Modern Mass Customization – Rule 2: Follow the Rules

by Jordan Reynolds

Following from the post Free to Choose: Mass Customization for Modern Manufacturers, here is the second rule to live by for modern mass customizers.

For practical reasons, manufacturers have to set limitations on range of configurability in their product architecture. These limitations are driven by a wide variety of business and technical requirements, including manufacturing constraints (Is it possible to assemble this?), and sales and marketing strategies (Do we want to offer this to our customers?) For many companies, it is tempting to try to control these limitations with brute force, identifying all the possible product configurations up front, and allowing customers to choose from an approved catalog. Without the right technology, this is often the only option. This is prohibitive, however, when you consider the number of permutations that must be defined, documented, and managed for a highly dynamic product. Imagine the task of identifying every possibly way a Lego kit could be put together, and you can understand magnitude of complexity with this approach.

A better strategy is to focus on uncovering the governing logic behind the configuration of your products, and to capture this logic into a manageable set of business rules. Establish rules that define what cannot be done, and rules that define what must be done. Part A and Part B cannot be on the same assembly. If you have Part C, you must have Part D. Document and manage rules that define other relevant business and technical requirements to include spatial constraints, approved vendors and lead times. By making your business rules the manageable asset rather than a massive list of possible configurations, you simplify the business problems inherent in product customization, and unleash configuration possibilities that you may not have known existed. Use a customer-interfacing product configurator, and operate within the boundaries set by your business rules, allowing your customer to freely explore and discover product configurations that meet their unique needs.

To realize success from a rules-driven product management approach, rule development should be considered a necessary phase of the product lifecycle. New product components or architectures should not be released without a complete set of business rules that define how those components can be arranged into a saleable product configuration. Integration with a PLM system is critical to oversee this development process, and to maintain associativity between your rules and your product data.

More Rules for Modern Mass Customizers

Modern Mass Customization – Rule 1: Modularize your People, Processes and Products
Modern Mass Customization – Rule 3: Honor the Order, Abandon the BOM
Modern Mass Customization – Rule 4: Look Your Customer in the Eyes
Modern Mass Customization – Rule 5: Brace for Change

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