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* 3M, other companies seek to transform R&D *

by

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Economic Development Reporter

“Concurrent innovation” doesn’t sound very exciting. But the concept turns out to be a big deal at large U.S. companies seeking to retool their research and development efforts post-recession.

Consider Maplewood-based 3M, which on Tuesday hosted executives from companies including Medtronic, Ecolab, ATK and Ingersoll-Rand at the 10th annual Society of Concurrent Product Development Conference.

Concurrent innovation loosely means carefully setting up processes around research and development so it actually results in products that customers will want, products that generate revenue and profits.

For 3M, such work in recent years has included a process in which the manufacturer solicits more ideas from the companies it supplies, 3M executive John Horn told the gathering. Horn, vice president of R&D at 3M’s industrial and transportation business, calls it “customer inspired innovation.”

He tried out the concept himself in the automotive manufacturing industry in 2007, and then assembled a team of seven executives who continued the practice in other areas including energy and national defense.

Horn’s team spends most of its time visiting with companies 3M supplies, and then networking with experts inside 3M to come up new products – not only things the companies expressly said they need but also things they never knew they needed but do.

Horn credits the efforts with helping 3M to turn around its automotive manufacturing supplies division post-recession.

3M developed products automakers needed, such as materials to improve acoustics around cars. In the process, 3M branched beyond the molding and film-based products it traditionally provided to automotive companies. 3M is now seeing revenue in the automotive business growing at double-digit percentages annually, Horn said.

“The leaders of these companies don’t wake up thinking tape and sandpaper. That’s not on their mind. We want to find out what’s on their minds,” Horn said.

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At the same time, 3M's technical experts who design products are interacting much more with customers. "There were people at 3M who had never seen a customer, and that is wrong," Horn said.

3M's annual report for the fiscal year ended Dec. 31 also suggests a return to innovation as a top goal. The report mentions "investing significantly to improve long-term growth," including research, development and related expenses of \$1.4 billion that helped to drive innovation and new product sales.

The efforts already appear to be paying off. 3M last year set a new corporate record with \$5.63 per share in earnings on \$26.7 billion in sales.

Work to overhaul research and development at companies like 3M is the best bet for the United States to remain an economic power, said Frank Hull, co-director of the nonprofit Strategy Research Institute. "If we don't start making things in this country, I don't think we're going to have a country," Hull said.

Bradford Goldense, head of the Needham, Mass.-based Goldense Group, liked how 3M is getting more product ideas from customers, but also cautioned that the company needs to protect intellectual property in the process. Goldense sees a time in the future when such intellectual property will be traded on open markets.

Perhaps no industry is more conscious about intellectual property than the medical device industry. Intellectual property issues, along with regulatory hurdles, make it much harder for a company such as Fridley-based Medtronic to gather in ideas from abroad, said Mike Hess, vice president of innovation excellence at the company.

Medtronic, though, is trying. Part of it involves investing in companies with good ideas. Medtronic increased its outside venture capital investing from \$180 million in fiscal year 2007 to \$320 million in fiscal year 2010.

Medtronic, though, has also been utilizing the website InnoCentive, which allows companies to post cash rewards for problems solved. The first time Medtronic tried out InnoCentive, an internal engineer quickly posted a solution to the problem to show the website wasn't needed, Hess said.

Out of about 55 potential solutions that came in, about 30 were just like the Medtronic engineer's. There were about a handful, however, that were truly different and worth exploring.

"In trying to prove we didn't need to do open innovation, he proved we needed to do open innovation," Hess said.