

Press Release

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

Pharma Plant Markets 2020

Development of Pharma Plant-Related Products and Services Markets until 2020

Annual world market growth of plant-related products and services for the pharmaceutical industry: 5.8% between 2010 and 2015, and 6.6% between 2015 and 2020.

2010:	EUR 28.9 billion
2015:	EUR 38.3 billion
2020:	EUR 52.7 billion

Markets: By 2020, plant-related products and services for traditional synthetic pharmaceuticals will still prevail; those for biopharmaceuticals are predicted to show the highest growth. Plants for generic drugs and biosimilar drugs are rapidly gaining market shares from plants for patented drugs.

Regions: In 2015, Asia-Pacific is region with the highest demand for pharma plant-related products and services, followed by Europe and the Americas. The same holds for 2020. United States is main driver for innovation and regulations for pharmaceutical plants. China, India, and Southeast Asia are catching up rapidly.

Trends: Trend towards modular concepts and solutions in order to save costs in production processes. Future IT systems and solutions for the pharmaceutical industry are expected to be more flexible than today's. Importance of MES systems is on the rise. They enable to integrate and process data from various plant operations and are indispensable tools in case of unplanned events and changes in demand

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Basel, December 11, 2015
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Solid Growth Expected for Pharmaceutical Plant, Engineering and Services Markets

According to a new World Report just published by INTECHNO CONSULTING, Basel (Switzerland), the global market for **plant-related products and external (open-market) services** for the **pharmaceutical industry** is predicted to grow from EUR 28.9 billion in 2010 to EUR 38.3 billion in 2015 and continued to grow to EUR 52.7 billion by 2020. This is equivalent to a compound average annual growth rate of 5.8% between 2010 and 2015 and of 6.6% between 2015 and 2020. For the entire forecasting period, the compound average annual growth rate is predicted to be 6.2%. These market figures take into account changing currency exchange rates over the forecast period.

Global market size and growth for pharmaceutical plants, equipment, software and services are determined by growing global capital expenditures and rising operating expenditures during the whole lifecycle of all pharmaceutical plants installed and operating worldwide. The spectrum of plant-related services comprises project-phase services such as feasibility studies, engineering, assembly and installation, start-up and validation services as well as all aspects of operation-phase services such as maintenance, support, remote monitoring, outsourcing services and others.

Due to steady progress in innovative drugs, the pharmaceutical industry contributes to longer and healthier lifetimes of the global population. Huge challenges still remain to be solved, such as successful cancer treatment, cardiovascular and respiratory diseases as well as new types of infectious diseases. Global growth of the pharmaceutical industry is and will continue to be stimulated by a growing world population, aging populations in developed countries and an improved healthcare access in developing 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. Especially oncology drugs are at the forefront of pharmaceutical research and development; high growth prospects can be expected for these drugs. Continuously rising demand for new synthetic and biopharmaceutical drugs is generating prosperous market opportunities for pharmaceutical plant suppliers, EPC firms, manufacturers of process and packaging machinery, electrical and automation equipment suppliers, suppliers of Manufacturing Execution Systems (MES), cleanroom and other building equipment manufacturers as well as suppliers of construction works.

Western Europe's share of the plant-related products and external services markets for the pharma industry is forecasted to shrink from 28.1% in 2010 to presumably 23.8% by 2020, and **North America's** market share is expected to shrink from 26.2% in 2010 to about 25.0% by 2020. **Asia-Pacific's** share, on the other hand, is forecasted to rise from 33.7% in 2010 to approximately 41.3% by 2020. The global plant-related products and external services market share of **Eastern Europe** is predicted to recede from 5.5% to 4.8% during that time, while **South America's** global portion of plant-related products and external services is expected to diminish from 3.3% to 2.3%. The **Rest of the World** will see its share shrink from 3.1% in 2010 to an estimated 2.8% by 2020.

In **highly industrialized and developed countries**, rising production capacities in order to cope with higher outputs, more innovative drugs and growing diversity of preparations will stimulate greenfield and brownfield plant markets. Continuous demand for modern-

zation and rationalization investments represents a further stimulus for plant-related products and external services markets. These types of investments are implemented in order to increase plant efficiency, plant flexibility, improve energy efficiency and environmental standards in existing pharmaceutical plants. Quality issues in China and India and a lack of traceability of some pharma ingredients in these countries could partially lead to a comeback of production in developed countries. In **emerging countries**, high production growth rates due to an increase in national demand require a significant capacity increase of pharmaceutical plants. To the degree that major pharmaceutical companies continue to outsource production capacities, greenfield and brownfield projects of various types are on the rise in these countries, especially in India, China and Southeast Asia.

Technology Trends

In the coming years, pharmaceutical firms will be challenged by new technologies that help to improve patient care and reduce the cost of patient management. In pharmaceutical production, there is a trend towards modular concepts and solutions in order to save costs, accelerate time to market and increase plant flexibility. New biopharmaceutical drugs will be based on more complex production processes than traditional synthetic (chemical) drugs. Within the next years, the product range of pharmaceutical preparations will be much more diverse than today. Consequently, smaller production facilities and multi-purpose plants will be advancing. In biopharmaceutical production, microreactors in parallel array are on the rise. **Multipurpose/multifunctional process machinery** allows for higher capacity utilization rates.

In biopharmaceuticals, **disposable single-use bioreactors** are gaining market shares from traditional stainless steel bioreactors. This will contribute to a reduction of engineering as well as reduced cleaning costs. **Cleanroom and containment systems** are further growing in importance, especially in the biotech field. Increasingly, entire manufacturing facilities are equipped with containment systems.

Future innovative IT systems and solutions for the pharmaceutical industry are expected to be more flexible than today's. Furthermore they have to deal with big data and smart data issues; cloud delivery models are on the rise, too. **Fight against counterfeiting** is a major challenge in order to protect the pharma business. New track-and-trace barcodes as well as electronic RFID labels are becoming part of the solution, offering new market opportunities for suppliers of sensor, inspection equipment and automation suppliers. **MES systems** are getting more and more important. They enable to integrate and process data from various plant operations and are indispensable tools in managing unplanned events and changes in demand.

Strategies

Successful engineering, procurement and construction firms (EPCs) are closely cooperating with the internal engineering teams of plant operators in order to realize projects faster, intensify partnerships and improve services. Specialized engineering service providers are adapting to the requirements of the pharmaceutical industry. In order to do business successfully, plant manufacturers, EPCs and general contractors have to match

the technological and regulatory requirements of the plant owners with the technological capabilities and pricing of the various machinery manufacturers as well as electrical and automation equipment suppliers.

A **modular approach and standardization** of components and equipment offer the advantage of faster plant erection, plant relocation as well as lower engineering costs. A major success factor for plant manufacturers is the ability to offer standard off-the shelf products wherever possible and customized, core technology equipment when necessary.

The vast spectrum of equipment and components for synthetic and biopharmaceutical drugs ranging from active pharmaceutical ingredient production to packaging lines offers **ample market opportunities** for these firms. Last but not least, changing regulatory requirements, fast-track solutions and the quest for greener and cleaner technologies will continue to generate innovations and continuous market opportunities.

**PHARMA PLANT MARKETS 2020:
Worldwide Analyses and Forecasts of Pharmaceutical Plants, Plant-Related Machinery, Equipment and Services until 2020**

*Price information of World Report available from INTECHNO CONSULTING,
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Figure: Global Market Development of Plant-Related Products and Services for the Pharmaceutical Industry by Regions until 2020: Project & Operation Phases/ External Demand

