

# Voith Paper

Autodesk Manufacturing Solutions  
Customer Success Story

Autodesk Inventor®  
Autodesk Inventor® Professional  
Autodesk® DWF™ Viewer  
AutoCAD®  
Autodesk Consulting



*"With Autodesk Inventor, we have standard models that we can easily customize to fill specific customer requirements."*

Olaf Spitzer  
Manager CAD/PDM  
Voith Paper

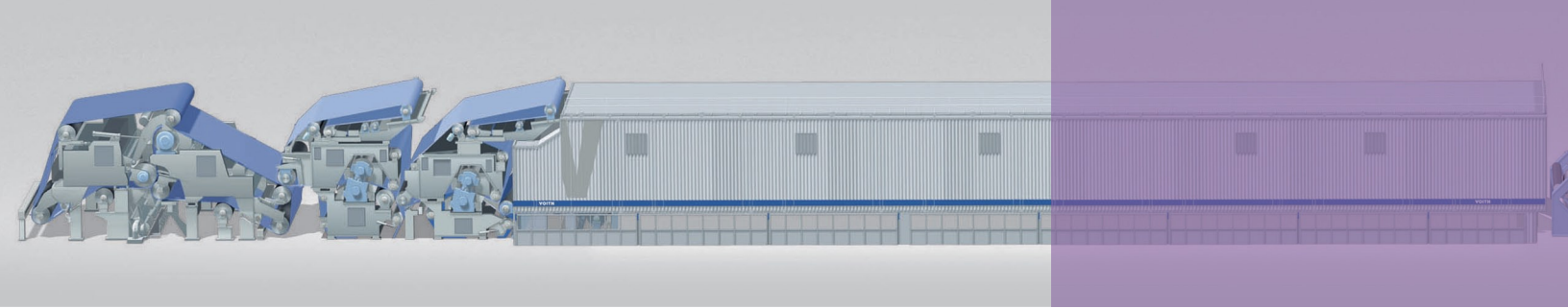
## Moving to 3D with Autodesk Inventor Increases Efficiency and Collaboration Worldwide

Voith Paper speeds up design and manufacturing processes, improves customer communications, and introduces efficiencies into procurement and maintenance operations globally.

### Project Summary

Every third sheet of paper is made on Voith Paper (Voith) machines. A giant in the worldwide paper industry, Voith employs 10,000 people, generates \$19 billion a year in revenue, and develops solutions that cover the entire paper production process—from fiber to wrapped paper. Previously dependent on 2D design tools, the company is now meeting its goal of improving the speed and quality of design creation by transitioning to 3D design with Autodesk Inventor. To gain additional efficiencies, Voith has partnered with Autodesk Consulting for guidance on the Autodesk Inventor implementation. Voith is also integrating its Autodesk manufacturing solution with its SAP enterprise resource planning (ERP) software, product data management (PDM) system, and PARTsolutions from CADENAS GmbH, an Autodesk Inventor Certified Application that manages parts and components, adding intelligence and information to the items. Voith is communicating easier with its customers worldwide for design reviews using Autodesk standards such as DWF. By implementing an integrated manufacturing solution, Voith's globally-dispersed engineers now work from a single source of data to produce 3D designs, speeding up—and streamlining—the company's design, manufacturing, and procurement processes.

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*“We designed a paper machine with about 5,000 parts using Autodesk Inventor and found that we could assemble it without any problem. Moving to 3D has allowed us to speed up installation time at our customer sites a great deal.”*

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### **The Challenge** **Deliver Massive Custom Machines Faster While Improving Quality**

Voith set its sights on improving its design process across its “centers of competencies,” which are located throughout the world. Each center specializes in particular parts of a paper machine; due to its massive size and complexity, a finished machine requires design input from several design centers. Voith knew that speeding up its design and manufacturing processes would mean aligning its dispersed design teams.

“We have five major design locations around the world: Germany; Austria; San Paulo, Brazil; Wisconsin; and China,” explains Olaf Spitzer, Manager CAD/PDM at Voith Paper. “Our goal was to make a single source of information available to every engineer.”

With an Autodesk manufacturing solution that integrates with Voith’s other key enterprise systems, Voith is providing its engineers with the consistent information they need to design faster. And with the transition to 3D, Voith is reaching new heights of quality than was previously possible. With a 3D-based process, Voith makes design changes easier and produces designs that are less prone to error in manufacturing.

### **Why Autodesk?**

Voith has over 1,000 CAD users that are transitioning to 3D with Autodesk Inventor. Explaining Autodesk’s value, Olaf Spitzer says, “We continue to choose Autodesk for three reasons. First, as the market share leader, Autodesk products are used by most of our customers and suppliers. By staying with Autodesk, we ensure that we can exchange design information easily. Second, we’re an

engineering-focused company that generates very large models. Autodesk Inventor provides us the support we need in this area. And finally, Autodesk was able to interface with our SAP ERP system.”

As a long-time Autodesk customer, Voith knew from experience that it could depend on Autodesk for global product support. The company also had confidence that by partnering with Autodesk Consulting, it would gain valuable implementation support and benefit from process advisory services.

### **The Solution** **Customizing Intricate 3D Designs**

Voith’s engineers custom design each paper machine. However, all the machines have design elements in common. With the Autodesk manufacturing solution, Voith can take advantage of these overlaps to speed design.

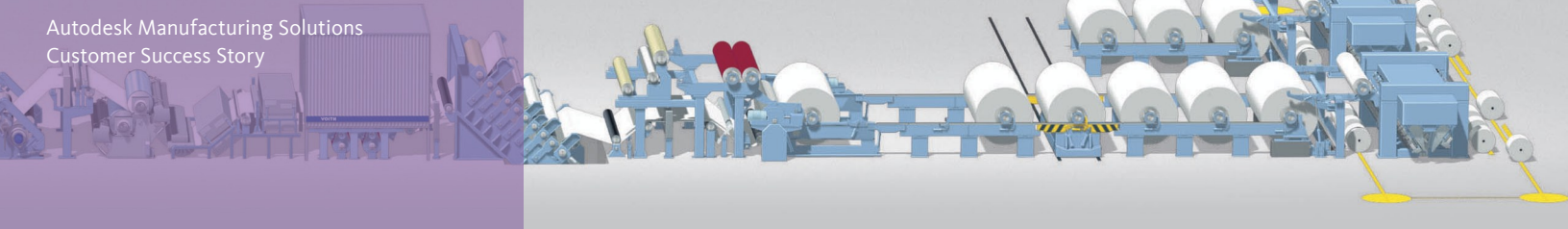
“With Autodesk, we have standard models that we can customize to fill specific customer requirements,” explains Olaf Spitzer. “This allows us to save a significant amount of time.”

Complicating matters for design engineers, each machine is comprised of hundreds of thousands of parts. Explains Olaf Spitzer, “Our paper machines have about 250,000 parts—far too many to fit into a single CAD model.” Adopting a 3D solution that would handle Voith’s large assembly needs was a huge priority. “Autodesk has proven that it is committed to developing large assembly performance capabilities in Inventor.”

Autodesk Inventor Professional helps Voith elevate design quality by enabling designers to review structural composition, ensure that

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parts fit and move together, and evaluate the performance impact of characteristics such as size, thickness, and weight of design components. With 3D, Voith's engineers know whether a design idea is viable—before it goes to production. As a result, Voith produces higher quality designs with fewer errors.

To facilitate its 3D design review process and share designs with customers, Voith uses Autodesk DWF Viewer. Autodesk DWF Viewer enables team members and customers without the original design software to view and print designs.

## Integrating Solutions Key to Efficiencies

Getting its designers on a standard platform worldwide meant integrating the Autodesk manufacturing solution with other key enterprise systems.

“Autodesk Consulting helped us find the right process and methodology for our whole system. They didn't just focus on the Autodesk Inventor implementation. They integrated our ERP, PDM, and parts management systems as well,” notes Friedrich Spitzer, PDM Support Manager, IT Solutions for Voith. As a result, Voith has synchronized its design teams and achieved new heights in speed and efficiency levels.

“By integrating our 3D models into our SAP ERP system, we can make design changes more quickly. Every engineer has access to the same information,” explains Olaf Spitzer. “This allows us to respond to our customers' needs faster.”

Adds Friedrich Spitzer “We're organized into centers of competencies, so every location with manufacturing capabilities has competencies

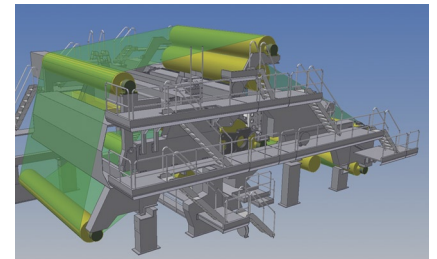
for a certain product in the finished machine. By installing a common Autodesk Inventor/SAP ERP system with help from Autodesk Consulting, we bring all the information that is generated by these different locations together in one system. With Autodesk Consulting, we have a global partner that supports us in all of our locations worldwide.”

## Streamlining Procurement

Voith is also gaining efficiencies thanks to its integration with the enterprise parts management system built by CADENAS GmbH, an Autodesk Developer Network member. The PARTsolutions system, which is an Inventor Certified Application, reduces design time by providing easy access to components and assemblies. Design and development engineers are able to see relevant part information such as price, delivery time, and release status in one user interface—as they design.

“It's very important to us that during the design phase of a project, we're not just designing geometry,” explains Friedrich Spitzer. “Our engineers can now bring in real items to their designs and generate bills of materials at the end of the design process.”

With a common database, Voith's entire design team now uses the same items with the same information. By streamlining parts numbers, Voith has not only facilitated procurement, but inventory and maintenance as well. “We are better able to stock inventory that we need in-house,” says Friedrich Spitzer. “And our service organization has the same data—regardless of where they are in the world.”



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Manager CAD/PDM  
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Friedrich Spitzer  
PDM Support Manager  
IT Solutions  
Voith Paper

## **The Result** **Better, Faster Designs**

Thanks to its Autodesk manufacturing solution, Voith is creating more accurate designs—faster. Each machine is designed by several of Voith’s centers of competencies and then assembled at the customer site. Since adopting Autodesk Inventor, Voith has reduced assembly problems.

Explains Olaf Spitzer, “Due to their large size, we can’t really test entire machines before they are assembled at a customer site. 3D reduces design errors and assembly problems. We designed a paper machine with about 5,000 parts using Autodesk Inventor and found that we could assemble it

without any problem. Moving to 3D has allowed us to speed up installation time at our customer sites a great deal.”

Meeting customer demands has also improved thanks to Autodesk. “By integrating Autodesk with our ERP system, we can respond quicker to our customer needs,” says Olaf Spitzer. “We are able to show them designs before we build a machine. For one project in China, a company ordered parts of a paper machine. We showed them the design and they had changes which we were able to make overnight. We then presented the new design to the customer the very next day and secured an order.”