

European Patent Office Annual Report 2018: UK continues upward trend in patent applications

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- European patent applications filed by UK businesses and inventors up for fifth year in a row
- Rolls-Royce remains top UK patent applicant at the EPO
- Medical technology, computer technology and organic fine chemistry UK's largest technology fields by volume
- UK main growth drivers for patent filings: computer technology, consumer goods, chemistry and pharmaceuticals
- Greater London in top ten European ranking of regions, North West England and East Midlands with strongest local growth
- Siemens reclaims No. 1 spot from Huawei in EPO's company ranking
- Overall demand for patent protection continues to grow: more than 174 000 applications (+4.6%) filed at the European Patent Office last year, US top country of origin, slower increase from China

Munich, 12 March 2019 – UK businesses again continued to file a growing number of patent applications with the European Patent Office (EPO) in 2018. Published today, the EPO's Annual Report 2018 shows that with 5 736 patent applications, the UK posted an increase of 7.8%, the fifth consecutive year of growth, the strongest since 2010, and above the average growth of 3.8% exhibited by the 38 EPO member states (<https://www.epo.org/about-us/foundation/member-states.html>). (Fig. Growth of UK patent applications at the EPO

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This was mainly attributable to double-digit increases in the computer technology, consumer goods, organic fine chemistry and pharmaceuticals sectors. The UK ranks ninth among the top 50 filing countries at the EPO with a 3% share of total European patent applications (Fig. Origin of applications

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The number of European patents granted by the EPO to British companies and inventors also rose by 22.8% to 3 827.

“The ongoing upward trend in the number of patent applications from the UK and patents granted to British companies and inventors sends a positive message and shows that European innovation can rely on a competitive and effective patent system,” said EPO President António Campinos. “Companies need a competitive and robust patent system so they can build strong patent portfolios. That is good for the economy as recent studies have shown that industries with a high use of intellectual property rights, including patents, strongly contribute to generating employment, growth and trade.”

Growth fuelled by European companies

In total, the EPO received 174 317 European patent applications in 2018, an increase of 4.6% over 2017 and the highest number ever (Fig. Growth of European patent applications

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The US remained the largest country of origin, with 25% of all European patent applications filed, followed by Germany, Japan, France and China. European countries fuelled the increase in applications, accounting for almost 40% of the overall growth in European applications – more than China, Japan, and

the Republic of Korea combined. While applications from China still advanced by 8.8%, they did so at their slowest rate for the past five years (2017: +21.8%).

Rolls-Royce No.1 UK patent applicant

Rolls-Royce was the UK's most active patent applicant at the EPO for the fourth consecutive year. They filed 352 applications in 2018 with 53% of those in the engines/pumps/turbines field. Unilever was second with 289 applications, followed by British Telecom (166), BAE Systems (162) and GlaxoSmithKline (153). The University of Oxford was once again the highest-ranked academic institution in terms of patent applications, climbing one spot to ninth position with 66 applications. While Vodafone dropped out of the top 20 applicants altogether (2017 at No. 15), Imagination Technologies, a graphics IP vendor, climbed from 16 to ten with 64 applications. Both Imagination Technologies and ARM (14th place with 55 applications) have markedly increased their level of patent applications in computer technology. British Telecom is the main UK applicant in this sector. (Fig. Top UK applicants at the EPO in 2018 (<https://mediacentre.epo.org/razuna/assets/1/48E87A7B232941C28C61EBF14484744C/img/680015857D344907B8D90DC7>))

Siemens heads EPO company ranking

Having last topped the ranking in 2011, Siemens was the leading patent applicant at the EPO in 2018 with 2 493 applications filed. Huawei – which in 2017 was the first Chinese company to head this ranking – ended the year in second place. They were followed by Samsung, LG and United Technologies from the US. The top ten is made up of four companies from Europe, three from the US, two from the Republic of Korea and one from China. (Fig. Top 10 applicants in 2018 (<https://mediacentre.epo.org/razuna/assets/1/48E87A7B232941C28C61EBF14484744C/img/5DDB70697F0C4FDAAFF77950>))

Re-shuffle in leading UK technology fields

Medical technology remained the UK's main technology field with 417 patent applications at the EPO in 2018 – an increase of 11.5%. The number two and three spots have seen a re-shuffle: computer technology, at number five in 2017, is now runner-up with 386 applications (+31.3%) with notable growth in the sub-fields of electric digital data processing, image data processing and computer systems based on specific computational models. Organic fine chemistry moved up one position to three with 359 applications (+15.8%). Transport is now the fourth most active UK technology field in terms of European patents, with 329 applications (+3.8%) while measurement is at number five with 310 applications (-3.7%).

Within the ten most active technology fields, pharmaceuticals (6th place/+20.3%), civil engineering (9th place/+10.1%) as well as engines/pumps/turbines (10th place/+19%) all saw a double-digit increase in applications. Growth in pharmaceuticals was driven by an increase in new applicants – on average about 130 UK companies and organisations filed patent applications in pharmaceuticals at the EPO in 2014-17, but in 2018 this number went up to 154. Of those, GlaxoSmithKline, 4D Pharma, Ipsen Biopharma and UCL Business filed the most applications. GSK was also the No. 6 applicant in the EPO's overall pharmaceuticals applicant ranking (after INSERM, Novartis, Merck & Co, Hoffmann-La Roche and University of California; but ahead of Boehringer Ingelheim, Bayer, Johnson & Johnson and Sanofi). Unilever was at No. 3 in the ranking of companies active in organic fine chemistry (after Germany's Bayer and BASF, but

ahead of L'Oreal and Hoffmann-La Roche).

UK regions: North West England and East Midlands with strongest growth

Looking at regions, Greater London leads the UK regional ranking with a 33.9% share of all UK patent applications filed at the EPO, followed by North West England (13.2%), East of England (12.1%), South East England (9.5%) and South West England (8.1%) (Fig. UK regional breakdown

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Greater London is the only UK region in the top ten ranking of leading European patent application regions where it is number 8. (Fig. Leading European regions for patent applications at the EPO

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North West England and the East Midlands exhibited the strongest growth in applications with 29.4% and 23.5% respectively, followed by Northern Ireland (+20.3%), East of England (+12.1%) and Greater London (+11.9%). Applications from the West Midlands and Wales fell by 21.9% and 12.8% respectively.

European country trends show solid growth

The filing trend in European countries was positive overall in 2018: with the exception of France (-2.8%) and Finland (-3.8%), all European countries in the EPO's top 20 ranking posted growth. (Fig. Top 50 countries for applications

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In the group of countries with high levels of filing activity – which includes the UK – Germany was the most active country in Europe with a 4.7% increase, its fastest growth since 2010. Switzerland (+7.8%) and Sweden (+7.1%) continued to rise solidly, while the Netherlands (+1.4%) and Italy (+0.9%) maintained similar levels to the previous year. Among the countries with smaller patenting volumes, both Ireland and Portugal stood out: while the 21.4% increase in filed patent applications from Ireland is largely due to pharmaceuticals, medical technology and areas related to smart vehicle technology, Portugal's 46.7% growth can be attributed to a large rise in applications in the fields of transport and civil engineering.

Medical technology top field – life sciences growing fast

Medical technology remains the technical field with the largest number of patent applications at the EPO overall (+5% in 2018), once again followed by digital communication and computer technology (Fig.

Technical fields with most applications

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The strongest growth among the top ten fields was recorded in the life sciences area, with pharmaceuticals and biotechnology growing by a combined 13%.

Europeans well positioned in a wide diversity of technologies

Statistics for the top technical sectors show that China and the Republic of Korea are pushing ahead in information and communications technology (ICT) as their field of highest specialisation. Most EPO member states as well as the US and Japan displayed greater diversity, filing high numbers of patent applications across several technical fields. Transport – which covers vehicles, aircraft, trains and

vessels – was again the field with the largest share of applications (59%) originating from Europe, and seven of the ten leading businesses in transport were European. This also confirms the findings of a recent EPO study (<https://www.epo.org/news-issues/press/releases/archive/2018/20181106.html>) on the patent landscape in self-driving vehicles which sees Europe and the US in the lead, each accounting for around a third of all European patent applications since 2011, some way ahead of Japan (13%), the Republic of Korea (7%) and China (3%). The study also found that many of the companies in the top 25 in this sector, including some of the European applicants, are not traditional automotive/transport companies, but ICT or telecoms firms, and that traditional car companies are exhibiting a growing tendency to behave like ICT companies in their patent application strategies.

The Annual Report also shows that European companies were strongly represented in life sciences last year: eight of the top ten applications for biotechnology patents came from Europe, while European firms occupy the top two spots in the EPO ranking of pharmaceuticals applicants.

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Notes to the Editor

For detailed statistics, and a review of our activities in 2018, see the EPO's Annual Report at: www.epo.org/annual-report2018 (<https://www.epo.org/annual-report2018>) (live 12 March, 10 am)

About the EPO

With nearly 7 000 staff, the European Patent Office (EPO) (<https://www.epo.org/index.html>) 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.

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