

## *Press Release*

Major Findings of the New Report on  
Markets, Strategies, Technologies

# Pharma Automation Markets 2020

*Development of Pharma Automation Hardware, Software and Services Markets until 2020*

Compound annual world market growth rates of automation products and services for the pharmaceutical industry: 6.5% between 2010 and 2015, and 7.4% between 2015 and 2020. Global pharma automation market is estimated to be

EUR 6.6 billion in 2010;  
EUR 9.1 billion in 2015;  
EUR 13.0 billion in 2020.

**Markets:** Over the analysis period, automation products and services for traditional synthetic pharmaceuticals are dominating; those for biopharmaceuticals are predicted to show the highest growth rates. Automation markets for generic and biosimilar drugs are growing rapidly at the expense of those for patented drugs.

**Regions:** In 2015, North America is region with highest demand for pharma automation products and services, followed by Western Europe and Asia-Pacific. By 2020, Asia-Pacific is forecasted to be the dominating region. Here, China, India, and Southeast Asia are catching up rapidly.

**Trends:** In pharmaceutical plants, automation is of key importance to increase plant performance and product quality as well as to improve asset effectiveness and plant availability. Automation will increasingly contribute to reduced energy and water consumption, lesser waste as well as to higher plant availability. Pharmaceutical plants are getting smarter and safer due to microcontroller-based digital sensors and smart field instrumentation allowing for faster data exchange rates between process equipment and business applications. Smart maintenance based on big data solutions is growing in importance.

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Basel, December 11, 2015  
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## Pharmaceutical Automation Hardware, Software and Services Markets Expected to Show Dynamic Growth

Taking into account changing currency exchange rates over the forecast period, the global market for automation products and services for the pharmaceutical industry is predicted to grow from EUR 6.6 billion in 2010 to EUR 9.1 billion in 2015 and continued to grow to EUR 13.0 billion by 2020. This is equivalent to a compound average annual growth rate of 6.5% between 2010 and 2015 and of 7.4% between 2015 and 2020. For the entire forecasting period, the compound average annual growth rate is predicted to be 7.0%. This is the result of a new World Report entitled "Pharma Automation Markets 2020" just published by INTECHNO CONSULTING, Basel (Switzerland).

The global pharmaceutical industry is expected to remain a major growth sector. Especially in developed countries, its growth will be stimulated by higher drug consumption per capita due to aging populations, further spread of chronic diseases and major advances of targeted treatments based on personalized drugs. The pharma industry of developing and emerging countries, on the other hand, profits from growing populations, higher government efforts to provide healthcare coverage, and outsourcing trends in the pharmaceutical industry of developed countries. Although the importance of traditional blockbuster drugs is expected to shrink, new biopharmaceutical drugs as well as generic drugs appear to represent new major growth sectors. So do personalized drugs and targeted therapies. Steadily growing demand for new synthetic and biopharmaceutical drugs is generating prosperous market perspectives for plant engineering and construction firms as well as for automation companies.

Global market size and growth for pharmaceutical automation hardware, software and services are determined by growing global capital and operating expenditures during the whole lifecycle of pharmaceutical plants. The spectrum of automation services ranges from project-phase services such as engineering, assembly and installation, start-up and validation services to all aspects of operation-phase services such as maintenance, support, remote monitoring, outsourcing services and others. About 52.8% of the EUR 6.6 billion automation market in 2010 were for automation hardware, 9.9% for automation software, 23.6% for project phase services and 13.7% for operation phase services. By 2020, the EUR 13.0 billion global automation market for the pharmaceutical industry is forecasted to be segmented as follows: 51.3% for hardware, 10.8% for software, 23.9% for project phase services and 14.0% for operation phase services.

Rising production capacities in developed countries to allow for higher outputs, more innovative drugs and a growing diversity of preparations will stimulate automation demand for greenfield and brownfield projects worldwide. Growing need for modernization and rationalization investments represents a further stimulus for automation products and external services markets. Modernization investments, too, represent an important stimulus for pharma automation markets. In developing and emerging countries, high plant capacity growth rates due to an increase in national demand are expected to generate rising demand for pharma automation hardware, software and services. To the degree that major pharmaceutical companies continue to outsource production capacities, various greenfield and brownfield projects in these countries are arising, especially in India, China and Southeast Asia.

## Technology Trends

The pharmaceutical industry is a typical **hybrid industry** with batch and/or continuous as well as discrete manufacturing processes. Accordingly, automation products and systems required by the pharmaceutical industry comprise process as well as discrete automation technologies. **Process automation** is applied in active pharmaceutical ingredients (API) manufacturing as well as in formulation. **Discrete automation** is of relevance in formulation as well as in packaging including labeling. **Automation** in pharmaceutical production facilities aims at increasing plant performance and product quality, complying with existing and new regulations in an efficient way as well as improving asset effectiveness.

Pharmaceutical plants are getting **smarter and safer** due to microcontroller-based digital sensors and smart field instrumentation allowing for faster data exchange rates between automated production processes and business applications. Automation and smart instrumentation are expected to further increase productivity, safety and availability of pharmaceutical plants.

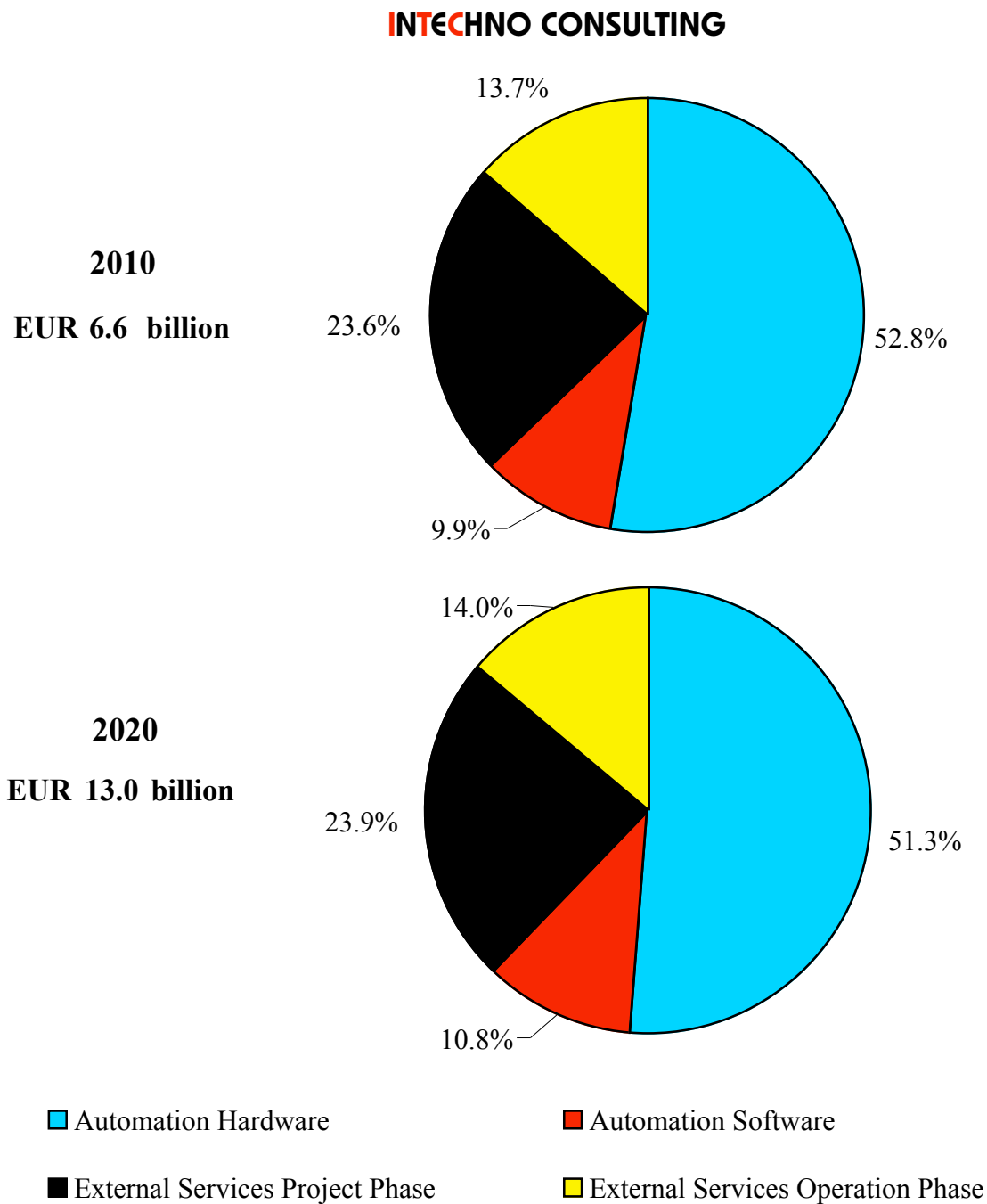
Predictive maintenance and condition-based monitoring of production equipment require more and smarter sensors and intelligent control algorithms. Besides **sensor smartness**, hygienic design, safety, accuracy and ease of maintenance are important requirements as well. Special automation solutions will be required for biopharmaceutical microreactors, **multipurpose/multifunctional processes**, **disposable single-use bioreactors** as well as for **clean room and containment systems**.

## Success Factors

Automation systems and solutions should be designed in such a way that cost of ownership during the whole life cycle of a plant be minimal with special emphasis on the operation phase. Using open standards allows for solutions that can easily be adapted and modified over time. When a new drug is about to enter the market, time pressure often becomes extreme for engineering and automation firms. Time-to-market project management requires that as many parts as possible be standardized. A **modular approach and standardization** of automation components, systems and software offer the advantage of faster integration of automation systems as well as lower engineering, implementation and equipment costs.

Due to **continued growth and innovations** of the global pharmaceutical industry, pharma automation markets are very promising for automation hardware suppliers, service providers and engineering as well as specialized software firms. The vast spectrum of equipment and components for synthetic and biopharmaceutical drugs, ranging from active pharmaceutical ingredient production to packaging lines, but also changing regulatory requirements, fast-track solutions and the quest for greener and cleaner technologies offer ample opportunities for automation firms.

Figure: Forecast of Global Pharma Automation Markets until 2020: Subdivision by Hardware, Software and External Services



**PHARMA AUTOMATION MARKETS 2020:  
Worldwide Analyses and Forecasts of Pharmaceutical Automation Products  
and Services Markets until 2020**

*Price information of World Report available from INTECHNO CONSULTING,  
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