Made to Order: NetSuite Supports Speed of Delivery for Engineer to Order and Configure to Order Manufacturers

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Cloud ERP, combined with an integrated quote and pricing application, gives engineer to order (ETO) and configure to order (CTO) manufacturers the tools they need to be able to run efficient, profitable operations.

Organizations that produce ETO and CTO products need an Enterprise Resource Planning (ERP) solution that can support customized, dynamic and highly complex manufacturing processes and improve business operations.

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ETO/CTO in High Demand

In a world that's moving to more personalization and customization, engineered to order and configured to order products are in high demand. Customers want goods that are tailored to their unique needs and manufacturers are using the opportunity to extend product lines, increase sales and grow market share. According to the New York Times, a growing number of industries and companies are offering mass customization. Many of those companies are niche manufacturers and startups, while others are large brands that have added customization options to extend their product lines and increase sales.[1]

ETO makes products that meets the customers' exact specifications ready to ship. Used in many manufacturing settings, ETO may include a company adding customer-specific changes to a power plant boiler, HVAC equipment or an industrial crane once an order for those goods has been received.

CTO gives manufacturers the opportunity to respond to changing and unpredictable customer demand. Using this method, companies can hold off on the final configurations of an item while keeping delivery lead times as short as possible. For example, when a customer orders a laptop 1 terabyte hard drive, the computer—which may also include customizable memory, display or chassis color—is the configured item and the hard drive is the configured option.

[1] https://www.nytimes.com/2020/03/18/business/customization-personalized-products.html

Speed of Delivery Matters

In 2021, there are about 636,000 manufacturers in the US, and many of them rely on aging on-premises ERP systems to run their operations.[2] Lacking in functionality and unable to integrate with outside applications, many of these solutions were installed in the 1990s or early-2000s and require onsite maintenance and upkeep. Most were small, niche applications that focused on specific manufacturing sectors.

Today, many of the companies still running on these solutions are forced to use Excel spreadsheets for core activities like inventory management and outside applications for ecommerce sales. As customer demand for ETO and CTO products continues to grow and as the number of different product configurations expands, managing these complexities while staying profitable has become increasingly difficult for manufacturers. Speed of delivery is also critical in a business sector where the next competitor is just one click or screen tap away online.

"If one manufacturer can build the product within six months and another can have it ready within two months, the latter is going to win the order. When manufacturers have the software they need to engineer and configure more—and to do it within a shorter timeframe—everyone wins."

Marc Bastnagel, CPA, Practice Manager, Myers-Holum

[2] https://www.ibisworld.com/industry-statistics/number-of-businesses/manufacturing-united-states/

Thinking Outside the Box

Because they operate more like professional services versus traditional manufacturers, companies that handle ETO and CTO orders have complex software requirements. Knowing this, NetSuite Alliance Partner Myers-Holum uses NetSuite as a core foundation plus NetSuite CPQ (a configure, price, quote solution which integrates directly with NetSuite). NetSuite CPQ ties into the interface for opportunities, quotes and sales orders. Items, customer data, bills of material (BOM) and routings are shared between the systems meaning they can be managed in a single application.

"We extract different aspects of a NetSuite implementation for a professional services company, a manufacturer and/or an installer and bring those best practices together to meet the needs of the ETO and CTO manufacturing firm."

Stephen Wolff, Managing Partner, Myers-Holum

For companies that also offer service and maintenance for their products, the company addresses recurring revenue requirements associated with those activities right within the ERP.

"We provide a single package that works holistically for an ETO or CTO company," said Wolff. Myers-Holum also helps manufacturers meet the growing demand for "self-service" on the part of their customers, many of whom want to be able to go online and place an order without having to pick up the phone, send an email or work directly with a sales rep. Without a unified ERP system in place to manage this activity, manufacturers may lose insight into the associated costs and not price the orders out correctly.

Multiply this problem over thousands of orders and the resultant bottom-line impact can be significant. "A lot of the upfront cost goes into designing products according to a customer's exact specifications," Bastnagel explained, "and pricing all of that out correctly can be extremely difficult." Using the pricing configurator with NetSuite, customers can view renderings of their products before they're even made, review pricing quotes and place orders with little or no human intervention. For orders that fall under a certain pricing threshold, buyers can go online and see which "off-the-shelf" products are available and which come with a predefined set of modifications.

Here's How It Works

Myers-Holum has implemented NetSuite for companies in many different industries, ETO and CTO manufacturers included. For example, ESPEC builds quality environmental test systems that its customers use to simulate specific environmental conditions (e.g. heat, cold, rain, humidity, vibration, etc.).

The largest organization in North America focused entirely on manufacturing environmental test and conditioning systems, ESPEC is renowned for its quality construction and innovative designs. Its systems are sold to large automotive manufacturers and other companies that need to test their own products in these environments prior to placing them on the market.

Each ESPEC system is unique and most are configured to order. With this level of complex manufacturing and rigorous testing standards, ESPEC needed a scalable, unified cloud platform to manage supplies, inventory, financials and payments. ESPEC selected NetSuite with Myers-Holum as its implementation partner.

One manufacturing client develops composites in all shapes and sizes from materials like carbon fiber. The composites are used for end products like windmill blades, boats and aircraft carrier components. A third company that Myers-Holum implemented NetSuite for makes large LED architectural lighting for the interior and exterior of commercial buildings (e.g. museums, stadiums and others).

Another organization focuses on packaging and creating bottles, cases and other items for multiple high-profile health and beauty brands. Leveraging NetSuite, they track the full customer life cycle from initial design to manufacturing and fulfillment of the configured product all in one integrated system.

"NetSuite is a great tool for ETO and CTO companies because it allows them to do everything they need to do to run their businesses efficiently and profitably. Companies using older, on-premises manufacturing solutions wouldn't have the professional services automation, the ability to record pre-sale activity, the CRM or the revenue recognition that NetSuite manages so well. It would have to get a separate accounting system."

Stephen Wolff, Managing Partner, Myers-Holum

"Every product is different for the ETO and CTO companies," said Bastnagel. "NetSuite is a good fit because it incorporates CRM, manages the build or configure process and then records the engineering and design time associated with that project."

Using NetSuite, companies can handle the inventory management that was previously done on spreadsheets and then orchestrate the manufacturing, installation and/or service processes. The system also manages recurring contract and revenue recognition for the manufacturer. This is especially helpful because revenue recognition for ETO and CTO companies are often complex. For example, they may require 50% of the total project fee upfront, 25% when the item ships and then 25% once it's been installed.

"NetSuite manages the cost allocations, revenue deferral and other intricacies of recognizing revenue in the ETO and CTO manufacturing setting," said Wolff, who adds that NetSuite, Configurator One and Myer-Holum's expertise are the right combination for made-to-order manufacturing firms that want a flexible, end-to-end software platform to work from.

Hitting All the Targets

Myers-Holum can typically get ETO and CTO manufacturers up and running after a six to eight month implementation.

Once NetSuite is in place, companies can better track and report costs, understand profitability on every custom job that they sell and gain new insights into both gross and net margins.

Businesses can also onboard new customers and process new orders faster than they'd be able to do with their on-premises and manual systems. This vastly speeds up time to market and helps manufacturers get a leg up on their competitors. "For most of these companies, the end goal is to get from the initial point of customer contact to the deal closing, and finally to getting an item into production as quickly as possible," said Bastnagel. "NetSuite helps them achieve that goal."

The ERP system also gives ETO and CTO manufacturers extremely granular details on every transaction. Armed with this information, companies can make better decisions regarding both their current and future workloads. For example, Wolff recalled one manufacturer that, upon implementing NetSuite, gained clear visibility over the profit margins for its individual projects.
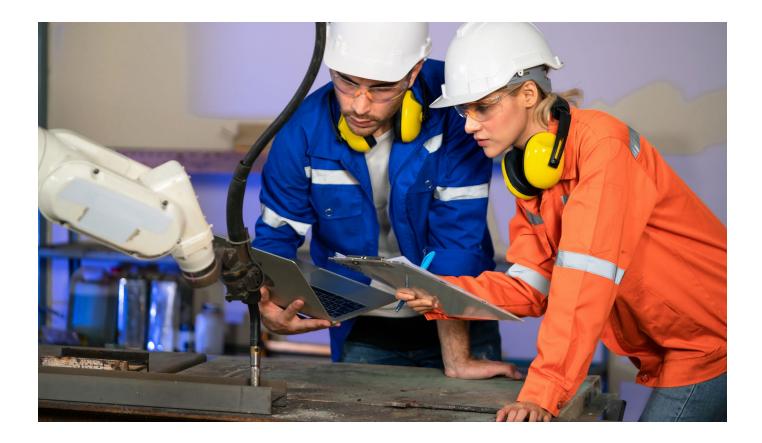
"The margin was 35% for one customer and 15% for another, yet the products were very similar," he explained. "The company was able to drill down into why that happened—something it wasn't able to do before."

Don't Get Left Behind

Facing stiffer competition, ongoing pandemic impacts, remote work, supply chain shortages and a persistent labor crunch, more ETO and CTO manufacturers are turning to technology and automation for help. Those that ignore this imperative may be left behind, a point that became increasingly clear during the early stages of the COVID-19 pandemic.

"Many companies that were using outdated on-premises technology couldn't even operate effectively during the pandemic, which isn't going to be the last major disruption we see," Bastnagel concluded. "On the other hand, engineers working for companies with advanced cloud-based platforms in place were able to continue working and serving their customers."

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