



The Company

A global medical device company founded in 1856, Smith & Nephew employs 10,000 people in 36 countries. Smith & Nephew markets innovative and clinically superior products, principally in orthopedics, endoscopy, wound management, and rehabilitation, that offer clear clinical and cost benefits, plus industry-leading service.

Based in Memphis, Tenn., Smith & Nephew's Orthopedics Division is a developer and manufacturer of orthopedic implants for joint replacement and reconstruction for hips, knees and shoulders and trauma equipment for treating acute fractures and congenital deformities. The company's continuous process of supplying new and innovative products is supported by substantial investment in research and development to deliver new levels of healing to patients throughout the world.

The Challenge

Smith & Nephew's orthopedic unit began searching for a product lifecycle management and collaboration tool in 1999 to replace its non-millennial compliant PDM system. As a medical device company operating in the United States, Smith & Nephew is also bound by FDA regulations. Any new system must comply with those regulations, especially 21 CFR Part 11 (commonly referred to as Part 11), that pertain to electronic records and electronic signatures.

Moreover, the orthopedics unit is based in Memphis with manufacturing facilities in Germany. Both operations needed a streamlined method to pull specifications and procedures remotely, eliminating the time-consuming necessity of "sending papers over the pond," as Program Director Gretchen Rhodes explains.

Medical Devices

The Success

- **Increased Productivity**
Designs adjusted in real-time online
- **Dramatically Improved Global Collaboration**
Version control issues eliminated by eliminating global paper trail
- **FDA Part 11 Regulatory Compliance**
Flexibility and configurability of eMatrix enabled system to be modified for compliance

The Story

"eMatrix makes global communications and communications between the planners and the shop floor easier. We're able to create and deliver designs and prints faster because the pertinent information is online for everyone to see."

*Gretchen Rhodes,
Project Director*

Once products were in production on the shop floor, Smith & Nephew Orthopedics needed to cut the time required to print and deliver a design or part down from the traditional four to eight hours. Both product planners and employees working on the manufacturing floor required a system through which they could retrieve the most accurate and latest prints immediately.

The Solution

Across-the-Board Compliance

In addition to meeting Smith & Nephew's needs for a millennium-compliant product lifecycle management tool, eMatrix's high degree of flexibility ensured Smith & Nephew could configure the system to comply with the FDA's Part 11 regulations. The Smith & Nephew implementation team, which was certified in CMII for configuration management, ensured eMatrix™ met the organization's exacting needs for global configuration management.

Global Collaboration for Increased Productivity

The collaborative nature of eMatrix enables the Memphis, Tenn., and German branches of the Orthopedics unit to work on the same product or design without "getting out of sync." All parties are immediately notified of any revisions, eliminating version control issues. eMatrix brings together the company's bill of materials (BOM), change processes, viewing tools, and MRP (manufacturing resource planning) system for easier access to commonly used information.

Ease of Use for Time Savings and Version Control

On the manufacturing floor, eMatrix has reduced print delivery times from hours to minutes, and both product planners and shop floor employees can now easily access eMatrix to download and print necessary documents. As Rhodes explains, "eMatrix provides a place to put all of your information so that it is accessible to everyone. eMatrix ensures that people are able to access only the latest versions, therefore eliminating version control errors. An additional benefit is the minimization of paper, copy, and microfilming expenses."

Looking Forward: Earlier Contributions from Suppliers

By providing suppliers with limited and appropriate access to design information, Smith & Nephew saves a substantial amount of time that would have otherwise been spent entering relevant part information into purchase orders. Suppliers become responsible for pulling the latest designs and fulfilling exact orders. By turning design and development into a shared process between Smith & Nephew and its suppliers, development, manufacturing, and delivery time are significantly reduced.

The Bottom Line

Rhodes reports, "eMatrix changes our process from a push to a pull system. This switch ensures better communication between all of our operations in the Orthopedics unit. This results in faster turnaround times in the manufacturing process."

About MatrixOne

MatrixOne, Inc. is changing the way the world brings products to market™ by helping customers to accelerate the right products to market profitably. Committed to the success of innovative companies, MatrixOne, together with its partners, offers product lifecycle management (PLM) solutions that enable enterprises to reduce costs, speed innovation, and maximize revenues across global value chains. MatrixOne's approximately 600 global customers represent the aerospace/defense, automotive, consumer products, general machinery, high technology, and life sciences industries, and include GE, Procter & Gamble, Philips, Siemens, Agilent Technologies, Johnson Controls, and Honda. A global corporation, MatrixOne is headquartered in Westford, Massachusetts.



210 Littleton Road, Westford, Massachusetts 01886 T. 978 589 4000 F. 978 589 5700 www.MatrixOne.com