



Europäisches
Patentamt
European
Patent Office
Office européen
des brevets

Patent Index 2020

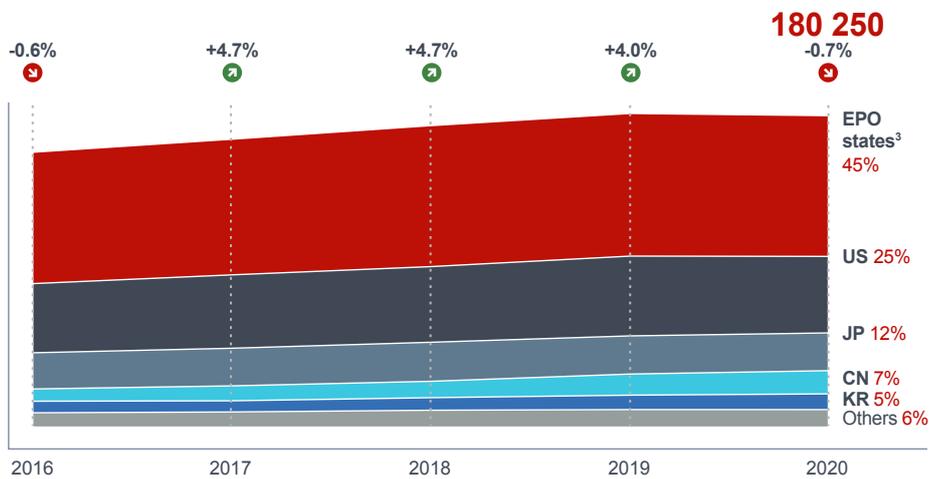
Statistics at a glance



Overall, demand for European patents remained robust in 2020. The EPO received 180 250 patent applications, just 0.7% down on the record year of 2019. However, this slight overall decrease conceals contrasting trends in the wake of the coronavirus pandemic, with falls in demand for patent applications from some countries and in some technologies offset by growth elsewhere. Healthcare innovation was the main driver of European patent applications in 2020, with medical technologies in the lead and major growth in pharmaceuticals and biotechnology.

Total European patent applications

This graph shows the geographic origin of the European patent applications¹ 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 principle²).



Source: EPO.
Status: 1.2.2021.

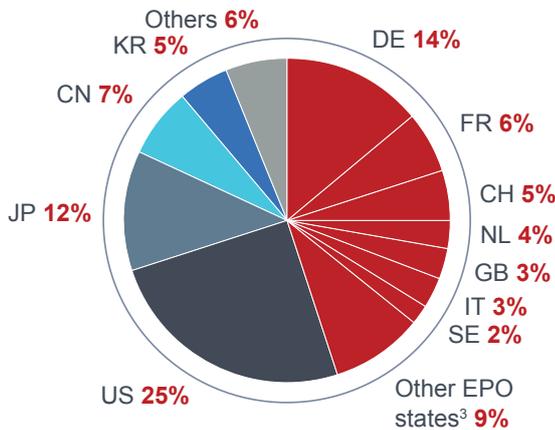
¹ European patent applications include direct European applications (Direct) and international (PCT) applications that entered the European phase during the reporting period (PCT regional).

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 38 member states of the European Patent Organisation, which includes the 27 states of the EU.

Origin of the 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	2020	2019	Change
● US	44 293	46 177	-4.1% ↓
● DE	25 954	26 762	-3.0% ↓
● JP	21 841	22 086	-1.1% ↓
● Other EPO states ³	15 710	15 358	2.3% ↑
● CN	13 432	12 227	9.9% ↑
● FR	10 554	10 233	3.1% ↑
● Others	10 135	10 149	-0.1% ↓
● KR	9 106	8 339	9.2% ↑
● CH	8 112	8 266	-1.9% ↓
● NL	6 375	6 942	-8.2% ↓
● GB	5 715	6 129	-6.8% ↓
● IT	4 600	4 469	2.9% ↑
● SE	4 423	4 395	0.6% ↑

Source: EPO.
Status: 1.2.2021.

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.

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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 2020.

As the digital transformation of the economy accelerates, Europe remains a robust technology market. Having soared in 2019, digital communication and computer technology made modest gains last year. Medical technology returned to top spot, while pharmaceuticals and biotechnology surged.

Traditional areas of mechanical engineering such as transport saw the steepest drops in filing volumes. In 2020, the top ten fields accounted for almost 55% of the total number of European applications filed.



Source: EPO.
Status: 1.2.2021.

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: http://www.wipo.int/export/sites/www/ipstats/en/statistics/patents/xls/ipc_technology.xls

Patent applications per million inhabitants

This country ranking² is based on the number of European patent applications filed with the EPO¹ per million inhabitants.³

Rank	Country	Applications per mio inhabitants	Population ³ (mio inhabitants)	Applications ¹
1.	Switzerland	965.9	8.398	8.112
2.	Sweden	434.2	10.186	4.423
3.	Denmark	409.6	5.869	2.404
4.	Netherlands	369.1	17.274	6.375
5.	Finland	340.1	5.572	1.895
6.	Germany	324.1	80.070	25.954
7.	Austria	260.0	8.856	2.303
8.	Belgium	205.0	11.708	2.400
9.	Israel	194.1	8.660	1.681
10.	Ireland	187.5	5.173	970
11.	Korea, Republic of	176.6	51.577	9.106
12.	Japan	174.5	125.136	21.841
13.	France	155.5	67.859	10.554
14.	United States	133.2	332.639	44.293
15.	Norway	118.2	5.465	646
16.	Singapore	99.3	5.810	577
17.	Puerto Rico	90.9	3.190	290
18.	United Kingdom	86.9	65.731	5.715
19.	Slovenia	78.5	2.102	165
20.	Italy	73.8	62.335	4.600

Source: EPO.
Status: 1.2.2021.

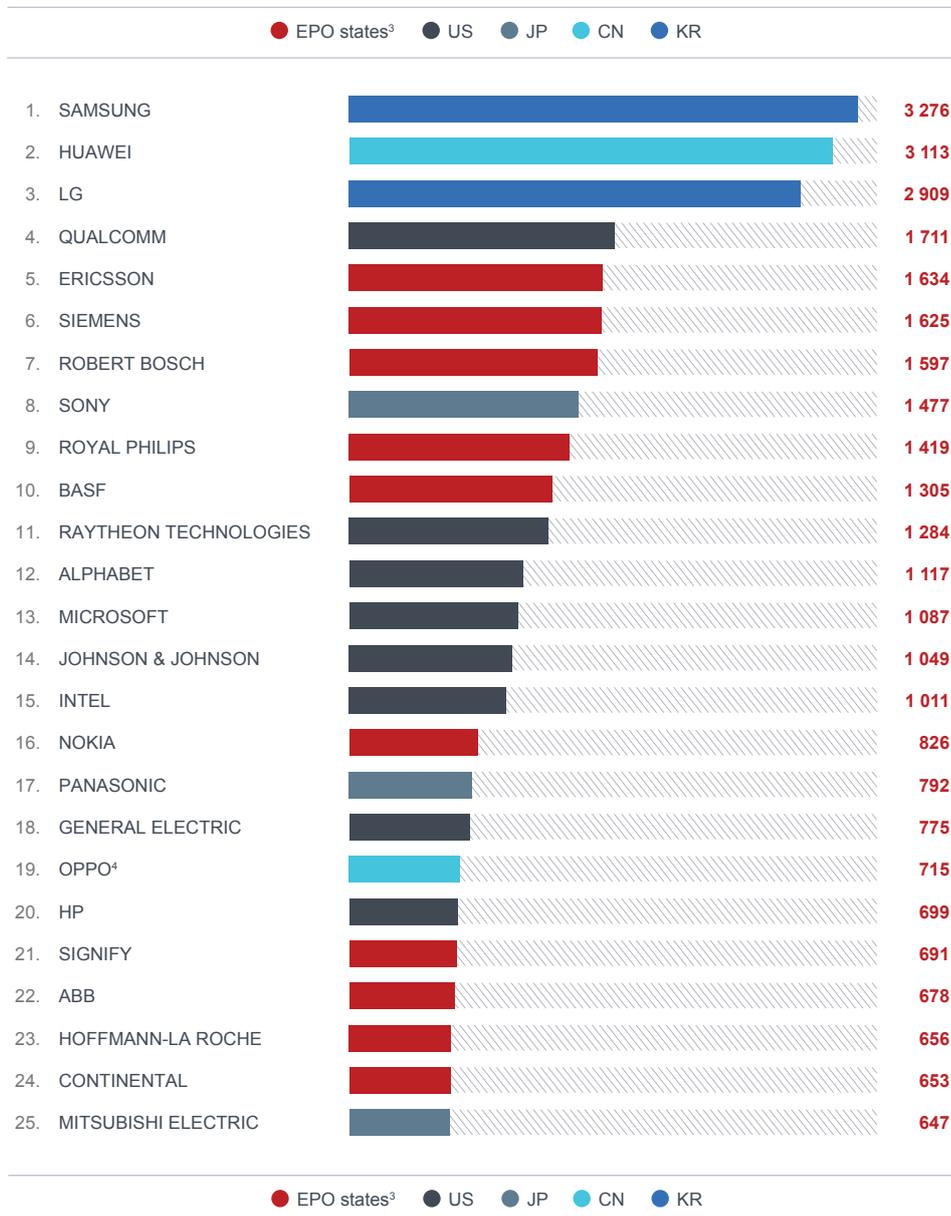
¹ European patent applications include direct European applications and international (PCT) applications that entered the European phase during the reporting period.

² 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.

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: 1.2.2021.

¹ This is the ranking of the main consolidated applicants at the EPO in 2019 (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.

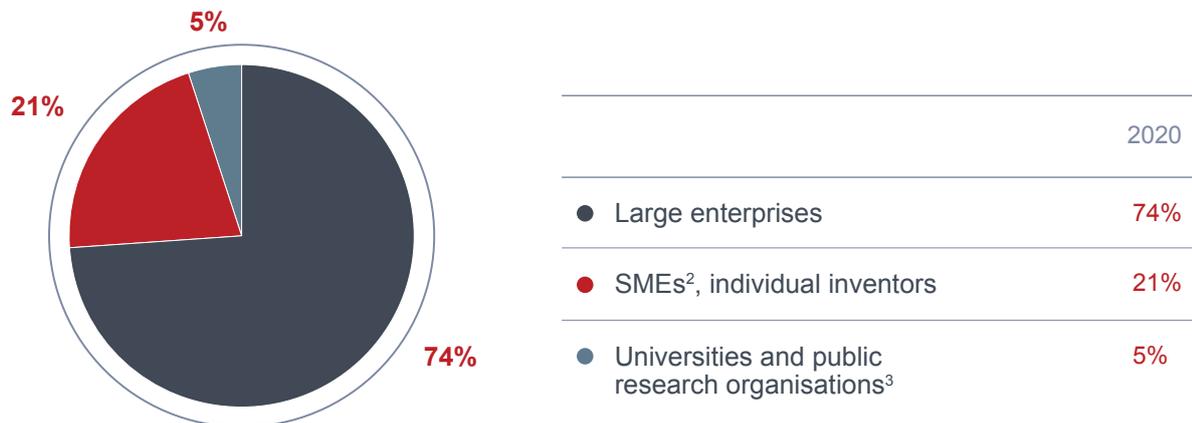
² Country of residence of the headquarters.

³ EPO states: the 38 member states of the European Patent Organisation, which includes the 27 states of the EU.

⁴ Guangdong OPPO Mobile Telecommunications.

Shares in applications originating from Europe¹

A breakdown of applications originating from European countries shows that 74% of them were filed by large companies, 21% by SMEs and individual inventors, and 5% by universities and public research organisations. This shows that a significant proportion of applicants at the EPO are smaller entities.



Source: EPO.
Status: 1.2.2021.

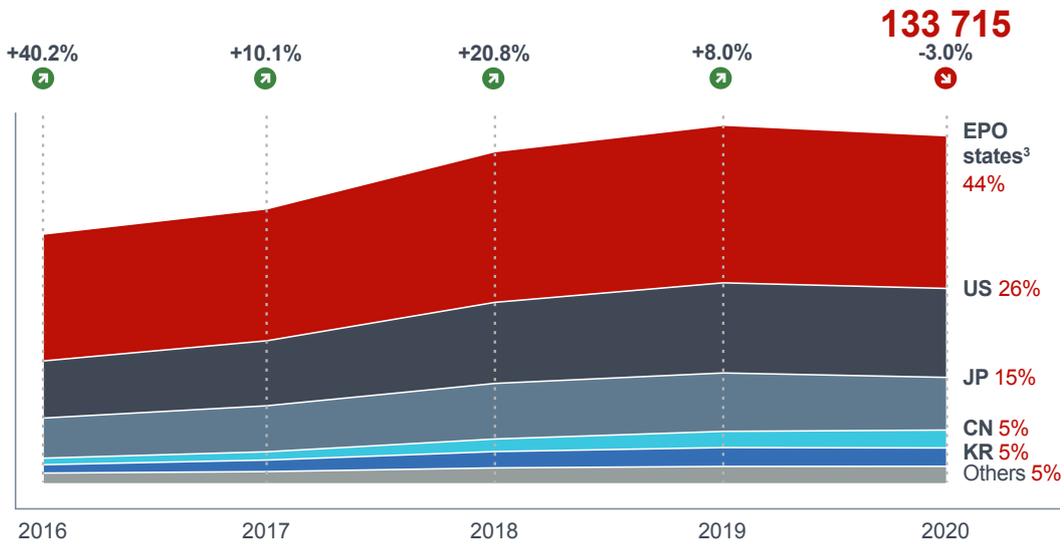
¹ This breakdown is based on a large representative sample of patent applications filed with the EPO in 2020 by applicants located in member states of the European Patent Organisation.

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: 1.2.2021.

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 38 member states of the European Patent Organisation, which includes the 27 states of the EU.