

# Engineering Services for Medical Devices and Pharma Industry

Product Engineering



Change is the operative in a new post-healthcare reform world where shrinking economies and increased scrutiny by regulators are pressing medical device and pharma majors to define a new path for accelerated profitable growth. Faced with dynamic market demand, shrinking operating margins, intense competition and rapid globalization, medical devices and pharma industry majors recognize that a conventional approach to functioning is not sufficient to achieve excellence. Today, manufacturers need to transform their operations by automating, executing, and managing the performance of business processes across the value chain. Product line rationalization and complete digitization of products and processes with reduced Total Cost of Ownership (TCO) are key challenges to sustain market leadership in a dynamic global regulated environment.

Tata Consultancy Services' (TCS) Engineering Services for the Medical Devices and Pharma industry span the product lifecycle, right from ideation all the way to product commercialization and supply chain management. An ISO13485 certified Design House, our services in this space enable organizations to develop and implement manufacturing solutions that integrate shop-floor automation to manufacturing execution systems and enterprise systems. We bring to the table unmatched results in increased innovation, cost containment and speed-to-new markets along with certainty of quality and trust. Leveraging cross functional domain knowledge along with end-to-end engineering business solution for new product development, TCS cultivates supplier enabled innovation for its customers.

## Overview

The Medical Devices and Diagnostics (MDD) and Pharma industry is dealing with shrinking profit margins and increased quality and regulatory compliance requirements. The industry's 'method to development, operations and market' is transitioning to a new model that requires a trusted global engineering partner to lead emerging and mature markets. Introducing differentiated innovative products with reduced time to market gives companies a competitive edge

TCS' Engineering Services for the Medical Devices and Pharma industry provides transformational, industrial solutions in medical technologies that are shaping a new age of patient care. TCS helps companies retain their competitive advantage by working with them to enhance R&D productivity, reduce time-to-market, minimize costs, improve supply chains, tap new markets, strengthen relationships with partners, adapt to market changes quickly and proactively seek new opportunities.

## Our Solution

TCS' Engineering Services for the Medical Devices and Pharma industry spans the full spectrum of the product lifecycle involving:

- VoC/risk assessment
- Ideation concept generation – design and development – V&V – regulatory trials-manufacturing design transfer-product launch-post market surveillance
- Obsolescence management

One-Stop-Shop solutions across the manufacturing value chain from control systems, manufacturing execution systems, and quality management systems to enterprise manufacturing intelligence and ERP integration

Our Connected health and remote patient monitoring solutions have helped clients increase people's access to services and technologies by portability, miniaturization and improving productivity. We also provide consulting services in structuring eDHF, eDMR, change management and electronic submissions. We have built solution accelerators using PLM platforms. Our broad expertise spans mechanical products, electronics systems, embedded software and specialized R&D projects.



## Benefits

Our services offer the following benefits:

Accelerate time-to-market for new products

- Get higher pay-off product innovation
- Enable in time, continuous quality and regulatory compliance
- Access world resources to introduce technological developments across product lines
- Strengthen the global footprint
- Expand current markets and enter new markets

Drive operational efficiency

- Optimize plant and process operations
- Enable cost effective clinical studies
- Improve supply chain efficiency

You can leverage our product engineering skills to traverse an undeniable path of profitable growth and achieve:

- Greater market share in emerging markets
- Cost savings of up to 40% for sustenance engineering and post market surveillance activities
- Increased efficiency by 4X in plant engineering solutions like – serialization, packaging, manufacturing line optimization
- Quicker resolution of adverse events and product complaints  
Cycle time reduction of 60% in part qualification process through TCS' Product Environmental Compliance Management Support Framework

## The TCS Advantage

TCS has been providing engineering solutions to medical device, diagnostics and pharmaceutical companies for over 15 years and is ISO 13485 certified. TCS delivers strategic, innovative and cost efficient solutions to 8 of top 10 Fortune Medical Devices and pharma companies with a special focus on 'digitized' product design and manufacturing. With experience of over 100 innovative projects on NPD, 50 manufacturing operations management, 20 risk assessment projects saving clients to around \$100M+, TCS understands the business imperatives that drives clients and is strategically positioned to partner with companies to achieve their goals.

We add value to our customers in a number of ways including

**In-House Innovation and R&D:** TCS set up India's 1st dedicated R&D center for software and process engineering in 1981, standing as a testimony to TCS' strong focus on innovation and R&D. TCS product engineers have filed more than 40 patents jointly with customers in the medical devices industry.

**Electromechanical manufacturing facility:** TCS' 100% Export Oriented Unit (EOU) enables us to undertake activities such as prototype and box build, wire harness assembly, sub assembly, testing, visual inspection, requalification, and so on. Backed by ISO9001 certified quality systems, products manufactured are certified by UL, TuV, CE and CSA.

**Cross functional domain knowledge:** TCS allows clients to leverage its research and development experience across medical devices market segments like orthopedics, bariatric, cardiology, diagnostics, diabetes care, and endoscopic surgery. For over 25 years, TCS has been the market leader in providing engineering solutions and implementing NPI programs for global majors in highly regulated domains like aerospace and medical devices.

## Awards & Recognition

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### To know more

Visit the [Product Engineering](#) unit page on [tcs.com](#)  
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### About Tata Consultancy Services Ltd (TCS)

Tata Consultancy Services is an IT services, consulting and business solutions organization that delivers real results to global business, ensuring a level of certainty no other firm can match. TCS offers a consulting-led, integrated portfolio of IT and IT-enabled infrastructure, engineering and assurance services. This is delivered through its unique Global Network Delivery Model™, recognized as the benchmark of excellence in software development. A part of the Tata Group, India's largest industrial conglomerate, TCS has a global footprint and is listed on the National Stock Exchange and Bombay Stock Exchange in India.

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