, among which there were about 1,120,000 cases of examination on patent applications for invention.

## **Information and Documentation**

### **1) Information service**

CNIPA has improved the public IP information service system. As of the end of 2020, public IP information service agencies were set up in 28 provinces (autonomous regions and municipalities) and 15 sub-provincial cities, and comprehensive IP information public service agencies were set up in 27 percent of prefecture-level cities. The Implementation Measures for Recordation of National Public Intellectual Property Information Service Centers was issued. A total of 102 WIPO Technology and Innovation Support Centers (TISCs) have been selected and certified in 4 batches, achieving full coverage in 31 provinces, municipalities, and autonomous regions.

### **Information infrastructure construction was strengthened.**

The National IP Public Service Platform was launched for trial operation to provide one-stop services, including application, payment, information inquiry, search and download for trademarks, patents, geographical indications, and layout designs of integrated circuits. The new-generation local patent search and analysis system was enhanced, with the bibliographic items publicly available for download increased from 7 to 29, and the service scope expanded to the whole country.

### **Information dissemination and utilization was facilitated.**

CNIPA has been promoting the access and sharing of basic IP data while strengthening data management. The Plan for Coordination and Integration of Basic Intellectual Property Information and Resource Platforms was formulated, and the catalogue management system for basic IP information was developed. The Standard for Basic Intellectual Property Information Data (Version 2020 for Trial Implementation) was compiled, which increased the types of accessible basic patent data from 29 to 34.

### **2) Documentation service**

Throughout the year, a total of 150 types of documentation resources were allocated, including 6 types of patent resources and 144 types of non-patent resources, which provides basic guarantees for patent examination, public patent information services and related research. 2,435 patent documents and 25,000 non-patent literatures were provided to examiners throughout the year. CNIPA continued to exchange

patent documentation with IP offices and international organizations of 31 countries (regions), and donated Chinese patent documentation to 6 PCT ISAs and IPEAs. As of the end of 2020, CNIPA has possessed cumulatively 540 types of patent document resources. Among them, the bibliographic data, the full-text image data and the full-text data covered 104, 103, and 36 countries (regions) or international organizations respectively. The total volume of CNIPA's patent documentation exceeded 135 million.

### **3) Service facilitation reform**

More facilitated services were provided to applicants. 230 local counters that receive trademark applications and 34 local receiving offices for patent applications were set up nationwide, so as to facilitate nearby applicants. A green channel was opened for trademark examination; the mechanisms for priority examination and fast-track examination of patents were improved; and a system was established for delayed patent examination upon request. Patent certificates could be claimed in 33 local receiving offices nationwide.

### **International Cooperation**

In 2020, faced with challenges brought by the COVID-19 pandemic, CNIPA took innovative measures proactively for international cooperation on mitigating the impact of the pandemic. CNIPA is committed to promoting international IP cooperation and competition, participating actively in the global IP governance, advancing the adjustment of international IP norms, and deepening pragmatic IP cooperation with major countries and regions, in an effort to build a comprehensive international IP paradigm featuring coordinated progress in bilateral, plurilateral and multilateral levels and in collaboration with neighbouring countries.

### **PPH network kept expanding.**

CNIPA launched PPH pilot programs with its counterparts of Norway and Saudi Arabia, signed an updated PPH cooperation agreement with Brazil, extended PPH pilot programs with Malaysia, the Czech Republic and Chile, and extended the IP5 PPH pilot program for three years. By the end of 2020, CNIPA has networked with 30 PPH partners, including 16 IP offices in countries and regions along the Belt and Road.

### **Work sharing programs progressed steadily.**

The evaluation of the PCT Collaborative Search and Examination Pilot (PCT CS&E) and the China-Korea Joint Search Pilot (CSP) started orderly, following the completion of run phase. Pursuant to users' demand for information on overseas patent application procedures, outreach and training activities were launched to introduce international work sharing programs and their outcomes to the public via multiple channels.

### **Patent examination exchanges went on smoothly.**

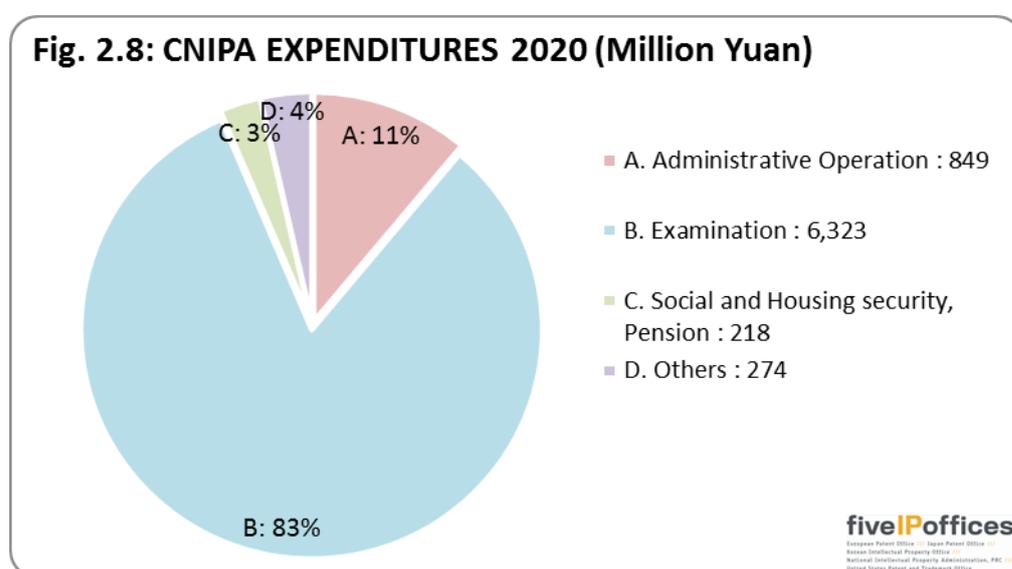
The China-EU expert videoconference on patent examination quality was held for in-depth exchanges on quality management and patent examination standards in the field of new emerging technologies. The China-Japan examiner exchange program (Phase I) was carried out via video conferences and yielded evident results.

## Patent documentation cooperation was further strengthened.

International cooperation programs on patent documentation were carried out online in 2020. CNIPA took an active part in revising international patent classifications, with 3 proposals approved by WIPO, 11 proposals put forward at the IP5 platform, and another 1 proposal in regard to new emerging technologies presented to WIPO for consideration. China-EU documentation cooperation was further deepened, and bilateral videoconferences were held on documentation resource management, patent information services, and CPC task forces. Three China-EU CPC online training sessions were held, attended by nearly 120 classifiers and examiners.

## The CNIPA budget

Fig 2.8 shows CNIPA expenditures by category in 2020.<sup>21</sup>



A description of the items in Fig. 2.8 can be found in Annex 1.

## The CNIPA Staff Composition

By the end of 2019, the CNIPA has 8 functional departments (vice bureau level).

## More information

Further information can be found on the CNIPA's Homepage:  
<https://english.cnipa.gov.cn/>

<sup>21</sup> Percentages may not total 100 due to rounding.

## UNITED STATES PATENT AND TRADEMARK OFFICE

### Mission Statement

The mission of the United States Patent and Trademark Office (USPTO) is:

Fostering innovation, competitiveness and job growth in the United States by conducting high quality and timely patent and trademark examination and review proceedings in order to produce reliable and predictable intellectual property rights; guiding intellectual property policy, and improving intellectual property rights protection; and delivering intellectual property information and education worldwide.

The USPTO is pivotal to the success of innovators. In fulfilling the mandate of Article 1, Section 8, Clause 8, of the U.S. Constitution, “To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries”, the USPTO is on the cutting edge of technological progress and achievement in the United States.

The USPTO provides valuable products and services to its customers in exchange for fees to fund its operations. The powers and duties of the USPTO are vested in the Under Secretary of Commerce for Intellectual Property and Director of the USPTO, who consults with the Patent Public Advisory Committee and the Trademark Public Advisory Committee. (collectively “the public advisory committees”).The USPTO operates with two core business units, Patents and Trademarks.

The USPTO’s Strategic Plan for Fiscal Years (FY)<sup>22</sup> 2018-2022 sets forth the Agency's three mission-focused strategic goals and one mission support goal, as well as the proposed objectives and initiatives to meet those goals. The strategic goals collectively focus efforts on issuing predictable, reliable, and high-quality IP rights, aligning patent and trademark examination capacity with current and projected workloads, modernizing information technology, enhancing the customer experience, promoting IP rights abroad, monitoring and helping address dynamic IP issues in Congress and the Courts, maintaining a sustainable funding model, and developing IP policy. This plan was developed with input from the public advisory committees, stakeholders, the public, and USPTO employees.

- Goal 1: Optimize Patent Quality and Timeliness.
- Goal 2: Optimize Trademark Quality and Timeliness.
- Goal 3: Provide Domestic and Global Leadership to Improve IP Policy, Enforcement, and Protection Worldwide.
- Mission Support Goal: Deliver Organizational Excellence.

### Agency News

In response to the global COVID-19 pandemic, the USPTO smoothly transitioned the workforce to mandatory telework, provided temporary relief for patent and trademark applicants affected by the pandemic, and actually improved the quality and efficiency of patent and trademark examination.

With the authority provided by the Coronavirus Aid, Relief, and Economic Security Act (CARES Act), the USPTO temporarily extended deadlines for filing many patent and

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<sup>22</sup> The USPTO’s Fiscal Year is October 1 to September 30.

trademark documents and paying certain fees. The USPTO did not receive an appropriation from Congress to support this relief; it was financed by the use of operating reserves and a number of spending adjustments to extend and target relief throughout the remainder of FY 2020.

Another way the USPTO worked to provide relief during the pandemic was to launch the COVID-19 Prioritized Patent Examination Pilot Program and the COVID-19 Prioritized Trademark Examination Program. These programs enabled the USPTO to, without payment of the typical fees associated with other prioritized examination, grant requests for prioritized examination to qualifying patent applicants and to accept petitions to advance the initial examination of applications for trademarks used to identify qualifying COVID-19 medical products and services. Since the programs' enactment in May 2020 for patents and June 2020 for trademarks, 272 patent requests for prioritized patent application examination have been granted, resulting in 46 patents being allowed or granted, and 130 trademark petitions have been granted, resulting in 14 trademark registrations being issued during the 2020 calendar year. More than half of the patent applications granted prioritized examination were directed to medical treatments, vaccines, and diagnostic technology. The balance of the applications were directed to ventilators, personal protective equipment (PPE), and other technology related to COVID-19. Almost half of the trademark petitions granted are for items designed to detect and treat COVID-19. The other half are for PPE and medical goods, as well as medical services related to COVID-19. To support research related to COVID-19, the USPTO also launched the Patents 4 Partnerships website, which provides a repository of patents and applications related to COVID-19 and creates a platform for connecting patentees and potential licensees.

To enhance patent quality, the USPTO implemented the first phase of updates to improve the examination process. These included an increase to the base time patent examiners are allotted to examine each application, as well as additional time for applications that contain particular attributes; the introduction of a new patent search system that provides examiners with increased access to prior art, in part, aided by AI; and enhanced classification efforts with the use of an auto-classification system that uses machine learning and AI to assign CPC symbols on patent documents and identifies whether CPC symbols are associated with the specific claimed subject matter, thereby improving consistency of classification practices and facilitating international harmonization.

For patent timeliness, the USPTO is focusing on Patent Term Adjustment (PTA) goals based on the statutory requirements laid out in The American Inventor's Protection Act (AIPA, 1999). Under the AIPA, specific time frames for the Office to act on applications at various stages of prosecution were set, with failure to meet these time frames possibly increasing the patent term. Shifting to PTA goals will provide increased accountability, consistency, and certainty throughout the examination process. For FY 2020, total PTA Compliance for all mailed actions (defined as all actions mailed by the USPTO throughout the measurement period and counted as either compliant or non-compliant compared to the applicable PTA time frame) is 83 percent. The total PTA Compliance for all remaining inventory (defined as all cases awaiting any action by the USPTO at the end of the measurement period and counted as compliant or non-compliant compared to the applicable PTA time frame, based on the time spent waiting as of the end of the measurement period) is 88 percent.

The Trademarks organization also had an impressive year with several new milestones, despite the challenges of a global pandemic. As a result of greater electronic processing of applications, efficiency gains throughout the application cycle enabled Trademarks to exceed pendency and quality targets in a year where trademark

applications increased by 9.6 percent and as COVID-19 forced a dramatic shift in agency operations. Trademarks also advanced a number of initiatives to mitigate suspicious filings, fraudulent filings and specimens, and counterfeit products.

Also in 2020, the USPTO launched an important initiative aimed at expanding invention and entrepreneurship in the United States: the National Council for Expanding American Innovation (NCEAI). The NCEAI was born out of a recommendation in the USPTO's 2018 SUCCESS Act and is tasked with helping the USPTO develop a long-term, comprehensive national strategy to build a more diverse and inclusive innovation ecosystem by increasing participation demographically, geographically, and economically. The NCEAI is committed to increasing the opportunities for all Americans to participate in innovation and will be an important catalyst for increasing opportunity and fuelling the United States' innovation economy.

### **International Cooperation and Work Sharing**

The USPTO continued to develop and provide international in-person and virtual programs to improve IP systems in countries around the world. Participants included foreign officials with IP-related responsibilities, including judges, prosecutors, and IP office administrators. In all, the USPTO worked with over 4,800 foreign government officials representing 121 countries and intergovernmental organizations. The USPTO worked throughout FY 2020 to improve IP protection and enforcement for U.S. stakeholders globally through its network of overseas IP attachés and U.S.-based IP specialists.

In FY 2020, the USPTO conducted 130 training programs through its Global Intellectual Property Academy (GIPA), serving over 10,688 individuals. Approximately 40 percent of all attendees were stakeholders representing domestic small and medium-sized enterprises, IP practitioners, and IP owners and users. The remaining attendees were patent, trademark, and copyright officials; prosecutors; police; customs officials; and policymakers from the U. S. and 121 other countries. From 2017 to mid-2020, GIPA and the Office of Policy and International Affairs' China Team conducted China IP Road Shows in 29 cities and six related webinars on China IP topics.

The USPTO continues to be a global leader in developing worksharing programs that result in efficiencies for patent applicants and patent examiners as well as enhance the efficiency of the global patent system. In October 2021, the USPTO and Cambodian Ministry of Industry, Science, Technology & Innovation signed a worksharing agreement by which U.S. patent holders will now be able to request issuance of a corresponding patent in Cambodia without undergoing a substantive examination of their application. Also, early in FY 2020, the USPTO and Brazil's National Institute for Industrial Property put into effect a new PPH agreement that significantly expands on a prior agreement, allowing for applications for more industries and for higher annual caps. The USPTO and the Mexican Institute of Industrial Property (IMPI) signed a memorandum of understanding to implement a parallel patent grant framework that allows IMPI to leverage USPTO search and examination results when granting a corresponding Mexican patent, thereby furthering commitments made in the United States-Mexico-Canada Agreement. In July 2020, based on the success of a bilateral PPH with the USPTO, the National Institute of Industrial Property of Chile (INAPI) became the third Latin American office to join the Global PPH. As of the end of the fiscal year, a cumulative total of 68,099 applications with petitions had been filed under the PPH, with 60,221 applications granted

## USPTO production information

Table 2.5 includes production figures for application filings, PCT searches and examination, first actions, grants, applications in appeal and interference, and patent cases in litigation for calendar years 2019 and 2020.

**Table 2.5: USPTO PRODUCTION INFORMATION**

USPTO PRODUCTION FIGURES	2019	2020	Change	% Change
<b>Applications filed</b>				
Utility (patents for invention) <sup>23</sup>	621,453	597,175	- 24,278	- 3.9%
Domestic	292,998	277,297	-15,701	-5.3%
Foreign	328,455	319,878	-8,577	-2.6%
Plant	1,134	976	- 158	- 14%
Reissue	1,110	1,171	+ 61	+ 5.5%
<b>Total utility, plant &amp; reissue</b>	<b>623,697</b>	<b>599,322</b>	<b>- 24,375</b>	<b>- 4.0%</b>
Design	46,847	47,838	+ 991	+ 2.1%
Provisional	170,089	172,052	+ 1,963	+ 1.2%
<b>Total</b>	<b>840,633</b>	<b>819,212</b>	<b>- 21,421</b>	<b>- 2.6%</b>
Request for continued examination (RCE) <sup>24</sup>	170,568	154,731	- 15,837	- 9.3%
<b>PCT Chapter I searches</b>	<b>22,465</b>	<b>22,723</b>	<b>+ 258</b>	<b>+ 1.1%</b>
<b>PCT Chapter II examinations</b>	<b>1,003</b>	<b>1,035</b>	<b>+ 32</b>	<b>+ 3.2%</b>
<b>First actions (utility, plant, reissue)</b>	<b>600,057</b>	<b>573,920</b>	<b>- 26,137</b>	<b>- 4.4%</b>
<b>Grants (total)</b>	<b>354,430</b>	<b>351,993</b>	<b>- 2,437</b>	<b>- 0.7%</b>
U.S. residents	167,115	164,555	- 2,560	- 1.5%
Foreign	187,315	187,438	+ 123	+ 0.1%
Japan	53,542	51,619	- 1,923	- 3.6%
EPC states	55,638	54,377	- 1,261	- 2.3%
R. Korea	21,684	21,977	+ 293	+ 1.4%
P.R. China	19,209	21,428	+ 2,219	+ 12%
Others	37,242	38,037	+ 795	+ 2.1%
<b>Applications in appeal and interference proceedings (includes utility, plant, and reissue)</b>				
Ex-parte cases received	6,889	6,676	- 213	- 3.1%
Ex-parte cases disposed	11,353	7,767	- 3,586	- 31.6%
Inter-partes cases received	10	4	- 6	- 60%
Inter-partes cases disposed	19	15	- 4	- 21.1%
<b>Patent cases in litigation</b>				
Cases filed	682	684	+ 2	+ 0.3%
Cases disposed	778	716	- 62	- 8.0%
Pending cases (end of calendar year)	561	535	- 26	- 4.6%

<sup>23</sup> Unless otherwise noted, the USPTO statistics presented elsewhere in this report are limited to utility patent applications and grants, and include Requests for Continued Examination (RCEs).

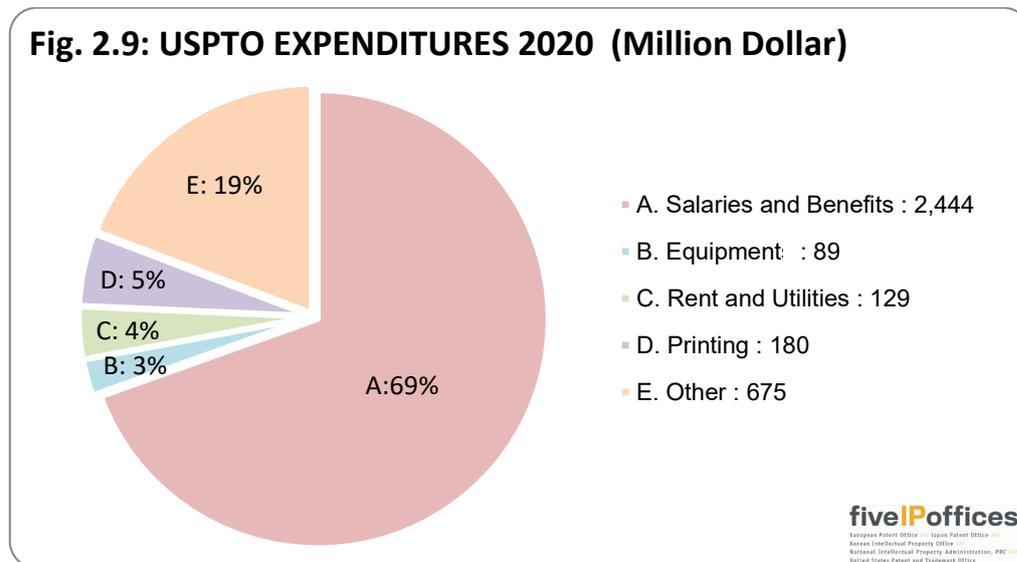
<sup>24</sup> A Request for Continued Examination is a USPTO procedure under which an applicant may obtain continued examination of an application by filing a submission and paying a specified fee, even if the application is under a final rejection, appeal, or a notice of allowance.

## USPTO Budget

The USPTO utilizes an activity based information methodology to allocate resources and costs that support programs and activities within each of the three strategic goals. In FY 2020, USPTO expenditures totalled \$3.516 billion. Agency-wide, 18.0 percent of expenditures were allocated to IT security and associated IT costs.

Goal 1 – Optimize Patent Quality and Timeliness	\$ 3.105 billion
Goal 2 – Optimize Trademark Quality an Timeliness	\$ 344.3 million
Goal 3 – Provide Domestic and Global Leadership to Improve IP Policy, Protection and Enforcement Worldwide	\$ 66.2 million

Fig. 2.9 shows USPTO expenditures by category in 2020<sup>25</sup>



A description of the items in Fig. 2.9 can be found in Annex 1

## USPTO Staff Composition

At the end of FY 2020, the USPTO work force was composed of 12,928 federal employees. Included in this number are 8,230 Utility, Plant, and Reissue patent examination staff and 204 Design examination staff; 622 Trademark examining attorney staff, and 3,872 managerial, policy, legal, administrative and technical support staff.

## More information

Further information can be found on the USPTO's website:  
<https://www.uspto.gov>

<sup>25</sup> Percentages may not total 100 due to rounding.