



Answers for Manufacturing

# Pharmaceutical Industry

Siemens IT Solutions and Services

**SIEMENS**

# Prescription for change

The pharmaceutical industry is facing major challenges: significant change is inevitable in the next few years as companies try to cut costs, reduce time to market and collaborate more effectively for agility and speed.



The life science market is large, complex and fragmented. Apart from the small number of global pharma players, it includes thousands of other companies, ranging from generic drug manufacturers to medical device specialists, biotech firms, contract researchers, wholesalers and retailers. Demand for new drugs will continue to rise as populations age and their need for long-term medical support rises. Yet many existing players will struggle to stay profitable as successful new drugs become harder to find, regulation becomes tighter and new concerns, such as counterfeiting in a global market, lead to growing losses.

## **Speed and flexibility**

Research and Development (R&D) accounts for around 15-20% of total sales revenue in most pharmaceutical companies, yet there is strong evidence to suggest that the success rate for new compounds is steadily falling. The challenge now is to improve success rates through improvements to workflow, while also reducing costs and exposure to risk through more effective methods for collaborative working. Production processes also need to become more flexible to allow for rapid scaling up or down, ensuring a fast response to changing sales patterns, avoiding over-capacity or shortages. Finally, there is an equal need for greater flexibility and responsiveness in the sales and marketing processes, as this is the key to having the right products in the right quantities available when needed.

## **Relationship management and transparency**

It is becoming more important than ever to ensure transparency along the entire value chain, especially as the pharmaceutical market becomes more global. This is the key to maintaining customer intimacy and trust, while also managing relationships with all other stakeholders.

## **Focus and costs**

Pharmaceutical companies need to review their processes from end to end in order to stay competitive. This should mean a stronger focus on core business, on developing processes suitable for use across multiple manufacturing sites, highly reliable compliance regimes and an ability to collaborate more effectively with research partners than ever before.

To be successful in the customer-focused, tightly regulated marketplace of the future, pharmaceutical companies need a partner that is able not just to take cost out through technology integration but also to redesign business processes in the drive for speed, agility, risk reduction and assured compliance.



# Partnering for success

For pharmaceutical companies, IT and process efficiency go together in driving competitive advantage. To be an effective partner, it is not enough to be a competent single source IT provider: it is also essential to deliver solutions based on deep industry knowledge.

## Facing the IT challenge

Siemens IT Solutions and Services is part of a global manufacturer with more than a century's experience of developing and managing industrial processes and products in more than 190 countries across the world. Our services and solutions are rooted in practical experience and pharmaceutical industry knowledge.

## Advanced processes

Siemens has specialized knowledge of the entire life science value chain, together with a market leading position in both diagnostics and medical equipment. There is no potential partner with a deeper or more up to date knowledge of the challenges, nor better and more comprehensive solutions for dealing with them than Siemens.

## A single point of contact

Siemens IT Solutions and Services can provide truly comprehensive solutions from a single point of contact. These range from process architecture to business consultancy; from IT design and management through to consolidation, harmonization and outsourcing, all informed by profound industry knowledge and experience.

## Complete solutions

Siemens is a leader in all the basic disciplines and capabilities that go to make up the pharmaceutical industry.

- Business consultancy for strategic planning, scenario testing and process design.
- Development and construction of manufacturing plants.
- Design, management services and technology for large industrial processes.
- Buildings management, from construction to long-term security and safety.
- Logistics, from management of supply chains to track and trace worldwide.
- IT services, from harmonization of existing infrastructures to large-scale business process outsourcing.



No other potential partner has the combination of global reach, financial strength, innovative networks and range of skills to provide end-to-end services for even the largest and most complex clients.

# Transformation for long-term success

To be a winner in this fast-moving marketplace requires a combination of innovative thinking, outstanding customer relationships and continuously improved levels of efficiency. Siemens has the capability to help drive positive transformation even the most complex global business.



## Smarter processes for faster innovation

It is becoming harder for pharmaceutical companies to maximize their profits through creating and marketing original products. An innovative new vision is now needed to transform the economics of research and production. Siemens IT Solutions and Services helps its clients to focus on transformational change within core processes.

- Changes in R&D workflow can drive efficiencies into the entire process, leading to higher success rates and faster time to market.
- Collaborative processes make it possible to manage risk through joint working with specialist research partners.
- Effective management of R&D also adds value to long-term production, enabling intelligent frameworks to be created for moving from laboratory to real-world production.
- Managing production innovation can enable more scalable manufacturing, reducing the cost impact of safety stocks, while also extending some aspects of patent protection to production.

IT harmonization is a key factor in cost and efficiency gains but process design is at the heart of winning strategies for competitive advantage.

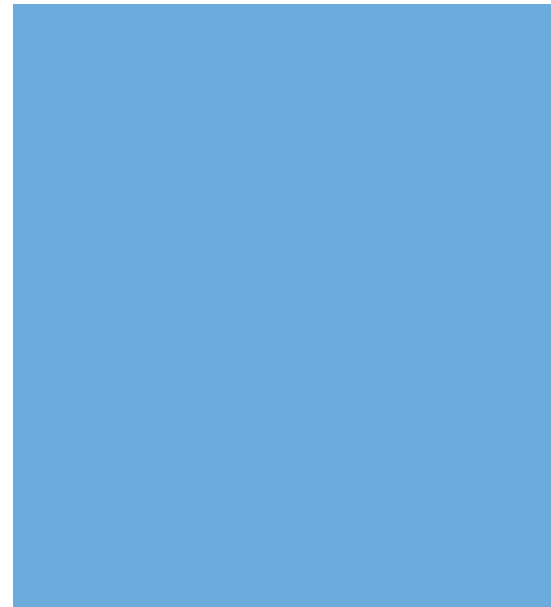
## Closer to the market for better customer satisfaction

With manufacturing taking place in different countries and a value chain that connects the globe, pharmaceutical companies face a growing challenge in maintaining the integrity of their products, maintaining trust in their brand and being more responsive to customer needs.

Siemens IT Solutions and Services can help to keep you closer to all stakeholders along the pharmaceutical value chain by:

- Making products and components fully visible and traceable at every step in the production and distribution processes to meet e-pedigree requirements.
- Streamlining production processes in order to respond more quickly to fluctuations in demand, anywhere in the world.
- Helping client companies to develop and manage high quality service networks for partner management and distribution throughout the global marketplace.

To stay closer to all stakeholders in a changing market, pharmaceutical companies need to make every part of their value chains more responsive, agile and secure. Siemens has the solutions they need to drive better performance, end to end.



**Fitter corporate structures for competitive advantage**

Focus on core business and processes is the key to staying fitter and leaner in this competitive marketplace. Siemens IT Solutions and Services can help pharmaceutical companies to cut down fixed costs while increasing corporate agility through targeted use of outsourcing and improved process design. Siemens IT Solutions and Services can also:

- Rationalize the IT infrastructure to cut out duplication, introduce common standards and make IT processes more agile and responsive to business needs.
- Manage applications across the business to ensure better levels of integration, while simplifying the infrastructure.
- Use IT outsourcing to free up capital for productive investment, while embedding constant innovation into corporate systems.



The Siemens combination of IT, process and industry expertise can bring pharmaceutical companies measurable results in terms of reduced costs, unified processes and value creation.

# End-to-end support

Successful solutions for pharmaceutical companies must be integrated with each other. They will be based on a combination of IT services and creative redesign of core processes, requiring not just high quality service offers but relevant industry knowledge.

## **Solutions for process harmonization and IT standardization**

Many core applications and platforms in pharmaceutical companies have been developed in-house to deal with highly specific needs. The result is great complexity within mission-critical systems, making IT standardization a bigger challenge than would otherwise be the case. The Siemens manufacturing heritage gives us special insights to "shop floor IT", which is a key factor in our industry-leading approach to harmonization within the pharmaceutical sector.



## **Track and trace**

Pharmaceutical companies must assure the e-pedigree of their products in order to ensure full compliance, avoid reputational damage and streamline their distribution processes. Siemens is the market leader in both key technologies and processes for track and trace, with the only specialist solutions for the global pharmaceutical industry from a single point of contact. Siemens IT Solutions and Services can:

- Manage the authentication of any physical object worldwide through our leadership in RFID technology and data matrix bar code solutions.
- Ensure traceability online every step of the way through real-time reporting.
- Provide the IT back office systems that certifies compliance and enables continuous tracking.

Delivering best-of-breed products, proven business know-how and global availability, Siemens assures you of comprehensive RFID capability and sound business understanding.



**Productivity and value through outsourcing**

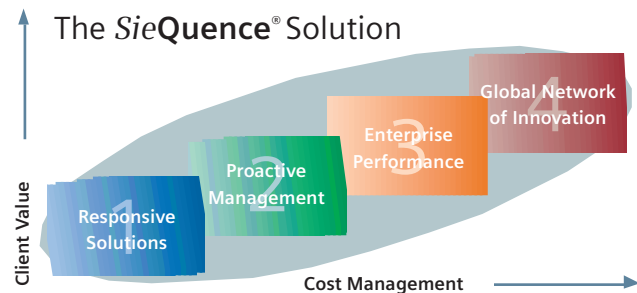
As pharmaceutical companies search for more effective ways to stay competitive, so they need to focus on core business and divest as many non-core activities as possible. Siemens IT Solutions and Services combines its proven outsourcing methodology and deep industry knowledge to unlock client value, end to end.

Our Siequence® methodology resolves the most pressing IT issues, ensures optimization of applications and processes, and then leads onto transformational development of the IT infrastructure and business processes. From processes to applications and IT platforms, the Siequence solution approach drives continuous improvement and value delivery, freeing capital for investment in the client's core business and ensuring full alignment of IT with business strategy.

**True partnership for industry leaders**

Backed by our own experience as one of the world's largest and most successful manufacturers, Siemens solutions are engineered for high performance in the most demanding environments. We provide comprehensive services worldwide, tailored to your own precise needs, covering the production processes; IT systems, networking and communication; channels to market, value chain management, compliance, safety and security.

State 1	State 2	State 3	State 4
Resolve customers' most pressing problems	Proactively monitoring and managing the IT operations	Transform and optimize performance and operations	Providing business benefits through a strategic partnership with Siemens



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