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The real thing: New metric reveals the true impact of ideas on the bottom line

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“Half my advertising dollars are wasted—but I don’t know which half.”

That statement has been attributed variously to Henry Ford and department store tycoon J.C. Penney. No matter its origin, the sentiment could be applied to the research & development (R&D) budgets of modern-day manufacturers.

Slowly but surely, attention is turning to rectifying that. From diverse directions, the spotlight is shining on metrics by which new product development effort can be measured.

For instance, Needham, Mass.-based R&D consulting firm [Goldense Group](#) has been tracking R&D performance in a biennial survey for the past decade. And after years of seeing the use of metrics relating to product development remain at roughly constant levels, an uptick is now detectable, says company president Bradford L. Goldense.

“R&D managers are more focused on business results,” he says. “More companies are using metrics, and using and defining them in the same way. What’s more, they’re using ‘true’ performance metrics, rather than simple counts of projects in the pipeline, or people involved.”

Goldense says the heightened interest is evident in the steadily rising number attendees to the conference his firm hosts around the topic. The next *Product Development Metrics* Summit is scheduled for April 28-30 in Boston. This is the ninth such event over the past five years, and, says Goldense, “We’re seeing a big increase in people showing up and asking: How do I measure R&D productivity?”

The question has various answers. The most commonly used metric isn’t a traditional measure of productivity at all, says Goldense, but instead examines the impact of new product development on sales.

“ ‘Current year sales due to product released in the previous N years’ is a metric that’s tracked by just over half the companies that measure R&D effectiveness,” explains Goldense. N, he stresses, shouldn’t be some absolute number, but should vary by industry and market, and is the length of time that a product can be regarded as being new—and thus earning higher profits—and not mature, plateauing, or at end-of-life.

Among traditional measures, he notes, more companies are now calculating productivity measures such as ‘products released per engineer or developer’ and ‘revenues and/or profits per engineer or developer.’

Goldense’s own preference, though, is for a measure known as RoI—where “I” stands not for *investment*, but *innovation*. The similarity to ROI—or return-on-investment—is unfortunate, he adds, because it leads to the assumption the measure applies at an individual product or product level, whereas return on innovation is more properly a portfolio-based metric, tracking the impact of R&D on profitability.

Essentially, says Goldense, RoI measures the profit attributable to new products as a ratio of the R&D investment necessary to create those products and bring them to market. While this concept is fairly straightforward, most companies have trouble gathering the data to calculate RoI.

“There’s a lot of R&D expenditure that has nothing to do with delivering new products,” he notes—administration, training, and IT overhead, for example. The result is a dilemma: Businesses making efforts to precisely determine which R&D expenditures were relevant—and which weren’t—to the development of a new product may simply encourage people to ‘game’ the system, moving costs between budget headings.

Microsoft is one vendor seeking to help manufacturers resolve that problem. It’s doing so through an Innovation Process Management Solution built on top of the Microsoft Office SharePoint Server 2007 and [Microsoft Enterprise Project Management](#) solutions. The goal is to show companies how to use this new platform to move through six stages of innovation process management—from idea capture through to product approval.

“We’re working on the back end of the innovation process as well, creating metrics and capturing the financial aspects of R&D projects,” says Don Richardson, global director of innovation and PLM industry strategy, Microsoft. Typical metrics include how many projects get scrapped part-way through, how many projects get changed or redirected, as well as basic measures of designer productivity.

But metrics focused purely on product life-cycle management (PLM)—as opposed to R&D, or a broadly defined “innovation” process—will be a tougher nut to crack, Richardson warns: “Cost data is kept in an ERP system, and design-related data resides within a PLM system—and it’s very difficult to put the two together.”

Yet customer interest in doing so is high, it seems. “Many of these answers around metrics are elusive, and a lot of customers are struggling with them,” says Richardson. Several are working collaboratively with Microsoft as it refines its approach, he adds.

As noted by Charles Johnson, Microsoft’s worldwide general manager for manufacturing, “We’re pleasantly surprised just how many customers are working with us—particularly in



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these uncertain economic conditions—as we collaborate to develop a solution. It’s clear that they see the [return on investment associated with measuring the return on innovation] as being significant.”

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