Measuring profits, R&D grows vital

By Brian Gormley
Staff Writer

Most manufacturers track their research and development efforts in some way. But how many of them actually know how these efforts contribute to their profits?

Not many, according to a new study released by a Cambridge, Mass., consulting firm, the Goldense Group Inc. Most companies surveyed recently by the group have only a rudimentary idea of how to measure their product development efforts, according to the firm.

The survey covered 190 companies that produce goods in the medical, electronics, automotive, and industrial products field. Most were national firms, and their sizes ranged from $25 million to $5 billion in annual sales revenue. Researchers were seeking to find out what metrics these companies use to measure their product development efforts, and how they relate to profits.

They found that companies -- and their industries as a whole -- use few common metrics to measure performance. The survey also revealed a "misplaced responsibility" for product development within companies' corporate structures and a lack of overall sophistication in the measurement tools that many companies use.

Indeed, "There is little tie between overall business strategy and what gets measured," the study found.

While manufacturers constantly struggle to reduce their cycle times, the concept of using metrics to measure research and development as it relates to corporate profits is in a fairly immature stage, said Jon Gilmore, manager of research and education products for the Goldense Group.

Metrics themselves are nothing new, he said, and some of the more common ones -- such as "R&D spending as a percentage of sales," "new products completed and released," "patents filed and awarded," -- have been around for decades. But these are essentially reactive metrics, Gilmore said, as opposed to metrics that are active and help a company improve its performance.

"They're metrics in which people are reporting to other people, and they're not metrics in which we're measuring R&D performance," Gilmore said. "Very few companies are dealing with predictive metrics, going out and establishing a better baseline for measuring value next year's product.

The consequence of this is that: "We (the companies) have a limited ability for internalized learning," he said. "We're just not getting good learning back into the organization."

But this kind of learning will have to find its way back to companies, or else firms will lose their ability to compete internationally, Gilmore said. One of the big differences between the business world of today and that of 40 or 50 years ago, he said, is that products do not last long in the marketplace.

Therefore, it is essential that companies find ways to measure their products' profitability and the extent to which their research and development efforts contribute to profits.

More and more companies will develop these kinds of metrics in the next 10 to 25 years, Gilmore said. "They're not going to be able to afford not to and remain competitive," he said.

While companies have worked feverishly to reduce their cycle times and get their products to market sooner, companies are still struggling to find ways to measure the magnitude that reducing cycle time has on their business, said Alex Cooper, president of the Management Roundtable, a Lexington, Mass., firm that joined the Goldense Group in conducting the survey.

In some cases, Cooper said, it is better for a company to have the right product to market late than the wrong product to market early. Eventually, however, industries will begin to establish metrics to measure these things that are specific to them, he said.

"I don't think there will ever be a universal way (to measure R&D)," Cooper said.

"I think the metrics that are relevant for the pharmaceutical industry would be very different (from that of the) automotive or financial industry."

While metrics eventually will become industry specific, they must also be tailored to individual organizations, Cooper said.

While the metrics used for measuring performance may be different for the program manager than they are for a team leader, each of the metrics should reinforce the other.

With the pace at which business is changing today, however, many companies are struggling just to keep up, Cooper said.

"The dynamic for product developers right now is really fascinating, the energy of companies is how to stay relevant instead of how to get better," he said.

Steve Fielding, president of Fielding Manufacturing in Cranston and Providence, which is in the plastic injection and molding field, said companies have to make their decisions about how to structure their research and development efforts around what they do best. This way, they avoid spending money on product ideas that do not match their niche in the marketplace.

There's a real danger in getting "pulled in different directions," Fielding said. "You can't go wrong if you stick to your knitting."