

**Tech-Clarity**

**Tech-Clarity Insight:  
Improving Profitability for  
Configured Products**

***Leveraging Sales  
Configuration and Design  
Automation***



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**\*This summary is an abbreviated version of the report and does not contain the full content. A link to download the full report is available on the Tech-Clarity website, <http://www.tech-clarity.com>.**

**If you have difficulty obtaining a copy of the report, please contact the author at [michelle.boucher@tech-clarity.com](mailto:michelle.boucher@tech-clarity.com).**



## Executive Overview

Manufacturers have a tough job competing in today's global environment. Global competition, price sensitivity, time to market pressures, and increasing complexity all make it very difficult for manufacturers to be successful. Competitively differentiating your business and its products is hard while facing all these pressures. In addition, customers expect more.

To capitalize on this trend, a company can set itself and its products apart by tailoring products to customer needs with a Design to Order (DTO), Configure to Order (CTO), or Engineer to Order (ETO) strategy. Among the many benefits, customization and personalization:

- Offer customers exactly what they want
- Create competitive differentiation
- Enable a price premium

All of these factors lead to greater profitability.

For some companies, ETO is less about differentiation. Instead, it is a basic necessity in their industry. In these cases, it's not enough to set products apart through customization, because everyone does that. In these industries, you need to come close to offering customized products as effectively as others who offer standard products.

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***A sales configurator integrated with design automation can be a way to profitably customize products. It can improve a customer's experience, save time, and offer customers exactly what they want in an economical way***

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Regardless of the reasons driving "to order" manufacturing, to be successful, your company must overcome the inherent complexity. While there are a lot of benefits, complexity can introduce risk, which in turn could lead to higher costs that hurt profitability. It's important to choose the right approach.

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***As examples of the time savings, Pine Research Instrumentation found that processes that used to take two to four weeks are now instantaneous and Precision Polymer Engineering (PPE) found design cycles are reduced by 35%.***

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Rob Yule, Director of Engineering at Blue Giant, a loading dock manufacturer, says, "*We believe that manufacturing products locally can succeed long term. However we know we have to automate everything possible to remain competitive.*" A sales configurator integrated with design automation can help profitably customize products. It can improve

a customer's experience, save time, and offer customers exactly what they want in an economical way. In addition to higher customer satisfaction, the business benefits include:

- Higher productivity
- More accurate quotes
- Fewer errors
- Optimized manufacturing processes
- Less waste

As examples of the time savings, Pine Research Instrumentation finds that processes that used to take two to four weeks are now instantaneous and Precision Polymer Engineering (PPE) found design cycles are reduced by 35%.

The integrated solution also offers a competitive advantage. Says Paul Gimbel, Business Sherpa at Razorleaf, *"A sales configurator integrated with design automation gives a company the capability to offer customized products at standard product prices, while the competition is limited to their catalog items."*

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This paper explores how to manage the inherent complexities of "to-order" products. It identifies best practices to profitably customize products and shares the business benefits enjoyed by companies who have implemented them.

## **Conclusion**

Today's competitive environment is forcing many companies to look for new ways to stand out from their competition. For many, engineering products to order to meet customer needs can provide this advantage. For others, customization is already so prevalent in the industry, they must find a way to offer Engineer to Order products as easily as if they were offered in a standard catalogue. Regardless of the reasons for offering ETO products, customization drives up complexity, which can add to the risk, cost, and time to deliver products to customers.

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***In our case, the software has aided us exponentially, our order conversion rate is higher than manual quoting methods and we've increased our order rate by approximately 90%.***

*Gary Shackelford, Vice President at Heat & Sensor Technology*

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With an integrated sales and product configurator, companies can manage complexity with a more efficient and economical customization process. This can provide such a competitive advantage that many companies find both revenue and profitability have gone up. *"We believe universally, our sales and product configurator saves time for both the consumer and the manufacturer,"* Gary Shackelford, Vice President at Heat & Sensor Technology. *"In our case, the software has aided us exponentially, our order conversion rate is higher than manual quoting methods, and we've increased our order rate by approximately 90%."*

By integrating the sales, engineering, and manufacturing processes, customer information captured during the sales process can drive and automate all deliverables including quotes, engineering details, CAD models, and manufacturing information. *"The configurators allow our customers to select, build, visualize, examine and confirm their selected heater components before they place their order,"* explains Shackelford. Having all this information available so quickly during the quoting phase provides a competitive advantage. *"Immediately, our customers see how we beat competitor quotes in terms of speed and value,"* adds Shackelford.

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Ultimately, Successfully using configurators to improve profitability in ETO is about delivering a better experience to customers. Companies who are easy to work with and keep their commitments are more likely to win business. Shackelford concludes, *"Our online product configurators are a benchmark of achievement – representing the excellence in customer service that we're continuing to develop."*

## **Recommendations**

Based on industry experience and research for this report, Tech-Clarity offers the following recommendations:

- Understand the cost drivers of custom products
- Ensure quotes are both fast and accurate

- Use guided selling to simplify the buying process and ensure that all required information is accurately and consistently collected for every order
- Automate manufacturability checks during the sales process
- Use the information entered in the sales order to drive design information such as CAD models, drawings, and manufacturing instructions
- Automate sales, design, and manufacturing deliverables with a sales and product configurator
- Take advantage of internet technologies and support multiple devices to extend your reach to customers and dealers
- Keep in mind implementing a sales and product configurator does not need to be overly complicated and should be easy to maintain and improve
- Integrate configurators with other enterprise systems such as ERP and CRM to maintain a single source of enterprise information
- Use productivity gains from configurators to improve customer satisfaction and increase revenue opportunities to boost profitability

### **About the Author**

Michelle Boucher is the Vice President of Research for Engineering Software for research firm Tech-Clarity. Michelle has spent over 20 years in various roles in engineering, marketing, management, and as an analyst. She has broad experience with topics such as product design, simulation, systems engineering, mechatronics, embedded systems, PCB design, improving product performance, process improvement, and mass customization. She graduated magna cum laude with an MBA from Babson College and earned a BS in Mechanical Engineering, with distinction, from Worcester Polytechnic Institute.

Michelle began her career holding various roles as a mechanical engineer at Pratt & Whitney and KONA (now Synventive Molding Solutions). She then spent over 10 years at PTC, a leading MCAD and PLM solution provider. While at PTC, she developed a deep understanding of end user needs through roles in technical support, management, and product marketing. She worked in technical marketing at Moldflow Corporation (acquired by Autodesk), the market leader in injection molding simulation. Here she was instrumental in developing product positioning and go-to-market messages. Michelle then joined Aberdeen Group and covered product innovation, product development, and engineering processes, eventually running the Product Innovation and Engineering practice.

Michelle is an experienced researcher and author. She has benchmarked over 7000 product development professionals and published over 90 reports on product development best practices. She focuses on helping companies manage the complexity of



today's products, markets, design environments, and value chains to achieve higher profitability.