

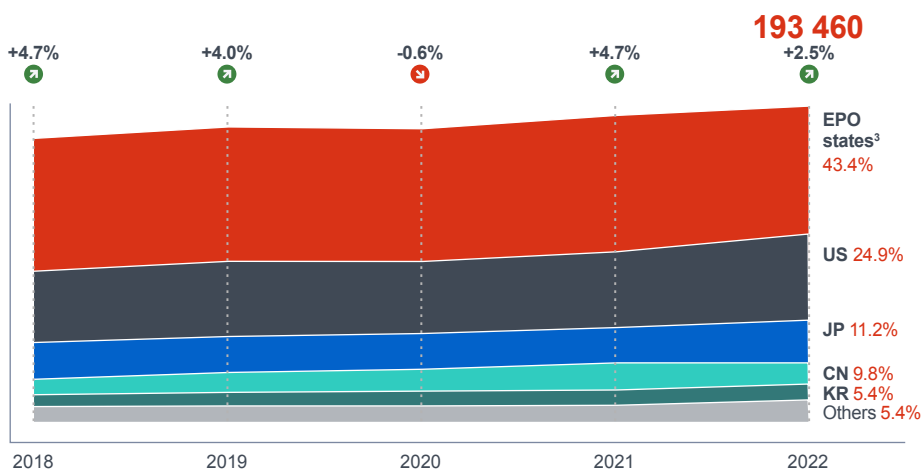
Patent Index 2022

Statistics at a glance

The European Patent Office (EPO) received a record 193 460 patent applications in 2022, up 2.5% on 2021. Despite global uncertainties, innovation remained strong, with digital and clean energy technologies the main drivers of growth. While digital communication continued to boom, innovation in batteries and semiconductors surged. Filings from the US and P.R. China saw the greatest absolute growth.

Total European patent applications

This graph shows the geographic origin of the European patent applications¹ filed with the EPO. The geographic origin of a filing is determined by the country of residence of the first applicant listed on the application form (“first-named applicant” principle²).



Source: EPO.

Status: 30.01.2023.

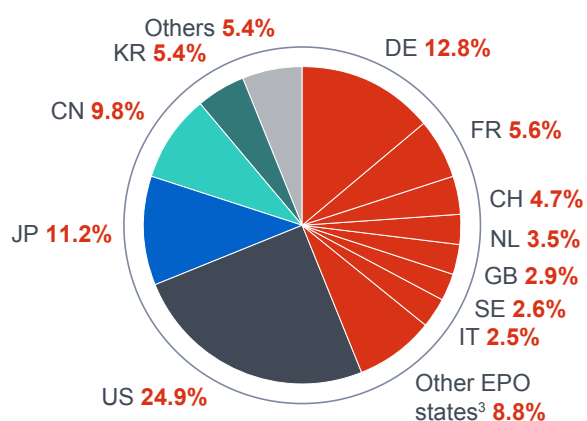
¹ European patent applications include direct European applications (Direct) and international (PCT) applications that entered the European phase during the reporting period (PCT regional).

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 applications¹ determined by the country of residence of the first applicant listed on the application form (“first-named applicant” principle²).



Country	2022	2021	Change
US	48 088	46 712	2.9% ↗
DE	24 684	25 891	-4,7% ↘
JP	21 576	21 672	-0,4% ↘
CN	19 041	16 550	15,1% ↗
Other EPO states ³	16 960	16 769	1,1% ↗
FR	10 900	10 693	1,9% ↗
Others	10 433	10 560	-1,2% ↘
KR	10 367	9 421	10,0% ↗
CH	9 008	8 504	5,9% ↗
NL	6 806	6 578	3,5% ↗
GB	5 697	5 592	1,9% ↗
SE	5 036	4 947	1,8% ↗
IT	4 864	4 920	-1,1% ↘

Source: EPO.

Status: 30.01.2023.

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

² In cases where several applicants are mentioned on the application form, the country of residence of the first applicant listed applies.

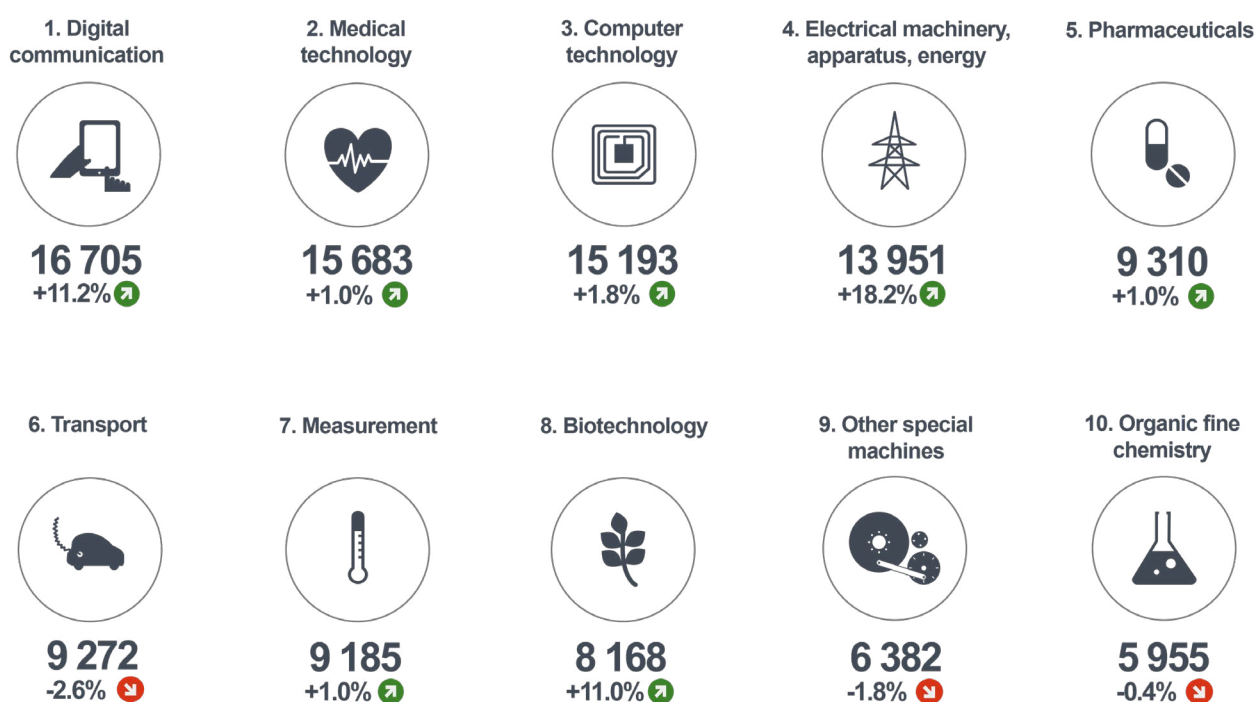
³ EPO states: the 39 member states of the European Patent Organisation, which includes the 27 states of the EU.

More information on 2022 statistics at epo.org/patent-index2022

Top technical fields based on European patent applications

This page shows the number of European patent applications¹ filed with the EPO for the ten technology fields² with the largest number of applications in 2022. Overall, the top ten fields accounted for almost 57% of patent applications at the EPO in 2022.

Seven of these technology fields saw growth. The greatest increase was seen in electrical machinery, apparatus and energy, which includes clean energy inventions and battery technology, where innovation surged. Digital communication and biotechnology also posted double-digit growth. Filings remained robust in medical technology, computer technology and pharmaceuticals, which squeezed past transport to break into the top five fields for the first time in a decade.



Source: EPO.
Status: 30.01.2023.

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

² The definition of the fields is based on the WIPO IPC technology concordance. The table is available at: https://www.wipo.int/ipstats/en/docs/ipc_technology.xlsx

Patent applications per million inhabitants

This country ranking¹ is based on the number of European patent applications² filed with the EPO per million inhabitants.³

Rank	Country	Applications per mio inhabitants	Population ³ (mio inhabitants)	Applications ²
1.	Switzerland	1.031.1	8.737	9.008
2.	Sweden	481.8	10.452	5.036
3.	Denmark	453.2	5.873	2.662
4.	Netherlands	386.9	17.591	6.806
5.	Finland	385.7	5.548	2.140
6.	Germany	296.6	83.237	24.684
7.	Austria	266.0	8.979	2.388
8.	Ireland	225.3	5.060	1.140
9.	Belgium	223.9	11.631	2.604
10.	Republic of Korea	200.1	51.816	10.367
11.	Israel	192.6	9.038	1.741
12.	Japan	174.1	123.952	21.576
13.	France	160.7	67.843	10.900
14.	United States	142.2	338.290	48.088
15.	Singapore	139.7	5.976	835
16.	Norway	121.7	5.425	660
17.	United Kingdom	84.4	67.509	5.697
18.	Italy	82.5	58.983	4.864
19.	Chinese Taipei	61.7	23.893	1.474
20.	Slovenia	58.4	2.107	123

Source: EPO.

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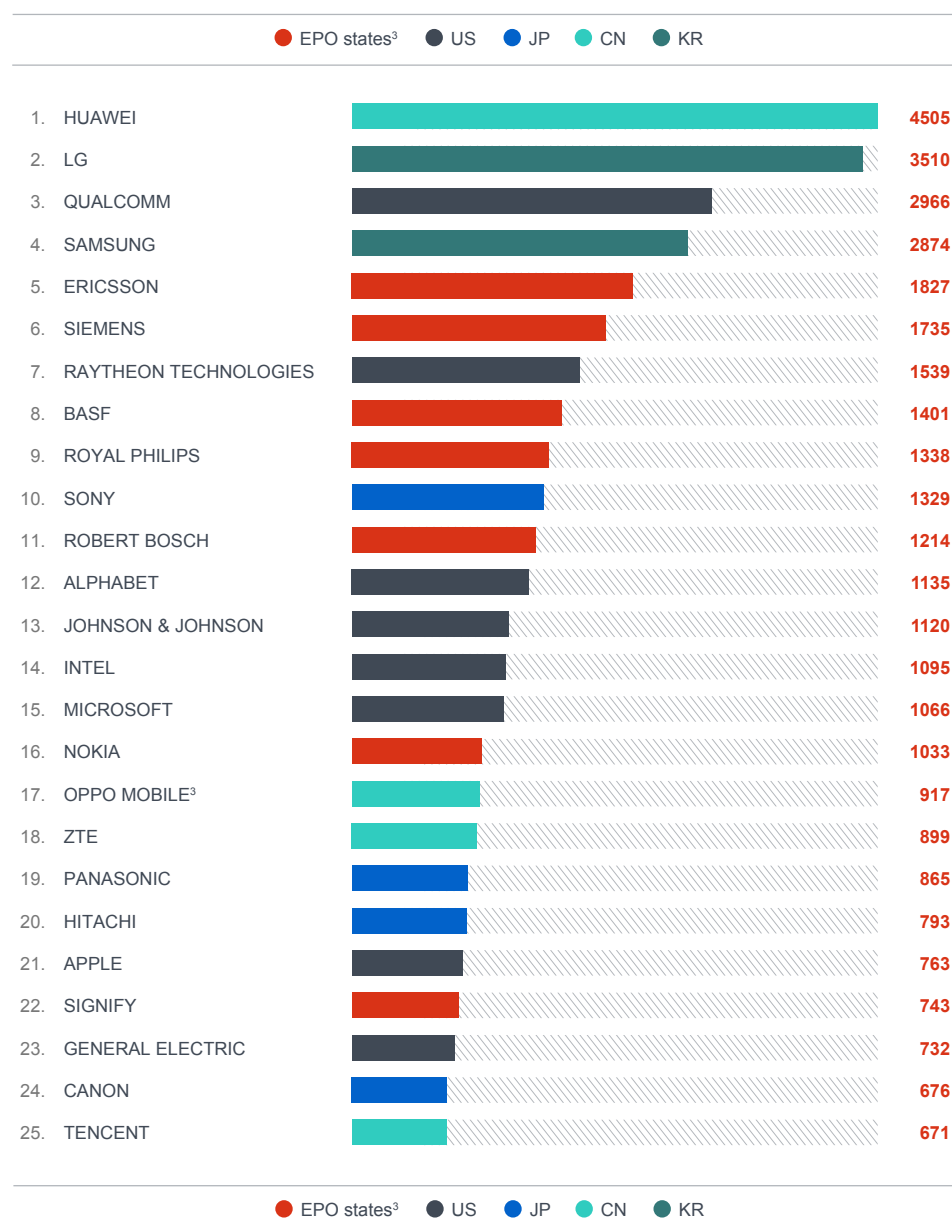
¹ The geographic origin is based on the country of residence of the first applicant listed on the application form (first-named applicant principle). In cases where several applicants are mentioned on the application form, the country of residence of the first applicant listed applies.

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

³ Source of population figures: US Census Bureau, International Data Base.

Top 25 applicants

This ranking shows the largest applicants¹ at the EPO, indicating their country of origin².



Source: EPO.

Status: 30.01.2023.

¹ This is the ranking of the main consolidated applicants at the EPO in 2022 (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.

² Country of residence of the headquarters.

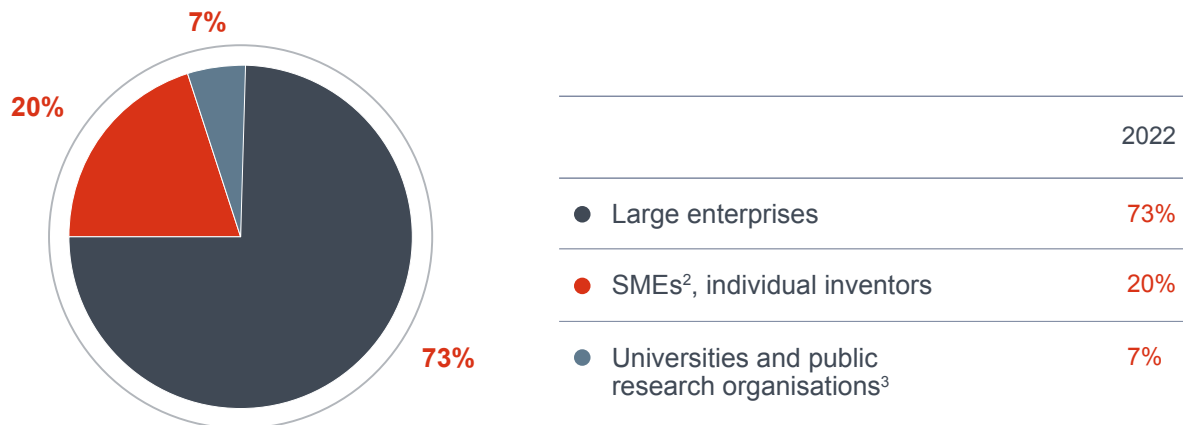
³ EPO states: the 39 member states of the European Patent Organisation, which includes the 27 states of the EU.

⁴ Guangdong OPPO Mobile Telecommunications.

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Shares in applications originating from Europe¹

A breakdown of patent applications originating from European countries shows that 73% of them were filed by large companies, 20% 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.



Source: EPO.
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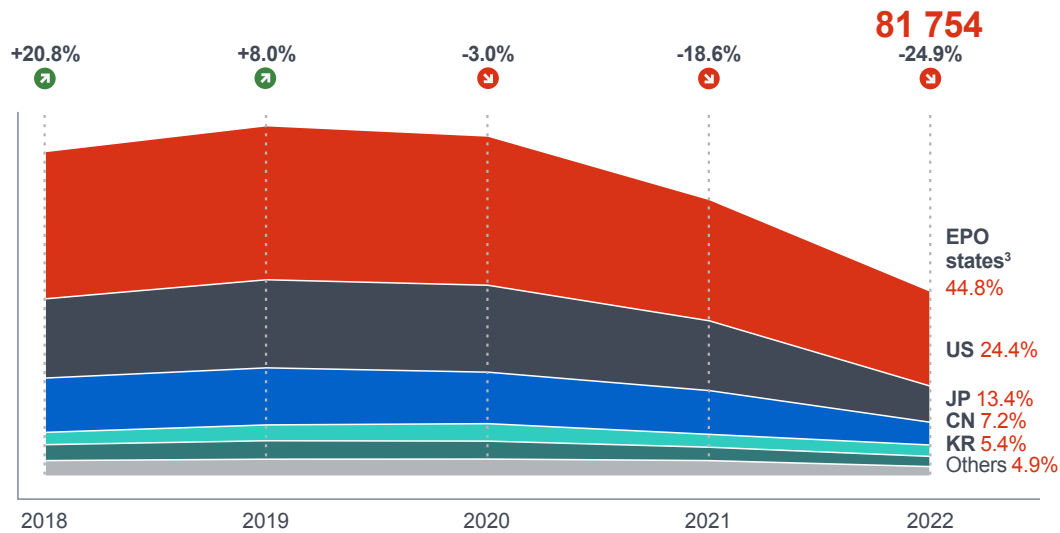
¹ This breakdown is based on a large representative sample of patent applications filed with the EPO in 2022 by applicants located in member states of the European Patent Organisation.

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 organisation.

Granted patents over 5 years

This graph shows the geographic origin of the patents granted by the EPO¹ based on the country of residence of the first patentee listed on the published patent².



Source: EPO.

Status: 30.01.2023.

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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