



Building your ability to configure, market and deliver personalized products

In today's world of focusing on the "Customer" and the need to deliver an individualized customer expectation, we need to understand how this impacts how we design and manufacture and bring products to the marketplace. This is quite a shift after Original Equipment Manufacturers (OEM) have focused on delivering a smaller product offering, even to the point of eliminating some of their brands that were focused on specific market segments. For example, the elimination of Pontiac out of the GM portfolio.

The concept of "personalized" products— requires an aligned approach from design to manufacturing. The three main concepts to realize an efficient method of delivering personalized products to the market are:

Modular Design

When developing a new product that enables customers with the choice of "personalized" features, a great deal of effort needs to be taken into the design of the overall architecting the product. The total system capability and options need to be deciphered and alternatives with pros/cons in terms of product configurability and feasibility need to be assessed. As the features are orchestrated into a "pick list" of choices for the customer, the system architecture and its sub-systems need to be developed and validated on how each configuration will work with one another. The importance of driving the concept of requirements driven modular sub-system design is key to providing not only the personalization of the product to the customer, but it also allows engineering to design the variants, and then understand the interaction of the different choices from each sub-system to the overall product. This is the enabler to defining the needed complex design planning and validation to ensure all options are certified before being made available to the customer.

Configured Modular Manufacturing

To enable manufacturing flexibility, the product design must ensure manufacturability, as well as, built in flexibility in the manufacturing process. The concept of manufacturing the core components as the initial step in the sub-system assembly sequencing will allow for a large percentage of the product to be built while keeping the manufacturing lines efficient and common. It also provides for relatively "late" configuration during the manufacturing process. This can also provide the option of "Final" configuration at the end of the production sequence or even off the assembly line just before shipping. Timely execution with the ability to minimize and if not completely eliminate any bottlenecks will provide for a profitable product line.

Providing a Guided Selling Approach to buying

When it comes to the customer-facing selling process, we need to configure a guided selling approach that only provides the consumer "validated and certified" product options. At the end of the day, we are providing the consumer with a personalized product, not a customized product. As the consumer is guided through the buying process, the sub-system options are provided for selection. Based on each selection, we then narrow the remaining configurations that are available to the customer. We need to only provide an "option" that has been validated and certified.

From an enterprise systems perspective, the need to orchestrate a product environment— from design through manufacturing, to sellable product catalogs, that provides a configured product is essential to keeping all parts of the organization aligned and working in harmony. From customer requirements, to sub-system and product definition, to the capabilities in manufacturing such as digital work instructions, the lifeline of the organization is the product lifecycle management (PLM) system.

If you'd like to know more about developing, implementing and embedding this system capability in your organization, give us a call.

Next Month: How to optimize your visibility throughout the Product Development Cycle