

Industrial machinery and equipment

Pöttinger

Leading manufacturer of agricultural machinery uses Teamcenter to meet diverse needs of its customers

Product

Teamcenter

Business challenges

Manage global markets with diverse design goals

Manage multi-site CAx environment

Improve project management support

Enhance standalone PDM tool

Adhere to diverse national regulations

Keys to success

Use Teamcenter for global data management

Integrate all disciplines, from product management to fixture construction

Improve requirements management

Results

Achieved faster, smarter decision-making

Facilitated engineering collaboration across locations

Unified procedures and work-flows across the organization

Accelerated project development cycles

Pöttinger enhances decision-making, reduces errors and improves hit rate with Siemens PLM Software solution

142 years of agricultural innovation

For centuries, it took half of the population to feed the world. As recently as the early 20th century, farming dominated the economies of most of Europe. At that time, 60 percent of the population of Germany was engaged in agriculture. A mere 100 years later, only 3 percent of the population farms for a living and food is abundant.

This development was made possible by an almost unbelievable increase in the efficiency of agricultural production. Aside from progress in other areas, such as chemical fertilizers, it is the use – and continuous improvement – of machinery on grassland and fields in all phases of production, from soil preparation to sowing to harvesting and crop processing, that is responsible for exponentially improving productivity. That is not only true for industrialized farming that covers large areas in flat, open country, but also for small farms in alpine regions that are often operated as sideline businesses.



Pöttinger has a 142-year tradition and is a market leader due to its cutting-edge innovations to enhance farm production efficiency while preserving soil value. All photos courtesy of Pöttinger.

“This provided us with a perfect opportunity to extend use of the existing Teamcenter implementation. The project was, in effect, the starting point of a much larger move that resulted in an upgrade to a full-fledged PLM methodology.”

Christoph Detzlhofer
Project Manager
Product Development
Pöttinger



Pöttinger's products are organized into two main lines, one consisting of grassland products such as this disc mower.

Alois Pöttinger Maschinenfabrik GmbH (Pöttinger) is a leading manufacturer of agricultural machinery, and is headquartered in Grieskirchen, Austria. Established in 1871, the family-owned business provides tractor-mounted, implement-mounted and trailed implements for use in tillage, drilling and harvesting technologies as well as associated services. It is a leader in the market because it has developed a number of groundbreaking inventions, such as the silage trailer and hay tractor for use on steep slopes, a development that revolutionized hill farming. Following the acquisition of a plough factory and a plant that manufactures seed drills, the company's 1,475 employees generated €303 million in revenues in fiscal year 2012/2013.

The machines that Pöttinger designs and manufactures need to fulfill seemingly contradictory requirements: on the one hand, they must be highly precise so they can support frictionless interaction of the numerous moving parts; and on the other hand, they must be rugged enough to stand up to decades of use in outdoor applications. They must be able to provide agricultural businesses with the technology – including product lifecycle manage-

ment (PLM) – that is required to increase productivity with unparalleled efficiency while preserving the valuable soil they help exploit.

A data organization challenge

Creating requirement specifications is a centralized task that is taken care of by the product management department. The sales force gathers highly diverse information from customers around the world, and that information is stored, managed and shared using Teamcenter® software from Siemens PLM Software. Pöttinger has been using Teamcenter since 1996.

“We were actually the first Teamcenter customer in Austria,” says Gerhard Wagner, who is head of the Pöttinger information technology (IT) operations and infrastructure team and is scheduled to become the company's IT manager in December, 2013. “We considered it essential to avoid making unnecessary system changes during the product creation process.”

“This helps avoid a lot of misunderstandings in the early defining phases of new product development,” notes Christoph Detzlhofer, a project manager for product

“This provided us with a perfect opportunity to extend use of the existing Teamcenter implementation.”



Pöttinger's second main product line is tillage machines.

development in Pöttinger's grassland division. Detzhofer, who has been supervising the project management integration with Teamcenter, adds, "As the product managers are part of the overall workflows implemented in Teamcenter, meetings have generally become very efficient."

The use of Teamcenter quickly spread from one product design department to all of them after a short period in which it was used to cover all product-related disciplines, including fixture construction.

Enhancing project management

This had not always been the case. A couple of years earlier, the project management team still relied heavily on work outside this environment. Although all cost considerations and scheduling tasks required for planning could have been covered rather well using the company's enterprise resource planning (ERP) software, Pöttinger engineers predominantly resorted to using spreadsheets on an individual basis.

When plans to establish a unified project management software environment for all engineering staff gained momentum in 2011, there was no set preference as to how to accomplish that task. IT was open to suggestions, and existing enterprise-wide solutions included huge platforms, such as ERP software from SAP, as well as Teamcenter and many other widely used packages, each of which would be able to accommodate a project management system.

"For all we knew then, even stand-alone solutions were an option," Wagner recalls. "As what was intended by introducing project management on the scale envisioned by management then would mainly affect and benefit product development, Teamcenter was benchmarked for its aptness as well."

Unifying information exchange

While one of the primary factors in Pöttinger's decision to use Teamcenter was its complete set of tools for project management, the company also recognized the opportunity to adopt an integrated approach across operations. Detzhofer explains, "This provided us with a perfect opportunity to extend use of the existing Teamcenter implementation. The project was, in effect, the starting point of a much larger move that resulted in an upgrade to a full-fledged PLM methodology."

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Gerhard Wagner
Team Manager
IT Operations and
Infrastructure
Pöttinger



In 1963, Pöttinger changed the way grass is harvested by inventing the silage trailer, an innovation that helped make the company a leader in designing and manufacturing agricultural machinery.



Good requirements management is essential in producing machinery that consists of numerous moving parts, especially equipment that remains in operation for decades, is used in off-road outdoor applications and needs to be hauled to and from the fields on public roads.

Some of the capabilities of Teamcenter previously had not been used at all. All kinds of product information, from requirements to test instructions, were stored in a database called “workflow,” which had been programmed in-house as a slim tool to support certain internal information exchange requirements. At the time, there weren’t many alternatives, so more than a decade and about 20,000 lines of code later, the tool was of little use. Although all the information had always been there, it was not available when needed – a serious flaw.

Using PLM for project management integration

Although alternative systems dedicated to project management had some attractive specialized features, Teamcenter was selected for its complete PLM approach and the opportunity it offered to address the issue of handling product-related information.

“With Teamcenter, you get all the mechanisms for providing information to those who need it when and where they need it,” says Thomas Zwatz, a design engineer administering the computer-aided design (CAD)/computer-aided manufacturing (CAM) systems used in his department. “This bolstered the firm’s decision to use the environment that many were already familiar with.”

Even before the project had started, it became clear that its scope needed to go well beyond just adding a project management tool. The company had decided to greatly extend document management by adding capabilities to accommodate non computer-aided technologies (CAx) information, thus not only replacing the previous product data management (PDM) database, but also for the first time, incorporating all product-related requirement definitions and development planning, except costing, which would remain in the ERP system.

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Thomas Zwatz
Design Engineer
Pöttinger

Solutions/Services

Teamcenter
www.siemens.com/teamcenter

Customer's primary business

Pöttinger is a leading manufacturer of agricultural machinery, providing tractor-mounted, implement-mounted and trailed implements for use in tillage, drilling and harvesting technologies as well as associated services.
www.pottinger.at

Customer location

Grieskirchen
Austria

"Based on management's vision of introducing project management on a very large scale to enhance product development, Teamcenter was made for this task."

Gerhard Wagner
Team Manager
IT Operations and
Infrastructure
Pöttinger

Providing a wider scope

The project was extended to include all portfolio management, requirements management and resources management. Document management will be organized via project management and utilize the workflow capabilities of Teamcenter. Based on the view that a strong focus on the use of standard modules within all software environments affected was preferable, the decision was made to link Teamcenter with SAP using the services of Siemens PLM Software partner Tesis.

The tasks that the ERP system would be used to fulfill would involve providing and confirming that required information was delivered on time and included cost information for components, assemblies and full products, thus providing supplementary product information and adding accuracy to the alignment of bills of materials (BOMs) between technical and commercial applications.

Pöttinger engaged key users across the company to implement and manage the deployment of Teamcenter, while IT handled the technical aspects and integration of the software with the company's existing technology environment. This strategy was considered important in carrying out a smooth execution. Following pilot phases for various parts of the project in spring and summer 2013, worldwide rollout of the full package is scheduled for December of that same year.

Process consistency helps secure market response

"The number of Teamcenter clients throughout Pöttinger has gone from 70 to 170, which is a considerable leap," says Wagner. "Although all the rules and workflow definitions have been there all the time, particularly the way the system guides users through projects, there is now great potential for accelerating the process, especially by reducing errors."

Wagner notes, "The main benefit of using Teamcenter for global data management is the opportunity to work with a single, consistent source of digital engineering information from product creation through manufacture. This includes portfolio management, comprising all aspects of development, such as market data, engineering, testing and fixture construction."

According to management, the result of implementing Teamcenter as the central source for product data and important related information is smarter decision-making, which enables faster market access and more business – both key ingredients in helping Pöttinger maintain its position as one of the leaders of agricultural production automation on the world market.

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