

Tigercat Industries, Inc.

MANAGING FORESTRY EQUIPMENT DEVELOPMENT WITH SOLIDWORKS ENTERPRISE PDM



After realizing time and cost savings through the use of SolidWorks CAD and SolidWorks Simulation software, Tigercat implemented the SolidWorks Enterprise PDM system to obtain additional productivity gains.

CHALLENGE:

Accelerate product development and reduce documentation costs while encouraging design collaboration and reuse.

SOLUTION:

Implement the SolidWorks Enterprise PDM system to integrate data management and automate development workflows across locations.

RESULTS:

- Improved engineering speed and flexibility
- Increased design collaboration and access
- Eliminated costly paper documentation
- Standardized workflows to become more efficient

Tigercat Industries is a full-range Canadian forestry equipment manufacturer. The company has established a leadership position in its market by developing premium-quality, heavy-duty off-road equipment for use by logging professionals. With manufacturing facilities in Canada and Sweden, Tigercat has grown to become a worldwide distributor of a diverse line of forest-harvesting systems.

The company's success rests partly on its commitment to using the latest, most-efficient product design and manufacturing technologies, according to Corey Vantilborg, engineering systems administrator. "At Tigercat, we have a history of pushing the envelope when it comes to technology, so we can quickly react to market and customer demands," Vantilborg says. "Improving our efficiency and speed is part of our culture, and we utilize the tools that best allow us to maintain our competitive edge."

Tigercat implemented the SolidWorks® 3D design platform in 2001, installing 43 seats, to increase productivity in equipment development. The company later acquired SolidWorks Simulation software to realize additional time and cost savings by validating equipment designs. To gain even greater product development efficiencies, Tigercat implemented a product data management (PDM) system in 2006.

"We had a number of designers and engineers who were working across four different plants accessing four different development servers," Vantilborg recalls. "We believed that a PDM system would allow us to become more efficient by integrating our resources into a single operation, thereby realizing better revision control, more efficient workflows, and greater access to design data."

For its PDM system, Tigercat chose SolidWorks Enterprise PDM software, implementing 200 seats, because of its ease of use, integration with SolidWorks software, customization potential, and the support of Javelin Technologies, Tigercat's local reseller. "At first, I did not think integrated PDM was a big deal," Vantilborg explains. "But now that we are up and running, I can clearly see the efficiency benefits of interfacing with the vault directly from inside SolidWorks software."



"With the [SolidWorks Enterprise] PDM system, all of our plants run differently and more efficiently."

Corey Vantilborg
Engineering Systems Administrator



Using SolidWorks Enterprise PDM software, TigerCat has integrated data management for all of its product lines, resulting in tighter revision control, reduced documentation costs, and greater engineering and manufacturing efficiencies.

Multiple product lines, multiple locations

By implementing SolidWorks Enterprise PDM software, TigerCat has integrated data management for all of its product lines – ranging from harvesters, bunchers, and loaders to skidders, mulchers, and attachments – with operations at all of its fabrication and assembly facilities in Canada and its manufacturing plant in Sweden. This integration has resulted in tighter revision control, reduced documentation costs, and greater engineering and manufacturing efficiencies.

"The ability of our engineering groups to communicate about models, maintain a revision history, and capture design innovations has substantially increased efficiency," Vantilborg stresses. "We have several hundred thousand unique design archives, all of which in the past required documentation with a paper drawing. The combination of digital signature capabilities and a heavily replicated system has led us to obsolete our costly, physical storage system. While we need to maintain some paper documents to meet legal requirements, we will otherwise eliminate paper altogether."

Automating workflows for efficiency

With PDM, TigerCat also has realized the ability to refine, automate, and standardize its workflows. SolidWorks Enterprise PDM software provides a framework within which TigerCat can more efficiently develop products and manage design changes. "The PDM system eliminates shortcuts and immediate solutions in order to preserve quality and capture innovation," Vantilborg notes. "The system forces you to follow the workflow procedure and provides accountability and traceability. As a result, our personnel give greater attention to detail and are faster at completing our processes."

"There are no longer any quick fixes, which might solve an immediate need but have long-term, undesired ramifications. With the PDM system, all of our plants run differently and more efficiently," he adds.

Leveraging design data across the organization

Another positive impact of the PDM system is the way it has opened up TigerCat's design data to departmental functions outside of engineering. By providing personnel in departments such as manufacturing planning, assembly, purchasing, sales, and technical publications with access to the vault, the company has enjoyed additional productivity benefits.

"TigerCat has always been an engineering-focused company," Vantilborg points out. "By providing every department in the company with controlled access to the vault, we are realizing improved productivity throughout the organization. Purchasing uses the data to obtain quotes, manufacturing planning uses data for setup, and shop floor computers give assembly personnel immediate access to the latest revisions. The system enables us to leverage our product design data throughout the organization."



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