

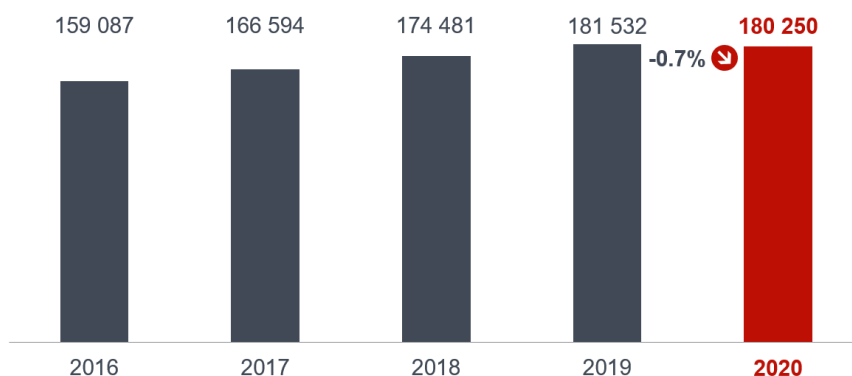
Healthcare innovation main driver of European patent applications in 2020

- Steady demand for patent protection at the EPO despite pandemic
- Data shows stark contrasts among technologies and countries of origin
- Healthcare inventions on the rise, transport sector decreases
- Strong growth from China and South Korea; European, Japanese and US inventors file fewer patent applications
- Samsung, Huawei and LG top the applicant ranking

Munich, 16 March 2021 – Statistics published today by the European Patent Office (EPO) show that innovation in healthcare drove patenting activity in 2020: Medical technology was the leading field for inventions in terms of volume, while pharmaceuticals and biotechnology were the fastest-growing areas.

Despite the pandemic, the overall number of European patent applications filed in 2020 was nearly on a par with the previous year's, decreasing by 0.7%. The EPO received 180 250 patent applications in total last year, which was slightly below the record level attained in 2019 (181 532).

Growth of European patent applications



“The EPO’s Patent Index for 2020 shows that demand for patent protection has remained high. Overall, patenting activity has been robust, even though it fluctuated across technology sectors and economic regions. While this is a conclusive set of results for the year, it is far from presenting a complete picture of the longer-term effects of the pandemic. Those, I’m sure, are yet to be seen. And although we can’t predict with any certainty the patent trends that will emerge in the coming months or years, we do know that it is innovation, research and science that will lead to a

healthier world, and to stronger and more sustainable economies. Because innovation, supported by a strong IP system, is the motor of recovery, in every sense of the word,” said EPO President António Campinos.

Life sciences inventions surge, digital technologies remain strong, transport down

Among the leading technical fields, pharmaceuticals (+10.2%) and biotechnology (+6.3%) showed the biggest increases in terms of patent filings. Medical technology (+2.6%) accounted for the most inventions in 2020, retaking the top spot from digital communication, which had been the most active field in 2019. The previous growth champions, digital communication (which includes technologies enabling 5G networks) and computer technology (including AI-related inventions), continued to show strong patenting activity, ranking second and third respectively, and growing by 1.0% and 1.9% on 2019. Meanwhile, transport showed the largest drop (-5.5%), especially in the sub-fields of aviation and aerospace (-24.7%), and to a lesser extent automotive (-1.6%).

Leading fields of technology

TOP 10

		2020	Change
1	Medical technology	14 295	2.6% ↑
2	Digital communication	14 122	1.0% ↑
3	Computer technology	13 097	1.9% ↑
4	Electrical machinery, apparatus, energy	11 346	0.4% ↑
5	Transport	9 020	-5.5% ↓
6	Pharmaceuticals	8 589	10.2% ↑
7	Measurement	8 582	-5.2% ↓
8	Biotechnology	7 246	6.3% ↑
9	Other special machines	6 261	-2.5% ↓
10	Organic fine chemistry	5 905	-1.5% ↓

China and South Korea post rapid growth

In terms of geographic origin of inventions, the top five countries in 2020 were again the US (44 293 applications), followed by Germany (25 954), Japan (21 841), China (13 432) and France (10 554). But there was considerable variation in growth rates: As in 2019, the strongest increases among the top 10 countries came from Chinese (+9.9%) and South Korean (+9.2%) applicants, with Chinese firms filing more applications in biotechnology, electrical machinery/apparatus/energy (where many inventions for clean energy technologies are filed) and digital communication. Korean companies were particularly active in electrical machinery/apparatus/energy, telecommunications, semiconductors and computer technology.

Conversely, US patent applicants, who account for a quarter of all applications at the EPO, filed 4.1% fewer applications in 2020, dropping significantly in the areas of transport, electrical machinery/apparatus/energy and organic fine chemistry. Patent applications from Japanese companies and inventors were down 1.1% on the previous year, with the biggest declines seen in transport and optics.

Top 50 countries for patent applications 2020

TOP 50

	2020	Change					
1	United States	44 293	-4.1%	18	Israel	1 681	+8.8%
2	Germany	25 954	-3.0%	19	Chinese Taipei	1 344	-15.9%
3	Japan	21 841	-1.1%	20	Ireland	970	+10.0%
4	P.R. China	13 432	+9.9%	21	Australia	958	-3.9%
5	France	10 554	+3.1%	22	India	698	+8.7%
6	R. Korea	9 106	+9.2%	23	Norway	646	0.0%
7	Switzerland	8 112	-1.9%	24	Turkey	594	+26.1%
8	Netherlands	6 375	-8.2%	25	Singapore	577	+14.3%
9	United Kingdom	5 715	-6.8%	26	Saudi Arabia	488	+34.1%
10	Italy	4 600	+2.9%	27	Poland	483	+4.3%
11	Sweden	4 423	+0.6%	28	Cayman Islands	458	-9.7%
12	Denmark	2 404	-0.5%	29	Liechtenstein	436	-0.2%
13	Belgium	2 400	-0.9%	30	Luxembourg	394	-5.1%
14	Austria	2 303	-1.8%	31	Puerto Rico	290	-1.7%
15	Finland	1 895	+11.1%	32	Russian Federation	264	+8.2%
16	Spain	1 791	-5.0%	33	Barbados	260	+9.7%
17	Canada	1 760	-4.4%	34	Portugal	249	-8.5%
				35	Czech Republic	205	+1.0%
				36	New Zealand	200	+11.1%
				37	Slovenia	165	+35.2%
				38	Brazil	161	-16.1%
				39	Hong Kong SAR (China)	156	+24.8%
				40	Greece	136	-3.5%
				41	Hungary	107	+10.3%
				42	Antigua and Barbuda	97	+142.5%
				43	South Africa	89	+1.1%
				44	United Arab Emirates	71	+65.1%
				45	Malta	65	+12.1%
				46	Cyprus	64	+33.3%
				47	Thailand	63	-25.9%
				48	British Virgin Islands	62	+5.1%
				49	Estonia	57	+18.8%
				50	Slovakia	55	+31.0%

European Patent Office 2021

Fewer applications from Europe – but Finland, France and Italy buck trend

Companies and inventors from the EPO's 38 member states filed over 81 000 European patent applications last year, down by 1.3% due to fewer filings in fields such as measurement (which includes sensor technologies; -10.4%), organic fine chemistry (-3.6%) and electrical machinery/apparatus/energy (-2.8%). Nevertheless, applicants from the EPO states posted significant growth in pharmaceuticals (+15%) and biotechnology (+4.5%).

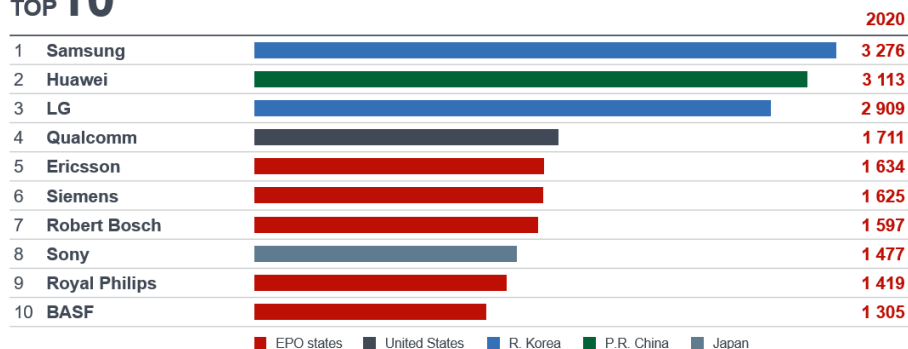
At country-level, the volume of filings also diverged significantly: While applications from Germany, Europe's biggest country of origin, dropped by 3.0% in 2020, French and Italian inventors filed 3.1% and 2.9% more applications respectively. Among the top 10 European countries, the Netherlands saw the biggest decline (-8.2%), followed by the UK (-6.8%). Patent filings from Sweden and Denmark reached the levels of 2019, while Finland recorded 11.1% growth, thanks to a strong increase in the number of inventions in digital technologies.

Five European companies in the Top 10 ranking

The 2020 top applicant ranking also reflects the sustained growth of patent applications from China and South Korea. Samsung (with 3 276 applications) heads the table, followed by Huawei (3 113), which led the ranking in the previous year, and LG in third place (2 909). The top 10 includes five companies from Europe (the highest number since 2014), two from South Korea, and one from China, Japan and the US respectively.

Top applicants at the EPO

TOP 10



For detailed statistics, see the EPO Patent Index 2020 at www.epo.org/patent-index2020.

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About the EPO

With 6 400 staff, the European Patent Office (EPO) is one of the largest public service institutions in Europe. Headquartered in Munich with offices in Berlin, Brussels, The Hague and Vienna, the EPO was founded with the aim of strengthening co-operation on patents in Europe. Through the EPO's centralised patent granting procedure, inventors are able to obtain high-quality patent protection in up to 44 countries, covering a market of some 700 million people. The EPO is also the world's leading authority in patent information and patent searching.