

Innovation is getting SMARTER



Companies need that the return on R&D investment increases, and rapidly. The low rate of new product success together with the pressing market situation is forcing food companies, both large and small, to drastically change the way in which they innovate. Senior executives from several leading European food companies came together recently at ENG's 3rd European NPD Summit in Amsterdam, to share their experiences and know-how on this topic. Highlights are given in this independent review.

* Independent review by: Dr. M. C. Kühn

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The pressure for change

"We are not good at open innovation, but we are learning fast" said Dr. Graham Cross, Collaborative Innovation Director at Unilever Foods in his presentation at ENG's 3rd European NPD Summit[§]. This statement reflects the pressure encountered not only by the big branded-product companies, but also by smaller ones; not only by food manufacturers, but also by ingredient suppliers. This pressure to innovate differently is a consequence of several additive factors: the very tough and competitive food market situation, the steady increase in private label products, the low success rate of the present innovation strategies and the tightening of R&D resources. And this trend will only continue. Thus companies must continue to search for new, better innovation strategies to succeed ... and to survive.

Innovation is the only viable growth strategy for European branded companies: "We are too expensive to compete on price,

thus we must innovate" is common knowledge in industrial Europe. New, differentiated products are the only way to keep ahead of cheaper competitors. But investing in innovation has not delivered the expected success rate. It is known¹ that it is not only a matter of investment: More R&D investment does not necessarily improve company results ('performance disconnect'). Thus innovation must get smarter. In recent years, leading European food companies have analyzed, evolved and improved their innovation strategies, models and tools. These vary from company to company, as also vary their value-in-use. The NPD Summit 2007 served as a platform for senior innovation executives from leading companies to share and discuss their experiences and know-how on this topic (Fig. 1). I have the challenging task to write the press review of this summit. As a trainer and lecturer on food innovation and R&D management, I do it with utmost pleasure because of the high quality of this meeting. Space allows

me to highlight only selected topics, carefully chosen to illustrate main developments.

Dramatic changes

In the last 20 years or so, the 'world has become flat'. Hierarchies have disappeared and globalization has been enabled. Just think of the electronic revolution (e.g., Internet, Windows, work flow software), outsourcing, off-shoring, supply-chaining and insourcing. Companies must take these changes into account to produce more profitable new products and to maximize the value from NPD resources, said Nigel Cordery of Sopheon, while citing Thomas Friedman².

The food industry has had to respond and adapt itself. Two of our greatest challenges at present are related to the rising of obesity and the *new consumer*. Obesity has increased the focus on healthier foods (functional foods). An excellent example of how drastic the change has been is McCain Foods. A world leader in the potato snacks industry, McCain has suffered from the blame put on the fried snacks industry as the culprit of the 'obesity epidemic'. "The leader has to show good stewardship for the whole category" said Mr. Mark McCauley, VP Business Development at McCain Foods. Convinced of the goodness of their main raw material, potato, McCain launched a massive campaign "It's all good", which involved extensive product reformulation, new products, new nutrition FOP labeling and a huge communication campaign. It developed a set of criteria that new products must fulfill, and combines investigation, invention and intention to find the needed technologies. The excellent sales results are the measure of the success of their campaign.

But "innovation extends far beyond product" continued Mr. McCauley. The *new consumer* with his worries for the environment and sustainability is motivating a new era of corporate responsibility, where the focus is changing from the *Organization to the People, Planet and Profit*. Companies keep carefully evaluating and preempting the

consequences of external trends, such as bioenergy, fair-trade and organic food. The increase in raw material costs due to the use of food materials for bioenergy is already an important issue.

More on the Functional Foods front

In many cases, ingredient suppliers lead functional foods innovation. Companies welcome the new EU Nutrition and Health Regulation (1924/2006). It "will progressively clear the market from abusive claims" said Dr. Hervé Nordmann, Director Scientific and Regulatory Affairs at Ajinomoto. Now that the legislation is approved, the focus in Europe is changing towards the need for long-term scientific evidence of the health benefit and the real risk-benefit assessment.

Ingredient companies are attending the need for developing products of improved nutrient profiles. Gelita has developed a protein-based fat-replacer, which can be used in chocolate bars without a sensory panel noticing differences. "The key for the acceptance of replacing ingredients is that they should use the same food production equipment and costs, and they should provide a high value added to the user (food manufacturer); and our chocolate fat-replacer achieves this" said Bernhard Münzing, Manager of New Business Projects at Gelita Europe.

An interesting knowledge initiative is the *International Council on Amino Acid Science (ICAAS)*, formed by leading amino acid companies (mainly Japanese; members are both users and suppliers) in view of the long ongoing problematic to definitively establish adequate amino acid intake levels internationally.

The Innovation Process: Tools, Models and Strategy

Does innovation mean introducing lots of products? Do people and companies need all these new products? Or would less products, of bigger sales volume and higher profitability not be a better scenario? Development and launch cost so much that there is only one chance to

Figure 1.



Source: European Networking Group (ENG)

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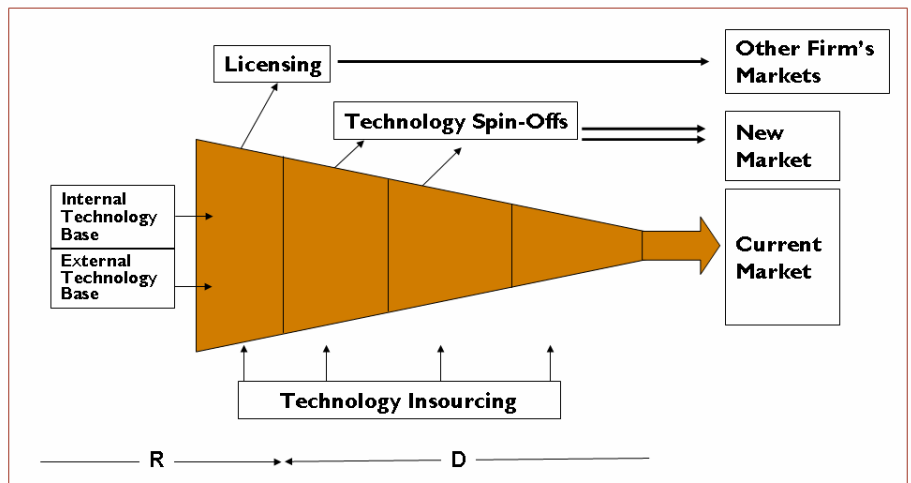
get it right. To innovate better with limited resources, food manufacturers are narrowing the mouth of the innovation funnel (changing the shape of the funnel). And they are also opening themselves, and learning how to use external contributors more and better; This is changing the nature of the funnel (Fig. 2).

“More launches do not mean more sales” said Philippe Taste, Marketing and R&D Director at Fromageries Riches Monts “better one but of higher sales volume”. Other companies have come to the same conclusion. At Barilla, the innovation funnel is becoming a pipe, where ideas are very critically screened so that fewer pass to the concept stage but these go through to development and launch. “We can’t afford to start 10 projects and finish only 5” said Dr. Renzo Rizzo, Pasta Meal R&D Global Director. In this way companies can focus on those chosen product ideas, and pull all their skills and know-how to make them a success. The risk of this approach is that sometimes there will be no market launch, but “this is better than the way it was before, when several products were launched none of which sold well” said another R&D manager.

As the mouth of the funnel gets narrower, the choice of the right idea (idea selection) becomes more critical. This was a key question throughout the summit. Criteria differ and some companies have an idea selection program in place, while others use a high degree of ‘gut feeling’ (“from our 40 years of market experience”). As this trend continues, companies will have to focus onto one of the most difficult tasks in innovation: develop successful tools to select future market winners at the ideation stage.

“Changing the way of working brings about a natural resistance in people” said Birgit Schleifenbaum, Director Global Innovation at Firmenich, who has recently been involved in implementing the stage-gate® innovation process. “A good process” she said “must help people be more effective and efficient in their work; must make work easier; and must help people connect better”.

Figure 2. The Open Innovation Funnel



Source: Henry Chesbrough (2006)

Jeff Stagg, Principal Scientist at Kraft Foods presented an impressive set of statistical tools used to help ensure product success in regional launches. Product development tools are modeled on 2 aspects: Product Power and Brand Power; and include: *Principal Components, Mutual Orthogonal Latin Squares, Cluster Analysis, Landscape Mapping, Design of Experiments*. Such tools serve to optimize the product portfolio, help decide on the coverage of the sensory space, design and evaluate consumer tests, establish market gaps, assist in formulation of products, analyze consumer test outcomes and identify best products. To maintain product quality and costs, other statistical tools such as *Six Sigma* and *Quality Tracking* are used.

Innovation models have evolved. ‘Innovation Acceleration Teams’ have been created. Nestlé has changed its innovation model, and adopted one that allows it product roll-out without re-development. This allows high market synergies and a high speed to market.

Success involves a mixture of many factors. In his excellent presentation, Dr. Renzo Rizzo, Pasta Meal R&D Global Director at Barilla shared his ‘Five Lessons’, developed in his many years as R&D manager for better and more focused spending: 1. Focus (company strategy which dictates the innovation strategy, with its short-term and long-term aspects); 2. Discipline (doing the

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needed due diligence at the right time increases the chance of R&D success and helps narrow the stage-gate funnel into a straight pipe); 3. Tough people, which are visionary and practical, impatient to achieve, positive and optimistic; 4. A good and collaborative team, sharing company values and able to make smart use of available technologies; 5. Leadership, to create the needed sense of urgency that makes successful innovation a reality.

Knowledge is on the move

A shift in the sources of knowledge is opening innovation in companies which were considered 'ivory towers' in the past. When Unilever discovered that in one of its core areas only 5% of patents launched were filed by big players, it realized that "we were missing part of the action", and decided to "get connected".

Nowadays knowledge is traded and exchanged; patents are auctioned; Knowing how to use external sources increases R&D results at reduced cost. So the pressure to learn to use 'change catalysts' –such as knowledge networks, consultants and brokers- is high. "There is lots of low hanging fruit as long as we want to get connected" said Dr. Graham Cross of Unilever. This is changing the nature of the classical innovation funnel, as shown in figure 2.

European companies are also having to expand their geographical R&D terrain. DSM Nutritional Products has started an R&D facility in China, not only because of low costs but also because of the large market opportunity for health ingredients, to better face its strong Chinese competitors and to take advantage of the government plans to become an R&D powerhouse (R&D spending growing at >20%). Dr. Reinhard

Karge, Director Process Research indicated that to succeed one has to master important issues such as the differences in skills, education, management and culture; price negotiations, IP and know-how leakage.

But also in Europe are new research initiatives appearing. The new 'Top Institute Food & Nutrition' will be inaugurated in June 2007 in the Netherlands. This is a unique government-academia-industry partnership that aims to assist in the development of new food products through 'generating vision on scientific breakthroughs'.

REFERENCES

¹ B. Jaruzelski, K. Dehoff and R. Bordin. "The Booz Allen Hamilton Global Innovation 1000: Money isn't Everything". *Strategy + Business Magazine*, issue 41, 2005.

² T. Friedman. "The World is Flat". 2005. Published by Farrar, Straus and Giroux. ISBN: 0374292884

§ The 3rd European NPD Summit "Driving New Product Development in the Food & Beverage Industry" was organized by the European Networking Group (ENG) in Amsterdam on April 18-19, 2007. The next summit will take place in the Spring 2008. This coming autumn ENG organizes a "Food Safety 2007" event. For information: www.eng-nl.com

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