

CASE STUDY

Enabling Make-to-Order Manufacturing For International Truck and Engine Corp.

The Client

Navistar International is a Fortune 500 manufacturer best known for its International@ brand of over-the-road trucks. The company, which operates under the name International Truck and Engine Corp., also makes medium-duty and severe service trucks, school buses, diesel engines, and replacement parts, and provides services such as financing and insurance. It sells its products, parts and services through a network over 1,000 dealers worldwide.

The Challenge

An important part of International's value proposition in a highly competitive market is its ability to make-to-order custom truck configurations based a customer's unique specifications. In order to effectively enable this process, International required a software system that could effectively address the high degree of complexity in its truck product variations, as well as a rapid pace of product change - including changes to existing parts and assemblies, the release of new components, the introduction of new products, and the addition of new manufacturing plants.

The solution needed to capture, manage, and leverage product configuration and design information through-out the enterprise, and allow the company to reduce the time, effort, and expertise required to manage that information.

The Solution

International implemented the Trigent Configuration Solution, TriCon, as its core system for managing product configuration knowledge to enable make-to-order manufacturing.

TriCon maintains product configuration information in a central repository, the Configuration Data Management System, which integrates sales, engineering, and manufacturing information and feeds a variety of other enterprise applications. TriCon's Configuration Engine employs this configuration knowledge to process each truck order, checking for proper specifications, compatibility, and thoroughness to ensure engineering is complete and the truck is buildable.

TriCon uses current product change information in validating each order, generating

Trigent's solution enables International Truck & Engine to manufacture made-to-order trucks quickly, reliably and profitably. Dealers can easily help customers order trucks built to their unique specifications, time-lines and target costs, while the company can ensure that it can deliver to meet those expectations.

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its Bill of Materials (BOM), validating the BOM, and determining it can be built according to schedule. Using TriCon, International can efficiently manage highly dynamic product information throughout the process of engineering changes, manufacturing release, build, and end-of-life.

The Results

Today, International manufactures complex made-to-order trucks quickly, reliably, and profitably with TriCon. International's dealers can quickly help customers order trucks built to their unique specifications, time-lines and target costs, while the company can ensure that it can deliver to meet those customer expectations.

TriCon has proven its ability to scale to meet International's business needs, including the introduction of new truck lines and new contract manufacturing capability. Configuration of a typical order takes under one minute.

Through TriCon, International has gained real-time views of BOM data, including pending changes, to the entire corporation. The company has significantly reduced the volume of data it needs to maintain - and the corresponding duplication of information, errors in data, and need for manual intervention.

With the oversupply of used trucks cutting into many truck makers new model sales, International's make-to-order capability today may be an even more critical competitor differentiator for the company than it was when the system was first implemented. Not only does this capability provide a more attractive value proposition to a potential customer, it also helps International reduce its inventory costs.

And because TriCon allows International to progressively ensure that new configurations are engineered to fit their particular purpose, the system has also led to a significant decrease in the cost of customer warranty claims.

About Trigent

Trigent is a provider of software development and support services that help companies achieve the greatest possible ROI on the applications that drive their businesses. Commercial software providers, manufacturers, and marketing and media companies rely on Trigent to deliver business value, leveraging unique solution frameworks, patent-pending technologies, and CMM-certified global development centers.

“ *TriCon enables a make-to-order solution that takes us from concept to showroom. Using a Web-based tool, our dealers are connected to the process from the very start, so every sale is validated and the manufacturing process determined automatically. Each component of the configuration engine has been designed with business rules for our specific requirements, and our customers' needs.* ”

Charles Crabtree

Configuration Systems Engineer
International Truck & Engine Corp.

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