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Product Development

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DESIGN AND ENGINEERING NEWSLETTER

What's best for your project, a product development firm or a "full-service" manufacturer?



Paul Gleason, our VP, has been with Omnica for over fifteen years. Previously, he was the international sales and marketing representative for an OEM instrumentation manufacturer.

Sourcing and qualifying out-source partners is a daunting task for companies who require product development *and* manufacturing services. We are often asked which is more advantageous, to hire a company that provides both services, or outsource from separate organizations. Without thinking it through, most people would say "Go with the one-stop shop". Paul has worked for both types of organizations and offers some good reasons why he believes manufacturers and product developers should concentrate on their specialty.

In the manufacturing paradigm there are two motivating issues. One is that designs created by a manufacturer are generally driven by the company business model. Secondly, engineering resources in these firms are specialized, and tend to be utilized for support of the revenue-generating manufacturing branch.

Manufacturers have preferences and comfort levels that coincide with similar projects they have done in the past. They perform services that are extensions of their primary business and have a tendency to design what they can build. Generally, the types of projects they see are directly related to their in-house manufacturing process or specialized industry.

A side effect of familiar challenges in a limited number of areas is that manufacturing support engineers usually don't have the experience to do principal engineering. If the product or device in question is not part of their general manufacturing technical expertise they will either need outside help to complete the project, or lose production time while the necessary experience is developed in-house.

Design and engineering firms are not constrained to a specific manufacturing process. Their job is to design for manufacture (DFM), then find a

company that is a good fit for production. Since they deal with many types of manufacturers, their engineers see a much wider range of challenging projects than those in specialty manufacturing firms. As a resource, experience in many areas makes them an especially good fit for technical products or those in feasibility studies. They are in a better position to understand what it takes to get the labor content out of a device, how to iron-out potential liability and cost issues, and identify which manufacturing processes are most appropriate. Ideally, your product design and engineering should be performed by technical personnel who are broadly versed in the possibilities of the art.

Manufacturers generate revenue by producing products. Activities that could move resources from that primary income source encounter great resistance. Few firms operating at capacity have "extra" engineering resources for performing non-manufacturing activities. If there is an interruption in that income stream, any available engineers are tasked to solve the problem. On the other hand, if things are running smoothly, they are assigned to do sustaining engineering or look for ways to improve output.

Product development firms generate income in an entirely different way, by selling technical expertise and resources. They create income for the firm by billing clients based on time and materials, not by the number of manufactured goods. The goal of a successful design and engineering firm is to supply their clients with the best possible manufacturable designs in a relatively short period of time. The down side possibility is the more time they spend refining a product or device, the greater the cost to the customer. It is the project manager's responsibility to make sure the project remains within budget, and watch out for creeping elegance from eager engineers, designers and their own marketing people who might add extra capabilities and features that the end customer doesn't really need.

The "one stop" approach, design and manufacturing at one company, suggests an attractive option, but the corporate cultures and motivations are so different, it is easy to question whether the two services can effectively coexist in the same firm.