A New Approach to Managing Product Data

Headquartered in Graz, Austria, Andritz is a global market leader in the supply of systems and services to the Pulp & Paper, Hydropower, Metals, Feed and Biofuel and Mechanical/Thermal separation sector.

Our engineering teams were eager to use Vault software from the outset. It is easy to learn, which means we have been able to keep training time to a minimum (around half a day for each employee) and get new users up to speed in a cost-effective manner.

— Ulrich Lanz
Head of Application Services
Engineering
Andritz

The company, which was founded in the 19th century, operates over 180 sites, service and sales companies around the world. Over the past twenty years, Andritz has grown rapidly from a company with 2,000 employees to one with around 17,000 currently.

In today’s highly competitive manufacturing environment, Andritz is concentrating on delivering high-quality solutions and services quickly and cost-effectively. The company is looking to achieve this by shifting from local engineering to a broader focus on cooperation between different teams located at diverse engineering locations.

Andritz was also looking to drive competitive edge in winning new business by delivering high-quality presentations to existing and prospective customers and effectively using 3D visualisation to enhance marketing programmes and drive sales uptake.

To meet these needs it chose to implement a range of Autodesk software including Autodesk® Inventor® and AutoCAD® for design, Autodesk® Navisworks® for visualisation and Autodesk® Vault Professional for product data management.

Challenge
Andritz faced challenges in both computer aided design (CAD) and product data management (PDM).

From the perspective of CAD, Andritz has historically used 2D design software solutions. In the early years of this century, Andritz AG faced the need to exchange its 2D system which was outdated. In addition, engineering felt the need to change to a state-of-the-art technology, including the potential for parametric design using skeleton models. The intent was to reduce engineering hours when creating variants of a machine and at the same time reduce errors and keep collisions to a minimum.

In addition, through a process of collaboration with external suppliers and customers, the data exchange function had already moved to use 3D data extensively.

With regard to product data management, Andritz was above all seeking a solution that would deliver enhanced collaboration between widely dispersed engineering teams while driving productivity, business agility, faster time to market and ultimately competitive edge.

Andritz’s existing PDM solution was proving to be too expensive, complex and unwieldy to meet these needs. The company therefore began to look for a new approach to PDM that would be capable of driving collaboration, delivering high-quality services and minimising cost. It decided that it needed a solution that was easy-to-use and
capability of reducing rather than increasing the burden of work on its engineering department; that ensured quality standards were maintained and that supported collaboration between the company’s different manufacturing locations.

Solution
In three out of its five business areas, Andritz gradually migrated to 3D software by implementing first Autodesk’s AutoCAD software and then Autodesk Inventor (today supplied as part of the AutoCAD Product Design Suite Ultimate). In a few areas, where 2D still makes more sense, AutoCAD Mechanical continues to be the preferred option.

The decision to migrate to Autodesk 3D design software was based primarily on the ease-of-use of the solutions and also the fact that they are widely used and trusted across the industry.

In addition to AutoCAD and Autodesk Inventor, the company has also implemented Autodesk Navisworks for visualisation purposes. “High-quality real-time visualisation is becoming a key part of any manufacturer’s armoury today,” says Ulrich Lanz, head of application services engineering, Andritz. “We are experiencing growing demand for customers to ‘see the product before it is built.’ And using a high-quality visualisation tool like Autodesk Navisworks enables us to satisfy that need.”

Moreover, in order to more efficiently manage CAD, engineering, materials handling and logistics data, Andritz has adopted Autodesk Vault product data management software.

Selected business areas of the company decided to adopt Autodesk Vault Collaboration software based on the company’s seamless integration between AutoCAD, Autodesk Inventor Professional and Autodesk Inventor. Within a year, Andritz was up and running with the software at 11 locations across Europe and Asia in its biggest business area. It has now switched all of these Autodesk Vault Collaboration licences to Autodesk Vault Professional 2012.

Currently 250 Andritz engineers are using this product. The company plans to extend this usage within the next two or three years to approximately 30 locations and 1,000 engineers.

The implementation was rapid compared with other enterprise deployments at Andritz and was further accelerated by Autodesk Consulting, which helped configure the system and infrastructure, conducted ERP and SAP integrations and provided invaluable help and advice on specialist technical queries and questions. Autodesk Authorised Reseller, Man and Machine in Austria, also assisted in developing associated add-ons. For the implementation as well as the daily operations and training on the systems, Andritz runs an internal Autodesk solutions team.

Ease of Use and Integration
“Ease of integration and ease of use provided by the Autodesk approach to PDM were key drivers in us switching to its software solutions,” adds Lanz. “Moving to Vault Collaboration and now Vault Professional has helped us achieve our key aim of making engineers’ lives easier by giving them the opportunity to work with a focused product data management (PDM) system which offers excellent integration with the company’s CAD solutions like Autodesk Inventor and AutoCAD.”

Migrating to Vault Professional enabled Andritz to upgrade its capability to manage item and bill of material (BOM) handling, and to integrate this data seamlessly with existing enterprise business systems like ERP.

The system is also versatile and offers a smooth upgrade path. With the latest version, Vault Professional 2013, which Andritz plans to implement soon, it is possible to upgrade the server without upgrading the client workstations. As a result, migrating from one version of the product to another is likely to be made much more straightforward for Andritz and the training and support programme easier to carry out.

In addition, Vault is fast. On certain key tasks, Andritz estimates it is ten times quicker than its previous system. Engineers get instant feedback on system performance, which they love. And errors, particularly from overwriting data or from working on the wrong versions of documents, have been minimised.

As a result of using Vault, Andritz believes it saves 10% of the engineering hours that it would otherwise have to spend on specific tasks or projects. In addition, the flexibility of the system enables Andritz to drive further productivity enhancements by shifting workloads easily from one location to another.

Strong Relationship
One of the key benefits Andritz has achieved from working with Autodesk comes from the positive way in which the relationship between the two companies has evolved.

“Originally, Autodesk performed the role of a typical software supplier to Andritz,” says Lanz. “Over time, however, we came to appreciate that when you implement product data management, you are no longer using unconfigured standard software but you have more complex processes to manage. To ensure that these are efficiently fulfilled, tight integration with the supplier and its systems is vital.

“Autodesk Vault is typically configured to match the needs of the user,” he adds. “This may involve some changes to the standard process and workflow. And carrying this out successfully requires a strong collaborative relationship between manufacturer and vendor which is exactly what we enjoy with Autodesk.”

Andritz is part of the Autodesk manufacturing advisory group which means it can contribute to discussions about Autodesk’s future development as a company. And Andritz has also just been named a platinum partner of Autodesk, enabling it to qualify for the highest possible support levels from its supplier.

Vault enhances the productivity that Andritz is able to achieve and offer the potential to improve collaboration between different locations. It acts as an international cooperation enabler and has also received positive feedback from Andritz management. A managing director of a major Andritz location said that the Vault implementation was the most successful IT project that he had seen in his Andritz career.

Vault is effectively an enabler to make the business objectives possible to achieve. Only with tools like Vault can manufacturers cooperate between locations and optimise the way that they use their CAD budget. It helps businesses to make the most of their human resources as well as enabling them to optimise their IT investment.

— Ulrich Lanz
Head of Application Services Engineering
Andritz