

Tips on Smart Customization

One of the best tools in American manufacturing's arsenal of competitive strategies is customized products and services. No other country can offer the customized products and services to U.S. customers as well as America's small and midsize manufacturers (SMMs). More and more customers are demanding customization, and if you have a system to design and build custom products and services, you not only have a competitive advantage but you can also make higher margins than the industry average.

But the problem of making money with customization is a daunting task. In other words, it's easy to let the customization process get out of control and to lose money and cause service problems.

It is important to define the specific type of customization because there are many different approaches. This article is about the type of customization that requires new engineering and changes in the bill of materials on every order ("one off" products and services). Here are some basic considerations:

1. Having a marketing plan: It is very important to have a basic marketing plan that defines the target markets you want to penetrate by SIC Code. This focus on specific markets will drive both the orders you accept and how you spend your engineering resources. For instance, if you have done a lot of work for paper mills, you will have developed a lot of proprietary experience and engineering that gives you an advantage.

2. Repeat business from customers: As everyone knows, business from repeat customers is more profitable than new customers, and dealing with repeat customers is an easier marketing situation than continuously trying to sell and find new customers. This means monitoring existing customers' operations better than your competitors, and responding to their needs.

3. Being able to say no: It is just as important to say no to an order that doesn't fit your plan (or process) as it is to accept orders. Accepting orders and projects indiscriminately is a fast way to lose money for a variety of reasons.

4. Having an accurate cost system: Perhaps one of the most strategic issues of customization is having a very good cost system that shows costs down to the sub assembly or option level. Just knowing costs in the aggregate

such as total engineering, materials, labor, and purchased parts costs is not good enough to play in the custom game. By keeping track of all of the costs over time, down to the sub assembly and work order level will allow you to develop a very accurate cost and quotation system. This system can be used to develop accurate prices and to know when a project is worth accepting.

5. Too much engineering: I think it is appropriate to say that if the order requires too much experimental engineering that it will cause massive changes to the bill of materials. When this happens, at some point the total costs of the project may no longer be projectable. Once this barrier is crossed, service problems can almost be guaranteed.

6. Reusing the engineering: If you have a good cost system and excellent records you are in a position to re-use some of the engineering on future projects. This is where you can make excellent margins because you're using engineering that has already been completed and it allows the rest of the manufacturing processes to be further up the learning curve. Reusing the engineering tends to reduce labor hours for the entire project.

7. Customized product vs. prototype: When vast amounts of new engineering are required, the project is really a prototype of a new product or service. This means there will be much experimentation and testing before the project is complete. Whether the company accepts an order for a prototype should depend on whether it could generate future sales, and also on the price the customer is willing to pay for the new engineering, changes, and testing.

8. Managing engineering hours: Another critical element in successful customization is managing engineering resources. Custom engineering usually requires a long learning curve and it is important to accept that you have a plan that divides engineering hours into the types of projects, options, and accessories that are carefully defined in the marketing plan.

9. The opportunity cost problem: If you invest in a large project that takes a large percentage of the annual engineering hours budget, and the project loses money, you will lose in three ways. The first is that the project or order lost money. The second is the opportunity cost of using hours on a losing project that could be used on something profitable. Third, this project may get into the production system and require so many resources that other project delivery dates are missed.

10. Specifications: On large production line type machines or packaging machines, it is common for customers to issue specifications with the order. It is important to take the time to carefully go through every line of specifications. If you don't, you may miss something that requires a change in the field that will become a warranty charge. Making a profit on these highly specified projects has a lot to do with evaluating the specifications carefully.

11. Contractual terms: Contractual terms are also important in custom products or services. If you classify the project as a C or D project with considerable risk, you may want to ask for a big down payment along with progress payments. It is also important to dictate the terms on cancellation so that you get paid for all work that is accomplished up to the date of cancellation.

The big advantage of customization is product differentiation. Being able to customize a product or service can automatically give you a competitive advantage.

The problem is being able to both project and manage your costs. If you have a well thought out system for customization you can make margins that are higher than your industry average. If you take orders indiscriminately and use "shotgun sales" methods, you may not only lose money on the project, you could also have warranty problems that can lead to losing customers. **IMPO**

Mike Collins is the author of Saving American Manufacturing, a comprehensive step-by-step strategy that demonstrates how to ultimately become an organization that will continually find new opportunities in today's fast-changing global economy.

