




Transforming the healthcare industry with advanced technologies

Sectoral Watch: Technological trends in the medical devices industry and related healthcare

The medical devices industry is being transformed by:

-  Connected healthcare models
-  Artificial Intelligence (AI)
-  New solutions developed based on data

Manufacturers for medical devices **are challenged with new consumer goods oriented actors and digital service providers** that are entering the value chain.

Thus

Firms need to adapt their business models and generate new value by offering complementary services, such as data analytics.



A health care system that contributes to a positive medical technology trade balance

High research expenditure into healthcare and medical technologies

Quality research centres with strong activity in the field of medical devices

Highly qualified workforce employing more than 550 100 people in medical devices

Medical technology is one of the fastest growing technology fields

Technology trends and developments have been captured through patent analysis. The most relevant advanced technologies in the field of which firms in the medical devices industry filed the most patent applications in the period of 2015-2017 have been:

Industrial Biotechnology



Advanced Manufacturing

Artificial Intelligence

Business-to-business (B2B) data sharing platforms centred around health technology are helping to create collaboration among

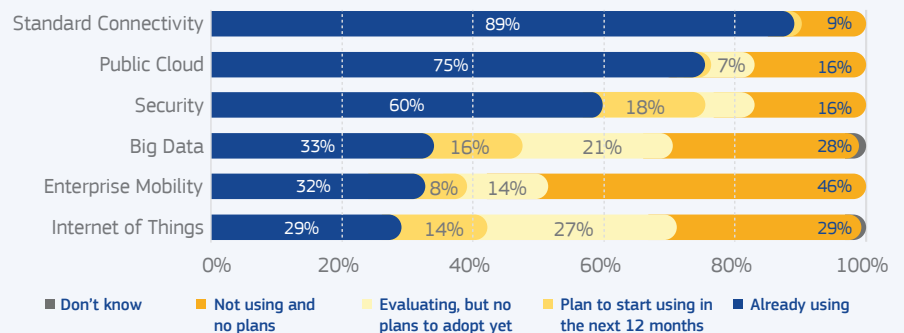
Large firms

Small- and medium-sized enterprises (SMEs) and hospitals

Platform-based health services

There is an increase in the adoption of advanced technologies in the healthcare sector. According to the ATI Survey 89% of surveyed healthcare institutions have adopted Standard Connectivity solutions. Other advanced technologies showed a lower percentage of adoption from surveyed organisations.

Share of organisations in the sample having adopted advanced technologies in the healthcare sector

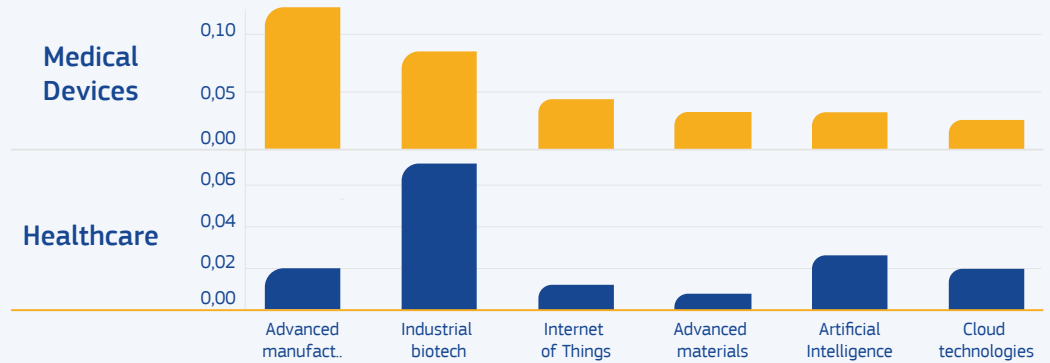


Source: ATI survey, IDC calculations, 2019

Advanced technology skills in professionals are continuing to grow

Share of professionals with advanced technology skills within medical devices and healthcare, 2019

Source: Technopolis Group based on LinkedIn data



Demand for advanced technology skills remains high. Countries with the highest share of professionals with advanced technology skills in the healthcare sector and medical devices industry include:

🇫🇮 Finland 🇩🇰 Denmark 🇸🇪 Sweden 🇳🇱 The Netherlands

Future outlook for medical advanced technologies

Demographic	Data, Artificial Intelligence (AI) and Cybersecurity	Regulatory compliance	Expected trends in skills
Challenge			
Ageing population, chronic disease and changing patient expectations	Privacy concerns around data, technical standards and political frameworks	High competition to meet end users needs with high-quality products and services	Highly competitive industry with a high demand skills and concerns around patient safety and AI ethics
Opportunity			
Focus on increasing efficiency, reducing cost and shifting sustainable medical technology	Build new strategies and form partnerships around medical device data to increase quality of care	Innovate and develop products and invest in compliance to add value to the business	Focus on accessing, leveraging and training professionals with the right skills

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.

For more information, read the full Sectoral Watch report on Technological trends in the medical devices industry and related healthcare here: <https://ati.ec.europa.eu/reports/sectoral-watch/technological-trends-medical-devices-industry-and-related-healthcare>

