SIEMENS

INDUSTRIAL MACHINERY AND EQUIPMENT

Leveraging web-based training to prevent software acceptance issues

Products

Teamcenter, NX, Simcenter

Business challenges

Design leading-edge fluid handling equipment

Use standardization to manage high customization level

Promote global engineering collaboration

Maintain leadership position in competitive industry

Keys to success

Use NX for all design work

Use Teamcenter for PLM

Use Xcelerator Academy for NX and Teamcenter training

Base online training program on custom use cases

Results

Prevented software acceptance issues

Established unified learning experience at individual speeds in four months

Facilitated concurrent global software rollout

Accelerated onboarding of new design engineers

Sulzer uses Xcelerator Academy for NX and Teamcenter training to establish a unified learning experience in four months

Moving liquids

Water is the most common liquid on Earth and is vital for all known forms of life. Our civilization depends on a reliable fresh water supply and safe wastewater disposal, not only in densely populated or arid areas. This is provided by technical means such as desalination plants or wastewater purification works. All installations technically processing liquids, including those for the oil and gas, power generation and process industries, require pumps.

Wherever fluids are treated, pumped, or mixed, Sulzer Management AG (Sulzer) acts

as a global market leader in pumping solutions. The company's flow equipment division specializes in pumping solutions specifically engineered for its customer's processes. Sulzer relies on intensive research and development in fluid dynamics and advanced materials to create pumps, agitators, compressors, grinders, screens and filters. As a full range supplier, it offers customers solutions ranging from standard to full custom products.

Sulzer is based in Winterthur, Switzerland, where it was established in 1834. It employs 15,000 people in 180 production facilities and service centers around the globe and in 2020, their employees delivered revenues of 3.3 billion Swiss Francs (CHF). Further to the Flow Equipment division, the company consist of Services and Chemtech, where they deliver



Sulzer is a leading manufacturer of pumps and related equipment for fluids of all types. Headquartered in Switzerland, the company has a network of 180 production facilities and service centers across the globe.



Following a CAD software unification program, 650 global design engineers are using NX for CAD and CAM.

"We chose Teamcenter for its deep NX integration and smooth interfaces, which can communicate with many other tools including a bidirectional interface with various brands of ERP software. In addition to Teamcenter's superior integration, the software's functional possibilities were another decisive factor."

Tobias Meier

Head of PLM Transformation Sulzer Flow Equipment and Services Division

> unrivaled expertise on rotating equipment services, chemical processing and seperation technologies. In line with Sulzer's structure and the need for product customization, the company's engineers develop, design and optimize equipment within an extensive global network.

A heterogeneous engineering environment

Sulzer owes part of its growth to acquisitions. Consequently, design engineers in various locations have historically used several different brands of computer-aided design (CAD) and computer-aided manufacturing (CAM) software.

"Our products come with a high level of customization," says Tobias Meier, head of product lifecycle management (PLM) transformation at Sulzer Flow Equipment and Services Division. "To keep things manageable, we strive for a great degree of standardization and reusability." Therefore, Sulzer attempted to tightly harness engineering-related data, early on. They implemented a PLM software spanning several locations, without using the software's full capabilities related to CAD integration, functionality and integration to other business systems. Although some of the CAD software systems were successfully integrated with the PLM software, the remaining were initially left out.

In addition, reluctance to change well-established processes influenced user acceptance. "Many people continued to use the conventional way to store engineering data in separate file systems outside the PLM system,"

By using the Xcelerator Academy platform, we were able to prevent acceptance issues before they could even arise."

Susanne Ahl Development Engineer and PLM Key User Sulzer Flow Equipment Division



Following the replacement of the legacy PLM software, Sulzer engineers use Teamcenter for PLM. NX and Teamcenter offer users the possibility to use their full functionality from either software.

says Meier. "The lack of digital visibility prevented us from weaving a digital thread and hampered common part usage." Separate data silos on different servers led to the team unknowingly recreated existing designs, resulting in elevated workload and a growth of item-related data in the company's enterprise resource planning (ERP) systems.

CAD/CAM and PLM software unification

To change this situation, Sulzer decided to remodel its engineering software landscape for Flow Equipment and Services with a devision-wide replacement of the legacy PLM Software.

NX[™] software was already in wide use for CAD and CAM in Sulzer's R&D and engineering departments. NX is part of the Xcelerator portfolio, the comprehensive and integrated portfolio of software and services from Siemens Digital Industries Software.

"It was easy to compare functionalities and user experiences between the various CAD and CAM software products," says Meier. "Based on these, we decided to standardize NX wherever possible in our engineering departments around the globe." The decision-making process to select new PLM software and roll it out across the two divisions was not taken lightly. Several products were taken into consideration. Those that made it to the shortlist had to undergo extensive benchmarking. Finally, Sulzer decided to use the Teamcenter® portfolio. "We chose Teamcenter for its deep NX integration and smooth interfaces, which can interact with many other tools including a bidirectional interface with various brands of ERP software," says Meier. "In addition to Teamcenter's superior integration, the software's functional possibilities were another decisive factor."

User acceptance is key

Those in charge of the conversion program knew user acceptance was a key success factor. Using PLM software such as Teamcenter can relieve engineers from many side tasks but requires some preparation and a change of habits.

Siemens suggested supporting the transition with an education program early in the definition phase to enable the success of Sulzer's software unification. Sulzer considered on-site trainings or webinars less than "Users learn as they are guided through process step-by-step. This enables them to learn each at their own speed while enjoying a unified empowerment experience."

Susanne Ahl Development Engineer and PLM Key User Sulzer Flow Equipment Division

Web-based Xcelerator Academy training greatly accelerates onboarding new engineers as they join the company."

Tobias Meier Head of PLM Transformation Sulzer Flow Equipment and Services Division

practical for their global network of 650 Teamcenter users. Therefore, the company used Xcelerator Academy, Siemens' comprehensive online platform for on-demand and instructor-led training. The platform provides structured learning plans with web-based training for all software in the Xcelerator portfolio via desktop computers and handheld devices.

Global user empowerment

Sulzer used this platform for its key user onboarding program. "Using Xcelerator Academy online training was a good way to create a unified training scheme," states Susanne Ahl, Development Engineer and PLM Key User, Sulzer Flow Equipment Division. "To improve the learning experience, we asked Siemens to integrate examples representing real Sulzer use cases we created."

One of the challenges was embracing users with different cultural, language or age backgrounds and making sure the training experience was comfortable for everyone. Additionally, Teamcenter was not fully implemented yet. At the time, not all details were known and it was impossible to transfer knowledge gained from Xcelerator Academy to the real working environment.

With only four months left until Teamcenter would go live, Sulzer worked with Siemens to jointly build a complete training solution heeding the credo of Jakob Sulzer (1782-1853), one of the founders of the company: "Whatever you do, do it right. It will not cost you more time to do it well than to do it badly." Thus, the solution not only comes in a Sulzer-defined look-and-feel, but also took the various time zones involved into account. To establish a timely completion and the best possible user acceptance, Sulzer developed a go-live plan. This included short information sessions on the new software, live demos, a presentation of the web-based training and a well-structured first, second and third-level support regime.

While the web-based training solution covers NX workflows with standard content, it uses



Sulzer and Siemens built a complete web-based training solution to avoid user acceptance issues by using Xcelerator Academy.

Solutions/Services

NX CAM siemens.com/plm/nxcam

Simcenter siemens.com/simcenter

Teamcenter siemens.com/teamcenter

Xcelerator Academy training.plm.automation. siemens.com

Customer's primary business

Sulzer is a global leader in fluid engineering, specializing in pumping, agitation, mixing, separation and application technologies for fluids of all types. Customers benefit from the company's commitment to innovation, performance, quality and its network of 180 global production facilities and service centers. www.sulzer.com

Customer location

Winterthur Switzerland 85 different Sulzer-specific Teamcenter operations and procedures of various complexity. "Users learn as they are guided through each process step-by-step. This enables them to learn at their own speed while enjoying a unified empowerment experience," Ahl confirms. "By using the Xcelerator Academy platform, we were able to prevent acceptance issues before they could even arise." This prepared the engineers at Sulzer in the wake of Teamcenter implementation. "Webbased Xcelerator Academy training greatly accelerates onboarding new engineers as they join the company," adds Meier.



Xcelerator Academy offers location-independent access to on-demand and instructor-led training. It provides structured learning plans with web-based training for all software in the Xcelerator portfolio.

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The web-based training solution covers NX workflows by standard content and uses 85 different Sulzer-specific Teamcenter operations and procedures of various complexity, which accelerates onboarding new engineers.

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