

# **Europe Smart Life Sciences Manufacturing Market Forecast to 2028 - Regional Analysis - by Component (Solutions and Services), Technology [AR/VR Systems, Internet of Things (IoT), Artificial Intelligence (AI), Cybersecurity, Big Data, and Others], Application (Pharma, Bio-Pharma, and Medical Device)**

<https://marketpublishers.com/r/E020E1F21BA9EN.html>

Date: October 2023

Pages: 195

Price: US\$ 3,000.00 (Single User License)

ID: E020E1F21BA9EN

## **Abstracts**

The Europe smart life sciences manufacturing market is expected to grow from US\$ 5,679.19 million in 2023 to US\$ 22052.87 million by 2033. It is estimated to grow at a CAGR of 14.5% from 2023 to 2033.

### **Rising Adoption of Pharma 4.0 Fuel Europe Smart Life Sciences Manufacturing Market**

Technology has been playing a major role in the healthcare sector, wherein the biotechnology industry is the most benefited segment by recent technological advancements in data analytics, compared to other domains such as oncology, neurology, and immunology. Emerging data sciences technologies also assist in the growth of the biotechnology industry. The analysis of living organisms, research for novel drugs, etc., are the major roles played by biotechnology laboratories.

Modern data analytics tools have allowed biotechnology researchers to create predictive analytics models and eventually allow them to understand the most effective ways of achieving their desired goals and objectives. Big data, AI, virtual reality, data visualization, and data security are among the common technologies used in biotech laboratories. Novozymes, a leading biotechnology company headquartered in Bagsv?rd, just outside of Copenhagen, Denmark, has adopted Tableau, a data visualization tool, which revolutionized its approach to data analysis and collaboration.

Tableau helped Novozymes cut the reporting times by more than 90%. It also assists in strategic decision-making within the company's departments such as sales, raw material purchase, +planning, and finance. In addition, Tableau allows Novozymes' sales force in sharing key insights with customers, thereby building relationships and enhancing revenue performance.

AstraZeneca, plc, a British-Swedish multinational pharmaceutical and biotechnology company, uses data and technology to minimize the time to discovery and delivery of potential new medicines. The company has data science and AI capabilities embedded in its R&D departments, which allows scientists to push the boundaries of science to deliver life-changing medicines. They apply AI throughout the discovery and development process, from target identification to clinical trials, to uncover new insights guiding the drug discovery and development process.

Atomwise has expertise in using AI in small-molecule drug discovery. In December 2021, the company announced its growing portfolio of emerging joint venture companies, with research programs spanning oncology, immunology, infectious disease, neuroscience, and clotting disorders. In the area of infectious disease, the company announced the addition of vAirus, a newly formed joint venture company with world RNA-virus expert Nito Panganiban. The joint venture will use AI-based screening to find small molecule compounds to act as novel broad-spectrum antivirals against flaviviruses. Integrated big data tools such as electronic health records (eHR) can make it easy for healthcare professionals to obtain a comprehensive patient health record, even if information regarding their health originates from scattered sources. Other advances in genetic research backed by big data could lead to dramatic progress in the fight against single-gene disorders, such as sickle cell disease, cystic fibrosis, and hemophilia. This type of research can also be employed to develop improved treatments and prevention strategies for complex conditions such as mental illness and heart disease.

## Europe Smart Life Sciences Manufacturing Market Overview

Europe is one of the developed regions for smart life sciences manufacturing, and Industry 4.0 is the fourth revolution started in 2011 by the German government to describe the digital changes in the manufacturing process. The International Society of Pharmaceutical Engineering (ISPE) introduced Pharma 4.0 in 2017, which takes a holistic approach to the implementation of digital technology in pharmaceutical enterprises. The region has seen significant changes in smart life sciences manufacturing owing to the high implementation of smart manufacturing and

collaborations among life sciences manufacturers are likely to propel the market growth in Europe in the coming years. In May 2020, Adamed Group, one of the largest pharmaceutical manufacturers in Europe, partnered with Predica for the deployment of Microsoft Azure cloud platform, including security, data analytics, machine learning, and app development. Predica designed and developed a fully extensible platform based on Azure data services and Power BI that helped Adamed generate automated forecasts and optimize its supply chain and marketing decisions. Additionally, in 2022, Hovione, one of the Contract Development and Manufacturing Organization (CDMO) from Portugal, collaborated with GEA to advance continuous tableting. This strategic collaboration combines GEA's engineering expertise with Hovione's development and manufacturing experience, and both parties commit to partner to accelerate the adoption of continuous tableting technology.

COVID-19 pandemic has increased the adoption and implementation of smart manufacturing technologies, especially for the production of ventilators, hospital beds, drugs, and vaccines. This led to a significant change in the regulatory policies of the region for the production and approval of medical devices and drugs. The European Parliament has replaced medical device directives with regulations. Owing to the pandemic, the manufacturers have amended provisions for the application of regulations in the region. For low-risk devices, the transition period from directive to regulation is extended until May 2027, and for moderate-risk devices, the period is extended until May 2026. Also, the transition period for high-risk devices is extended until May 2025. Digital automation in medical devices helps comply with the regulation and easily process approval, which reduces the approval time and assists in timely product launches. The changing regulatory scenario, high adoption rate of digital technology in life sciences manufacturing, and rising collaborations among market players are expected to augment the Europe smart life sciences manufacturing market growth in Europe during the forecast period.

Europe Smart Life Sciences Manufacturing Market Revenue and Forecast to 2033 (US\$ Million)

Europe Smart Life Sciences Manufacturing Market Segmentation

The Europe smart life sciences manufacturing market is segmented into technology, component, application, and country.

Based on component, the Europe smart life sciences manufacturing market is segmented into solutions and services. The solution segment held a larger share of the

Europe smart life sciences manufacturing Market in 2023.

Based on technology, the Europe smart life sciences manufacturing market segment is categorized into AR/VR Systems, Internet of things (IoT), Artificial Intelligence (AI), Cybersecurity, Big Data, and others. The Internet of Things segment held the largest share of the Europe smart life sciences manufacturing market in 2023.

Based on application, the Europe smart life sciences manufacturing market is segmented into pharma, bio-pharma, and medical devices. The medical devices segment held the largest share of the Europe smart life sciences manufacturing market in 2023.

Based on country, the Europe smart life sciences manufacturing market is segmented into Germany, France, Italy, Spain, the UK, and the Rest of Europe. Germany dominated the Europe smart life sciences manufacturing market in 2023.

ABB Ltd, Bosch Rexroth AG, Emerson Electric Co, Fortinet Inc, General Electric Co, Honeywell International Inc, International Business Machines Corp, Rockwell Automation Inc, Siemens AG, and Sophos Ltd are some of the leading companies operating in the Europe smart life sciences manufacturing market.

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