

# Patent Index 2024

Statistics at a glance



## Total European patent applications

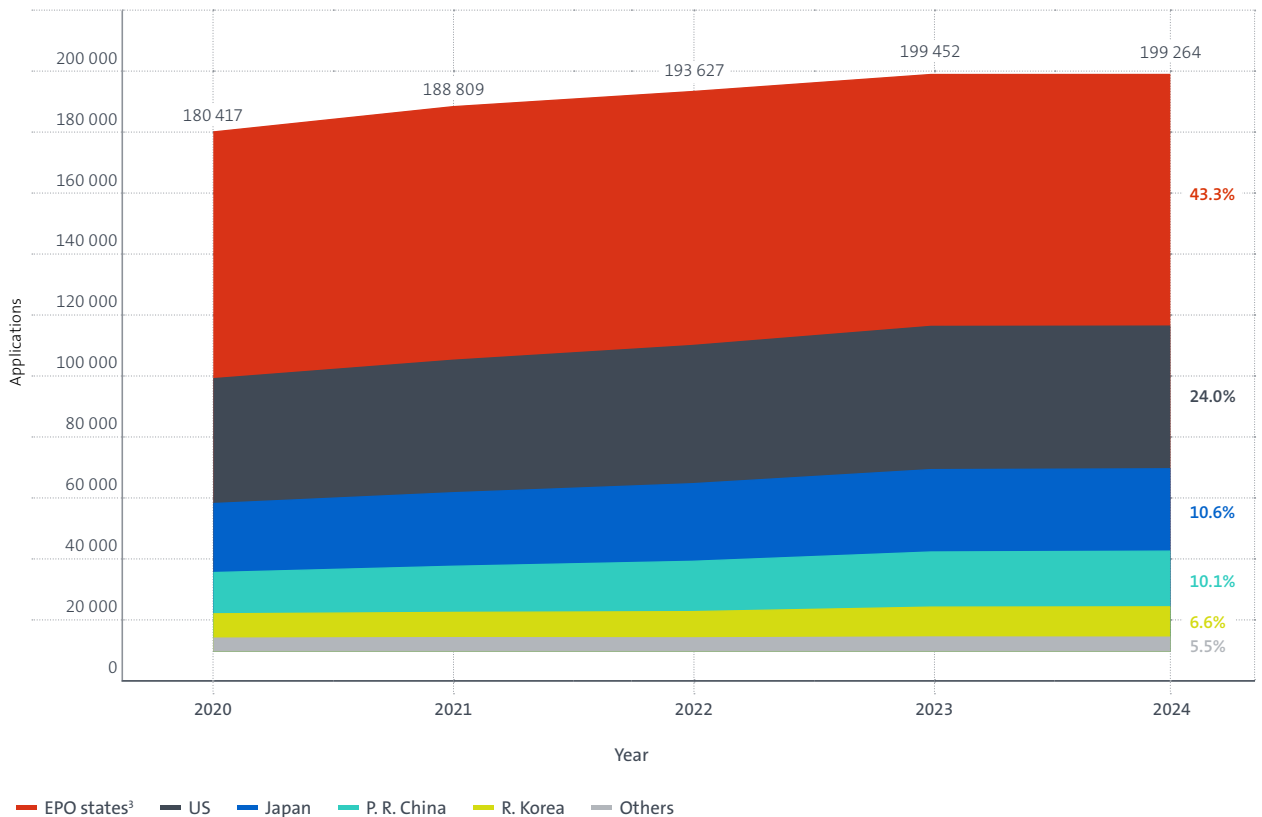
The European Patent Office (EPO) received 199 264 patent applications in 2024, a slight decrease (-0.1%) from 2023. Computer technology, which includes inventions related to artificial intelligence, rose two places to become the top technology field (+3.3%). Electrical machinery, apparatus and energy, which includes battery technologies, also rose two places to become the new #2 field (+8.9%). Digital technologies saw a significant reduction in applications (-6.3%), falling to #3; and medical technology dropped two places to #4 (-3.0%).

Growth was modest from EPO states (+0.3%), as well as from P.R. China (+0.5%), in contrast to the rapid increases in Chinese filings seen in recent years. Of all the major sources of applications, those from R. Korea saw the biggest growth (+4.2%).

This graph shows the geographic origin of the European patent applications<sup>1</sup> filed with the EPO. The geographic origin of the file is determined by the country of residence of the first applicant listed on the application form (first-named applicant principle<sup>2</sup>).

Figure 1

Patent applications to the EPO



Status: 03.02.2025

Source: EPO

1 European patent applications include direct European applications (Direct) and international (PCT) applications that entered the European phase during the reporting period (PCT regional).  
2 In cases where several applicants are mentioned on the application form, the country of residence of the first applicant listed applies.

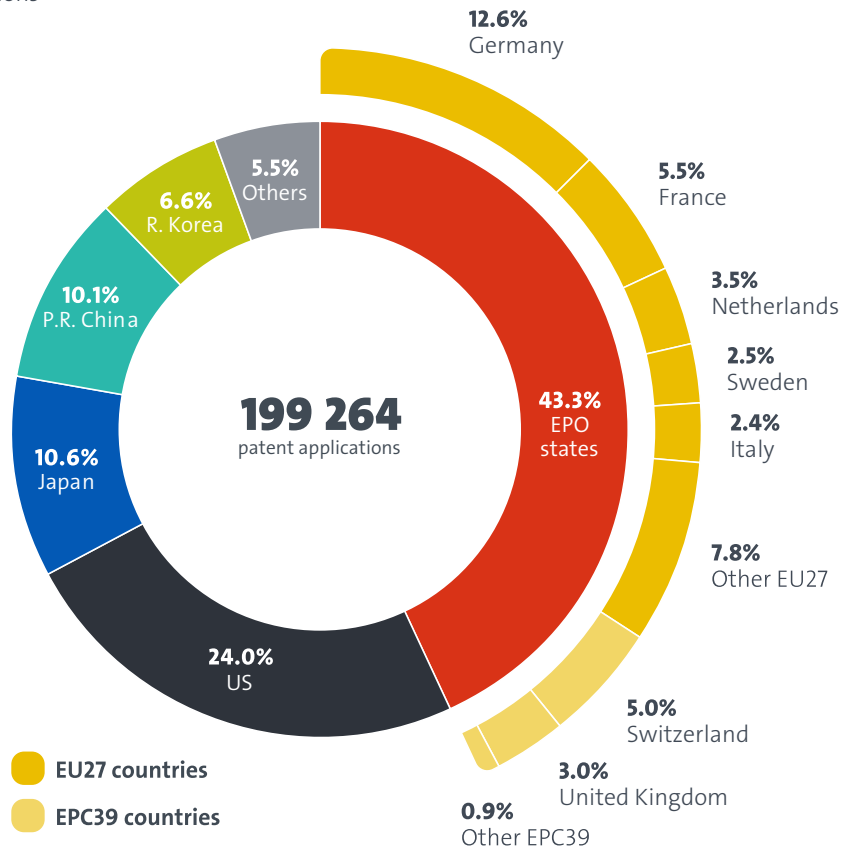
3 EPO states: the 39 member states of the European Patent Organisation, which includes the 27 states of the EU.

## Origin of European patent applications

This graph shows the geographic origin of the European patent applications<sup>1</sup> determined by the country of residence of the first applicant listed on the application form (first-named applicant principle<sup>2</sup>).

Figure 2

Origin of applications



Status: 03.02.2025

Source: EPO

<sup>1</sup> European patent applications include direct European applications and international (PCT) applications that entered the European phase during the reporting period.  
<sup>2</sup> In cases where several applicants are mentioned on the application form, the country of residence of the first applicant listed applies.

<sup>3</sup> EPO states: the 39 member states of the European Patent Organisation, which includes the 27 states of the EU.

## Top technical fields based on European patent applications

This page shows the number of European patent applications<sup>1</sup> filed with the EPO for the ten technical fields<sup>2</sup> with the largest number of applications in 2024.

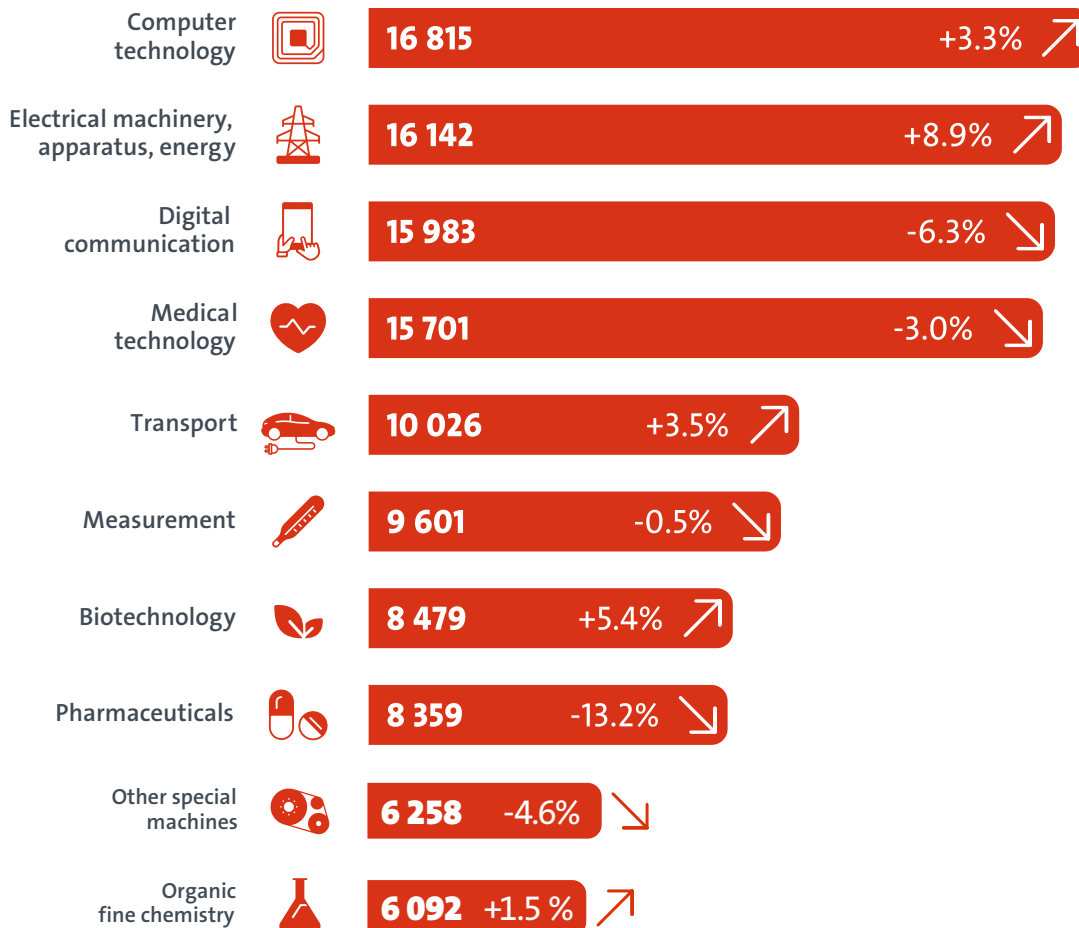
Five of the ten fields saw growth. The greatest increase was seen in electrical machinery, apparatus, energy (+8.9%), which includes clean energy inventions. Computer technology (+3.3%) was the top technology

field, overtaking digital communication (-6.3%) which fell to the third position. Filings remained robust in transport (+3.5%) and biotechnology (+5.4%), while medical technology (-3.0%) and especially pharmaceuticals (-13.2%) suffered a steep decline.

Overall, the top ten fields accounted for almost 57% of patent applications at the EPO in 2024.

Figure 3

### Top technical fields



Status: 03.02.2025

Source: EPO

<sup>1</sup> European patent applications include direct European applications and international (PCT) applications that entered the European phase during the reporting period.

<sup>2</sup> The definition of the fields is based on the WIPO IPC technology concordance. The table is available at: [www.wipo.int/ipstats/en/docs/ipc\\_technology.xlsx](http://www.wipo.int/ipstats/en/docs/ipc_technology.xlsx)

## Patent applications per million inhabitants

This country ranking<sup>1</sup> is based on the number of European patent applications<sup>2</sup> filed with the EPO per million inhabitants.<sup>3</sup>

Figure 4

### Applications per million inhabitants

Country	Applications in 2024	Population <sup>3</sup> (mio. inhabitants)	Ratio: applications per mio. inhabitants
1. <b>Switzerland</b>	<b>9 966</b>	8 961	1 112.2
2. <b>Sweden</b>	<b>4 936</b>	10 552	467.8
3. <b>Finland</b>	<b>2 400</b>	5 604	428.3
4. <b>Denmark</b>	<b>2 539</b>	5 961	425.9
5. <b>Netherlands</b>	<b>7 054</b>	17 943	393.1
6. <b>Germany</b>	<b>25 033</b>	83 445	300.0
7. <b>Republic of Korea</b>	<b>13 107</b>	51 718	253.4
8. <b>Austria</b>	<b>2 146</b>	9 159	234.3
9. <b>Belgium</b>	<b>2 615</b>	11 832	221.0
10. <b>Ireland</b>	<b>1 118</b>	5 344	209.2
11. <b>Singapore</b>	<b>1 092</b>	5 832	187.2
12. <b>Israel</b>	<b>1 715</b>	9 387	182.7
13. <b>Japan</b>	<b>21 062</b>	123 753	170.2
14. <b>Hong Kong SAR</b>	<b>1 197</b>	7 415	161.4
15. <b>France</b>	<b>10 980</b>	68 402	160.5
16. <b>Norway</b>	<b>817</b>	5 550	147.2
17. <b>United States</b>	<b>47 787</b>	345 427	138.3
18. <b>United Kingdom</b>	<b>6 076</b>	69 138	87.9
19. <b>Italy</b>	<b>4 853</b>	58 990	82.3
20. <b>Slovenia</b>	<b>156</b>	2 124	73.4

Status: 29.01.2025

Source: EPO

<sup>1</sup> The geographic origin is based on the country of residence of the first applicant listed on the application form (first-named applicant principle). In cases where several applicants are mentioned on the application form, the country of residence of the first applicant listed applies.

<sup>2</sup> European patent applications include direct European applications and international (PCT) applications that entered the European phase during the reporting period.

<sup>3</sup> Source of population figures: United Nations, Department of Economic and Social Affairs, Population Division (2024); Eurostat (2024)

## Top 50 applicants

This ranking shows the largest applicants<sup>1</sup> at the EPO, indicating their country of origin<sup>2</sup>.

Figure 5

### Top 50 applicants<sup>1</sup>



Status: 03.02.2025

Source: EPO

<sup>1</sup> This is the ranking of the main consolidated applicants at the EPO in 2024 (first-named applicant principle). It is based on European patent applications filed with the EPO, which include direct European applications and international (PCT) applications that entered the European phase during the reporting period.

<sup>2</sup> Country of residence of the headquarters.

<sup>3</sup> EPO states: the 39 member states of the European Patent Organisation, which includes the 27 states of the EU.

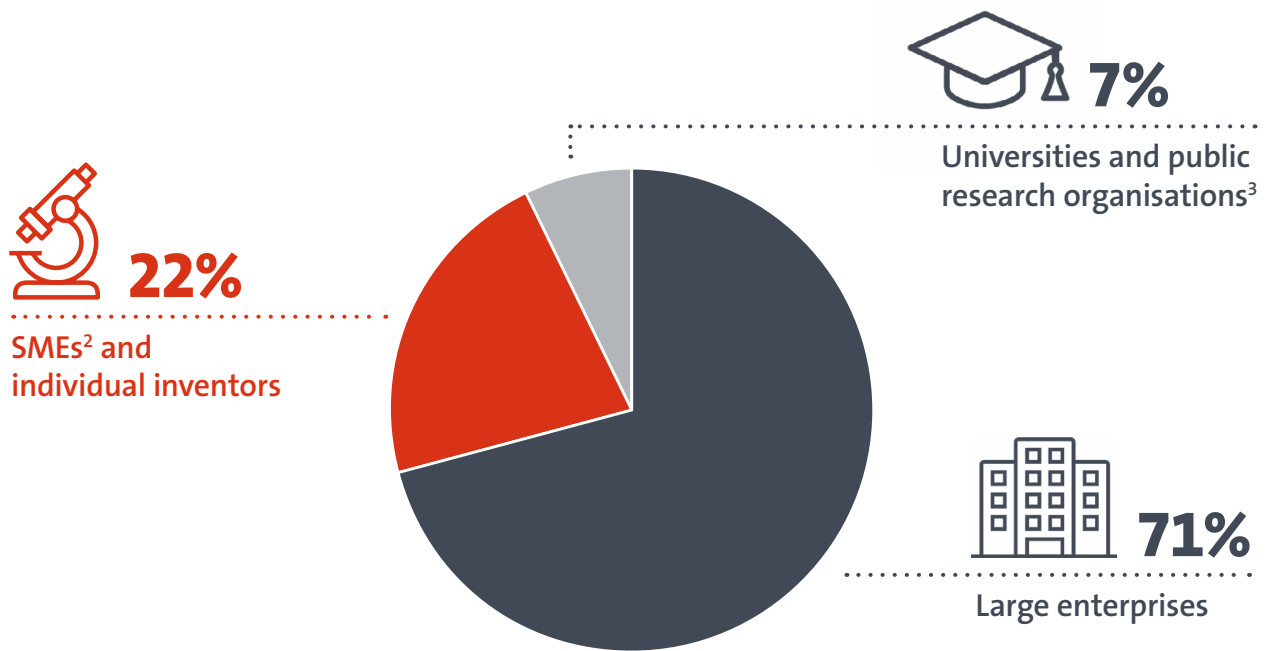
## Shares in applications originating from Europe<sup>1</sup>

A breakdown of patent applications originating from European countries shows that 71% of them were filed by large companies, 22% by individual inventors and SMEs, and 7% by universities and public research organisations.

This shows that a significant proportion of applicants at the EPO are smaller entities.

Figure 6

Breakdown of applicants by type



Status: 03.02.2025

Source: EPO

1 This breakdown is based on a large representative sample of patent applications filed with the EPO in 2024 by applicants located in member states of the European Patent Organisation.

2 SMEs have been identified based on the European Commission definition of SMEs (2003/361/EC). According to this definition, an SME is i) an independent company with ii) less than 250 staff and iii) a turnover below €50 million and/or a balance sheet below €43 million. Detailed financial data and company ownership data from the BvD Orbis database have been used to enable a strict application of this definition.

3 This category includes technology transfer offices that while registered as corporate entities are clearly affiliated to a university or public research

## Women Inventor Rate

In November 2022 the EPO published a study looking at women's participation in inventive activity, investigating how often women were named as inventors on patent applications. For 2024 we find that 25% of applications filed at the EPO from applicants based in one of the EPO's 39 member states named at least one woman as an inventor. A small drop from the previous year.

There is wide variation between countries and technology fields, indicating that there is still much to be done to encourage girls in STEM subjects at schools, and to encourage more women to follow careers in science and engineering.

## Granted patents over 5 years

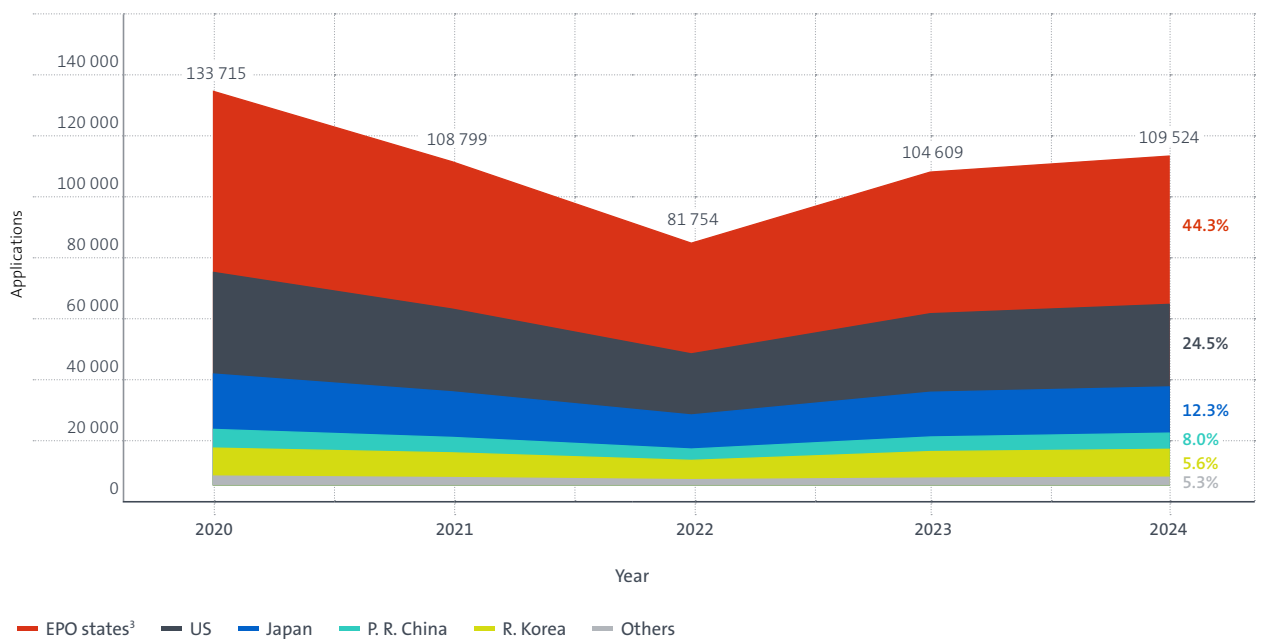
This graph shows the geographic origin of the patents granted by the EPO<sup>1</sup> based on the country of residence of the first patentee listed on the published patent<sup>2</sup>.

## Uptake of the new Unitary Patent

Of the 109 524 patents granted by the EPO in 2024, 25.6% requested unitary effect, a single validation covering 18 EU member states. Uptake from patentees based in Europe was even higher, at 36.5%, comprising almost two thirds of all Unitary Patents.

Figure 7

### Patent grants



Status: 03.02.2025

Source: EPO

1 The analysis is based on published patents granted by the EPO.  
 2 The geographic origin is based on the country of residence of the first patentee listed on the published patent. In cases where several patentees are mentioned on the published patent, the country of residence of the first patentee listed applies.

3 EPO states: the 39 member states of the European Patent Organisation, which includes the 27 states of the EU.



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