

HIRE A PRODUCT DESIGN FIRM, OR AN INDEPENDENT CONTRACTOR?

When it's time to produce the electronic portion of your product, do you go to a design firm, or an independent contractor? The answer is: It depends. Both are good solutions, but meet different needs.

"I like to use the lawn analogy. If you need your lawn mowed, you hire the kid next door. But if you also want someone who has the expertise to determine what fertilizer to use, what kinds of plants will grow in your yard, and when to trim the trees, you hire a landscaper," says Alex McKay, president of ARMA Design.

Outsourcing began as a cost-effective manufacturing solution. Then, in the 1990s, the concept expanded to include full-service product design. Today, companies are less likely to have in-house electronic engineering capabilities and more likely to outsource. They either hire an independent engineer with a specific expertise or go to a design firm they can rely on to be, essentially, their "virtual" electronic engineering department.

When faced with an outsourcing decision, which should you choose? Here are some issues to consider.

1. Cost is not necessarily a big differentiator.

Some firms go to an independent contractor for budgetary reasons. With no overhead, a "freelancer" typically charges less per hour than a firm. But, at closer look, the two sources could very well cost the same. With a design firm, the hours you pay for are roughly equivalent to those of a contractor's. The contractor's hourly rate may be lower than a firm's, but it all averages out when you take into account that where the contractor charges the same rate for engineering as he does for testing, a firm charges at a lower rate for non-engineering tasks.

2. Is your project simple or complex?

If you have an in-house product development team but have a specific task that needs to be executed and you want to go to an independent contractor, find one who specializes in that discipline. Contractors are usually very good in a particular area, whether it's mechanical, software or hardware engineering. When you need expertise in more than one discipline, your best choice is a design firm, where your team includes experts in all areas.

3. When time is a concern, think about the big picture.

If time is money, you don't want to lose any. One distinct advantage a firm offers over an independent is that different aspects of product development can be managed simultaneously. The mechanical design can be developed at the same time as the electronic design, while someone else designs the software. The team can consult with each other, which saves time and helps avoid costly 'do-overs'. Also, while a job may be sidelined with a consultant, a firm has some degree of redundancy so that, if one expert is out, another can take on the task.

3. Who is the project manager?

If you are the project manager on a design job, then working with one or various contractors can be a good option. On the other hand, you may just want to hand over that headache to someone else. If a contractor becomes the project manager he will be communicating with a team of contractors working independently. With a design firm, team members are in close communication so things may run smoother.

4. When it's time to manufacture you may be able to look to your design firm.

A recent development is for firms to offer in-house manufacturing capabilities. "This is something ARMA has been doing for many years," says McKay. Ongoing consultation with in-house manufacturing assures manufacturability of the product and decreases time-to-market. The further into the design process you have to make a change, the more expensive it is. A note of caution: A design firm that claims to have manufacturing capabilities may, in fact, sub out, so do your homework. If you've used an independent consultant and need to outsource your manufacturing, choose carefully and try to go with one that's been referred. Keep in mind that international outsourcing usually only takes large orders, so for smaller or prototype runs, you'll need to stay closer to home.