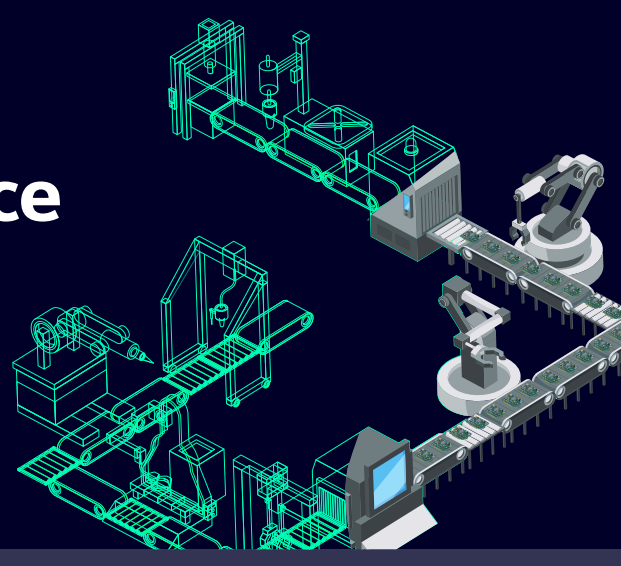


Enabling operational excellence of medical device production facilities

Digitalize manufacturing processes and plant management to enhance readiness, efficiency and quality



Trends

New market challenges are increasing the need for medical devices companies to innovate products and processes

- Elderly population
- Supply chain robustness
- Next-level intelligence
- Relentless innovation
- Regulatory complexity
- Value-based care

Digitalization: The effective medicine for operational excellence

Current market challenges are forcing manufacturers to:

- Adapt factory operations to changing marketplaces
- Improve throughput of existing facilities
- Align product quality and compliance with changing global and local regulations



With a digital manufacturing infrastructure, manufacturers can:

- Respond faster to market needs by anticipating production and operational changes
- Increase the performance and agility of production operations
- Improve quality with flawless production data traceability

Siemens' Operational Excellence for Medical Devices

Operational Efficiency

Bridge the data and collaboration gap from design to manufacturing execution, implementing automatic planning and scheduling and optimizing efficiency in production plans



Operational Readiness

Simulate parts, machines and plants using a digital twin, anticipate issues and be ready to respond rapidly to change

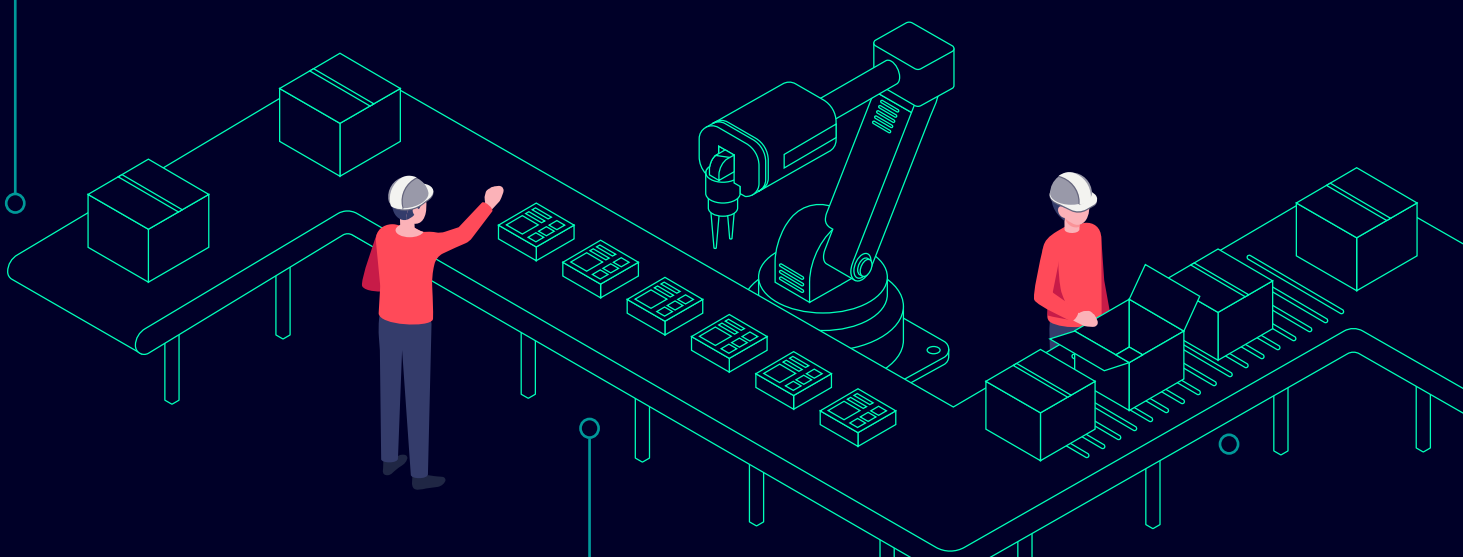
Operational Quality

Enforce processes and track production data in device history records with paperless manufacturing, ensuring quality and compliance



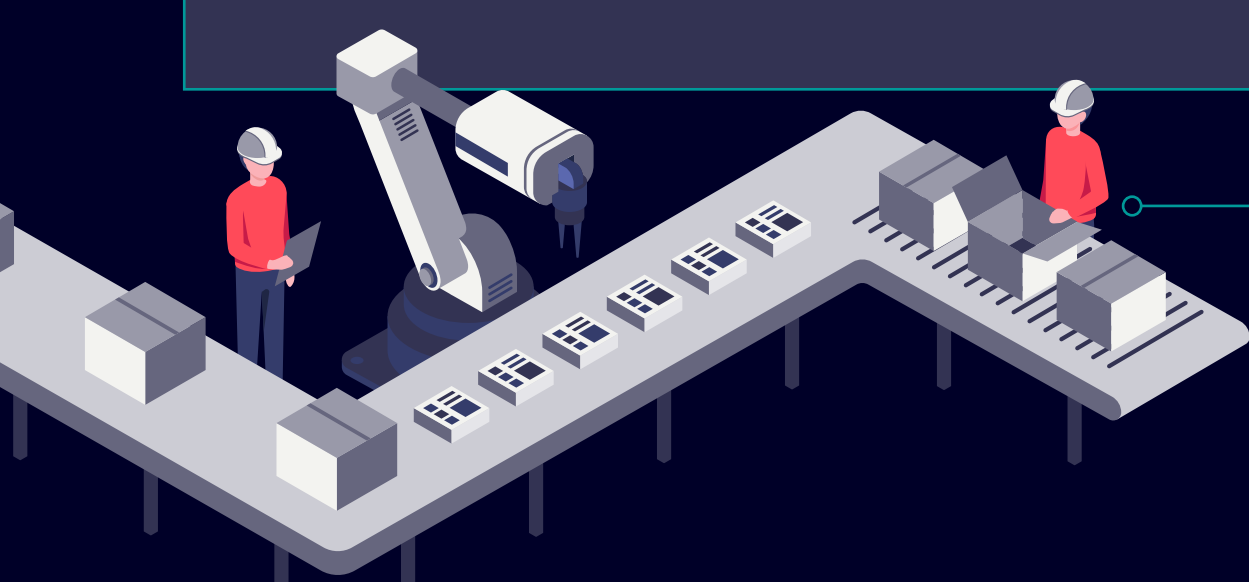
Eliminate causes of defects and inefficiencies before consuming resources

- Avoid downtime and trigger proactive responses through digital design transfer
- Minimize risk by validating optimal plant layout with process simulation
- Enhance personalization capabilities with improved additive manufacturing workflows



Automatically execute the digital plan in the physical realm

- Ensure alignment and compliance to the design requirements with the engineering BOM management
- Anticipate design changes and retooling requirements through process validation
- Track and trace 5M data for improved visibility
- Adopt electronic work instructions to minimize rework and improve throughput
- Capture, share and reuse information across sites with centralized configuration and change control
- Optimize logistics with end-to-end supply chain management



Track manufacturing data with centralized production information

- Enforce good manufacturing practices and regulatory compliance
- Eliminate non-value-added activities
- Create a self-auditing electronic Device History Record (eDHR)
- Error-proof and paperless manufacturing processes enabled by the manufacturing execution system (MES)

What's next?

To find out more on how you can achieve operational excellence, take a look at our related white paper

[Learn more](#)

