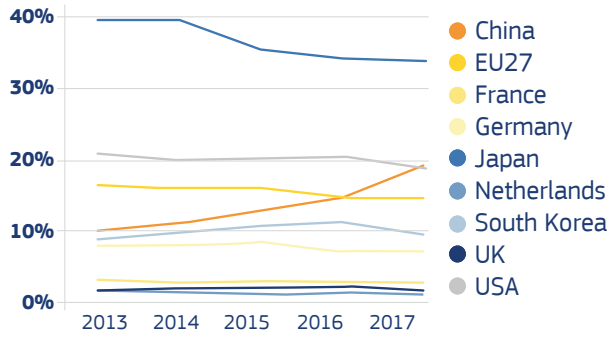
Embedded electronics is a rising market in the European electronics sector

Sectoral Watch: Technological trends in the electronics industry

Patenting in micro and nanoelectronics (MNE) technologies: stable EU27 share while China is on the rise

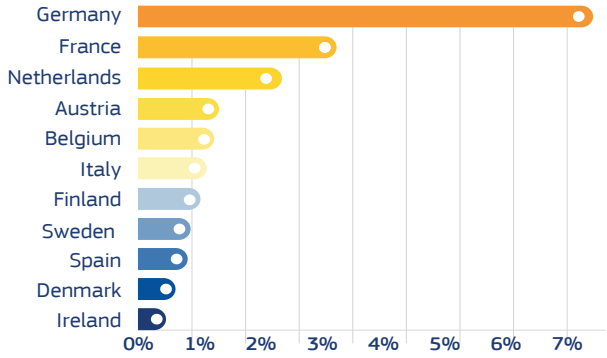
Between 2013-2017, **Japan** had the highest share of total patent applications with **± 39%** followed by the US [21%] and EU27 [16%]

Share of global patent applications in MNE (2013-2017)



In 2017, Germany was a key contributor to patent applications in the field of MNE **within the EU27** with 7.2%

EU Member States' share of global patent applications in MNE (2017)



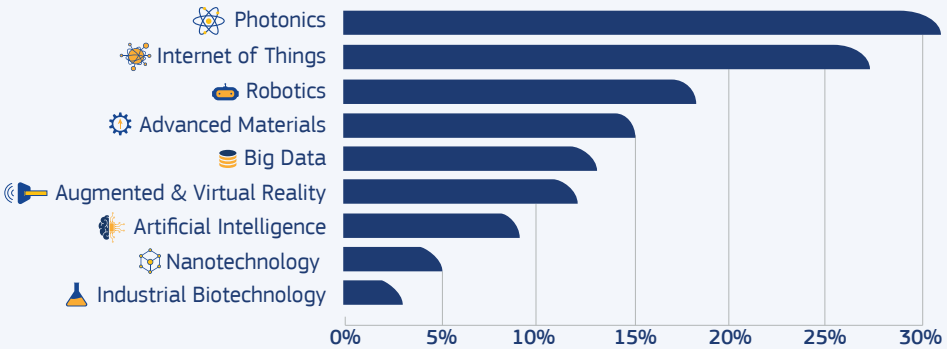
Source: ATI, 2019 Fraunhofer calculations

4 technologies in which electronic firms increased their patenting activity the most over the period of 2007 – 2017 include:

Out of the different advanced technologies, **Photonics** and **Internet of Things** appear most frequently in online content.

A **large-scale text-mining** of company websites belonging to the electronics industry sheds some light on how advanced technologies are changing the rules of the game in this sector.

Share of electronics company websites referencing advanced technologies (2019)

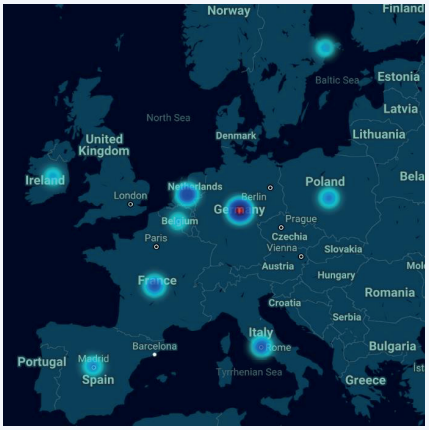


Source: Technopolis Group analysis

Note: Based on ca. 6000 websites from Belgium, France, Germany, Italy, the Netherlands, Poland and Spain

For more information, read the full Sectoral Watch report on the Technological trends in the electronics industry here:
https://ati.ec.europa.eu/reports/sectoral-watch/electronics-sectoral-watch

The top EU Member States with the highest number of professionals with technological skills in Internet of Things are Germany Italy the Netherlands Sweden



Concentration of professionals with Artificial Intelligence skills in the electronics industry in EU27

Source: Technopolis Group based on LinkedIn analysis using geolytics map

The demand for new technological skills and the number of professionals with skills in Big Data witness the **highest growth rate** from 2018 to 2019 in the electrical and electronics manufacturing sector.

In terms of the most recent hires by electronics firms in Europe, professionals possess skills such as engineering, Java, and C++, which reflects the fact that there are some **very specific skills needed** for electronics in terms of analogue and digital design.

The number of professionals with technological skills in the electronic industry is still relatively low

The findings of the analysis of skilled professionals are as captured by LinkedIn. Among the advanced technologies within the focus of this report, the most dominant technological skills relate especially to Internet of Things, but Cloud technologies, Artificial Intelligence, Advanced Materials and Robotics are prominent too.

Share of professionals with technological skills in the electronics industry within total professionals as captured by LinkedIn, EU27, 2019

Source: Technopolis Group based on LinkedIn analysis

About the Advanced Technologies for Industry (ATI) project

The ATI project – funded by the European Commission – supports the **implementation** of Europe's new growth strategy with a systematic monitoring of **technological trends** and reliable, **up-to-date data** on advanced technologies.

The **Sectoral Watch** analyses trends in the generation and uptake of advanced technologies, related entrepreneurial activities and skills needs in a number of selected sectors. It interprets data from a list of data sources compiled to monitor advanced technologies and their applications in industry across Europe and key competitor economies. It allows policy makers, industries and intermediaries to contextualise the collected data on advanced technologies specific for the industries in focus.

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Publications Office of the European Union

PDF: ISBN 978-92-9460-250-3 doi: 10.2826/07142 EA-02-20-757-EN-N