SIEMENS

Medical devices and pharmaceuticals

Siemens Healthcare

Improved requirements engineering drives new product development for medical device maker

Product

Teamcenter

Business challenges

Integrate three former companies into a single entity

Generate accurate BOMs

Track product changes

Re-use data in product variants

Keys to success

Use Microsoft Office as main user interface

Improve traceability

Enable design re-use

Results

Generated accurate BOMs

Facilitated re-use of requirements

Increased engineering productivity

Siemens Healthcare uses Teamcenter to increase design re-use

A single source of data

Siemens Healthcare is consolidating product systems engineering requirements into a single system using the Teamcenter® portfolio from product lifecycle management (PLM) specialist Siemens PLM Software. Siemens Healthcare is one of the world's largest suppliers to the healthcare industry and a trendsetter in medical imaging, laboratory diagnostics, medical information technology and hearing aids.

The diagnostic group within Siemens Healthcare has grown through acquisitions in recent years, combining three disparate groups under a single umbrella. "Each had different backgrounds from a systems engineering viewpoint," says Gerrit Salemink, director of engineering at Siemens Healthcare Diagnostics. "And each had different ways to capture and monitor requirements. Tracking requirements or sharing information among the different groups was difficult."

The groups were using an internally-developed database system, Excel® spreadsheets and Word® documents, a mix that was difficult to maintain. "We wanted to harmonize the requirements engineering process," notes Salemink. "A major motivator was the need to generate accurate and consistent bills of materials (BOMs)." An accurate and

“Teamcenter is going to help us move towards being more of a solution-driven organization…”

Gerrit Salemink
Director of Engineering
Siemens Healthcare
Diagnostics Inc.

“Three different processes needed to be merged together and frequent configuration changes were required. So, we moved to a single Teamcenter system.”

Joshua Canada
Healthcare IT Systems
Engineer
Siemens Medical Solutions
USA, Inc.

complete BOM is crucial for manufacturing any product, but even more so in the healthcare industry. Regulators such as the Food and Drug Administration (FDA) conduct thorough reviews of healthcare products prior to use on human subjects and require detailed information on every aspect of medical devices.

Multitude of requirements

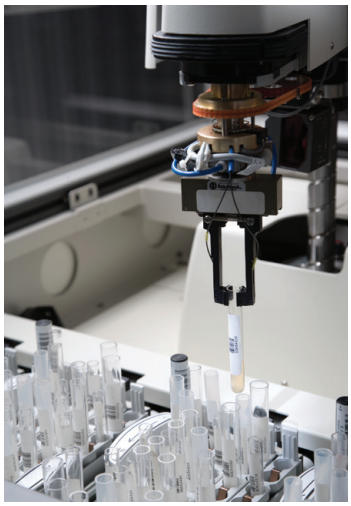
Requirements can take many forms. There are functional requirements to make sure a product operates as imagined and designed. Capturing the “voice of the customer” is also important to make sure hospitals and other healthcare providers get the features and functionality technicians require. There are requirements related to standards, guidelines and regulations. Plus, there are business and marketing requirements to help ensure that products meet sales objectives and fit market niches.

Siemens Healthcare Diagnostics is using Teamcenter to help improve requirements engineering to ensure full traceability of BOMs. Joshua Canada, a Healthcare IT systems engineer with Siemens Medical Solutions (a related Siemens group) worked closely with Siemens Healthcare Diagnostics to implement a unified requirements engineering system.

“Requirements engineering was in a state of flux in the diagnostics group,” says Canada. “Three different processes needed to be merged together and frequent configuration changes were required. So, we moved to a single system using Teamcenter.”

"Using Teamcenter has really facilitated the coming together of our three groups. It has been a key tool in helping us re-align. Teamcenter is very configurable and that helps improve productivity while enabling us to reduce errors and rework."

Gerrit Salemink
Director of Engineering
Siemens Healthcare
Diagnostics Inc.



Easy access to knowledge

Because Teamcenter is closely integrated with Word and Excel, the new requirements system enables engineers to interact with Teamcenter via these familiar Microsoft Office® software tools. "No one is working directly with Teamcenter itself," Salemink notes. "They simply use the Office tools they are accustomed to working with."

"We've seen some qualitative benefits of using Teamcenter," says Salemink. "Re-use of requirements has increased and we can now do things we never could do before. We are more platform-oriented, which enables us to see the product as a whole. In the near future, we expect to be able to re-use from 70 to 80 percent of requirements."

Re-using requirements enables the diagnostics group to better manage product variants, which improves productivity. "Now, everyone has access to the same data," says Salemink. "Instead of managing three separate systems, everything our users need is in a single place."

Users include medical technicians conducting chemical analysis in hospital laboratories, for example. "Teamcenter is going to help us move towards being more of a solution-driven organization that will be better able to capture user needs and deliver products that meet those needs," says Salemink.

"They simply use the Office tools they are accustomed to working with."

Gerrit Salemink
Director of Engineering
Siemens Healthcare Diagnostics Inc.

Solutions/Services

Teamcenter
www.siemens.com/teamcenter

Customer's primary business

Siemens Healthcare is one of the world's largest suppliers to the healthcare industry and a trendsetter in medical imaging, laboratory diagnostics, medical information technology and hearing aids.
usa.healthcare.siemens.com

Customer location

Tarrytown, New York
United States

"We've seen some qualitative benefits of using Teamcenter. Re-use of requirements has increased and we can now do things we never could do before."

Gerrit Salemink
Director of Engineering
Siemens Healthcare Diagnostics Inc.

"Using Teamcenter has really facilitated the coming together of our three groups," says Salemink. "It has been a key tool in helping us re-align. Teamcenter is very configurable and that helps improve productivity while enabling us to reduce errors and rework."

Next steps

Next steps include enhancing connectivity and automating data exchange with Microsoft's team foundation server (TFS), integrating mechanical computer-aided design (MCAD) and automating data exchange with SAP® software. "We are also looking to improve workflows and audit trails and traceability," says Canada.

"Teamcenter is very configurable and that helps improve productivity while enabling us to reduce errors and rework."

Gerrit Salemink
Director of Engineering
Siemens Healthcare Diagnostics Inc.

Siemens Industry Software

Americas	+1 314 264 8499
Europe	+44 (0) 1276 413200
Asia-Pacific	+852 2230 3308

www.siemens.com/plm

40411 Z13 5/14 A