



**SIEMENS**

*Ingenuity for life*



Siemens Digital Industries Software



# Operate your business with digital precision



Benefit from digitalization through smart  
manufacturing to achieve Operational  
Excellence for Medical Devices.



[siemens.com/OEMD](https://www.siemens.com/OEMD)

# Industry Megatrends

Today, **geographically disparate engineering and manufacturing departments** design and manufacture medical devices for the **global medical device market**. Market consolidation and technology partnerships demand **communication** and **cooperation** to produce quality products.

In a restrictive regulatory environment with regional differences, **smart technology** not only **enables compliance** but also **increases competitive advantages** by proactively improving quality.

As personalized treatment and preventive medicine become the norm, competition from small and agile companies increases. Medical device manufacturers must **accelerate product innovation** and **implement mass customization models** at scale.

Intelligent data analytics from manufacturing and the devices themselves will drive a more technology enabled approach to **improve design and production processes**. Clinicians and patients will have **better experiences** and **improved outcomes**.

Technology innovation leaders must go digital with **smart manufacturing** to empower global teams and go beyond simply meeting regulatory requirements. **Siemens Operational Excellence for Medical Devices** enables innovative, personalized solutions and enhances flexibility, operational excellence, and efficiency.

Are you ready to meet the challenges facing medical device manufacturing?





# Operational Excellence for Medical Devices empowers companies to efficiently manufacture high-quality, fully compliant products through an integrated digital system



Siemens offers a holistic framework to help you cope with the challenges of today's medical device engineering and manufacturing market.

## A digital revolution to transform business

**Siemens Operational Excellence for Medical Devices (OEMD)** is a digital approach to manufacturing, using digital twins and digital threads for smarter production.

**Digital twins** are accurate digital representations of the manufacturing process, the product, and its use. **Virtual production** allows controlled change in closed-loop manufacturing for continuous improvement. **Simulations** optimize efficiency and quality before commissioning.

A **digital thread approach** to design transfer enables seamless communication between design and manufacturing teams. **The Internet of Things (IoT)** connection between devices and controllers allows real-time measurement and strategic analysis. **Smart manufacturing** integrates and analyses the data from the shop floor and IoT sources to enrich the digital thread and communicate across the entire enterprise.

Production can be simulated, scheduled and executed using enforced routes, yielding quality-controlled devices with a perfect **Electronic Device History Record (eDHR)**.

Errors are identified, analyzed and prevented, so that product recalls are reduced, while instant access to data leads to faster and **better decision making**.

**Advanced Planning and Scheduling** optimizes the utilization of production and human resources.

Electronic Device History Records, eDHRs, eliminate paper and enforce effective quality processes, so that **finished devices and quality records are compliant**.

Smart manufacturing comes about as the digital twin and digital thread capabilities of a company to mature and **transform business processes**.

Smart manufacturing is realized through digital twin and digital thread capabilities as a company matures and **transforms its business processes**.

## Actual customer value gained

Agility

**50%** reduction in Corrective Action Preventive Action cycle time

Compliance

**78%** less FDA 483s per inspection

# Give your business a competitive advantage with digital manufacturing. Compliance and quality are in your hands.



The increasing complexity of markets and regulatory pressure require more and more operational agility, excellence, and efficiency in medical device production. Meet these challenges with smart manufacturing. Use **Siemens Operational Excellence for Medical Devices** to enhance product quality, meet all regulatory requirements, and develop quality-controlled devices with perfect eDHRs.

Increase efficiency to **reduce costs and optimize process time.**

Consistently **deliver outstanding quality and meet all customer and regulatory requirements.**

Use **Digital twins** to eliminate errors, optimize efficiency and improve processes. Enforce processes and verify specifications.

Plan for **rapidly changing global manufacturing strategies, supplier variation, collaboration and distributed production.**

**Reduce the time to market** for new devices and enable **cost-effective medical personalization**, all with **flawless eDHRs.**

**Leverage IoT and manufacturing data** for continuous feedback, predictive analytics and innovation insights.

**Scale and adapt our solution to the needs of your organization**, from SMB with simple modular deployment to Large Enterprises with dozens of sites around the world.

## What our customers say:

"Big data and advanced analytics can save time, protect company assets, reduce costs, increase efficiencies and save lives." DELL



## About Siemens Operational Excellence for Medical Devices

**Siemens Operational Excellence for Medical Devices** enables operational agility, with real-time visibility, control and speed throughout the manufacturing process. It leads to high-quality, efficient medical device production that is regulatory compliant and provides perfect eDHRs.

Our solutions help companies of all sizes leverage digital systems to produce innovations that meet tomorrow's challenges.

For more information on Siemens Operational Excellence for Medical Devices, visit [siemens.com/OEMD](https://www.siemens.com/OEMD) or follow us on [LinkedIn](#), [Twitter](#), [Facebook](#) and [Instagram](#).

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