



# Innovation and R&D

It is the lifeblood of your organization?

by Paula Manoski and Scott Gantwerker

"We need to make our R&D group more innovative" is a statement we often hear coming from business leaders, the plants, and within R&D management. "What can we do to bring about this change?"

Like asking how to make our children better students or our spouses more attentive, the answer is complex, requiring more than a one-time fix. Innovation is a characteristic of an entire business, an attitude and a way of life. Innovation is the lifeblood of a healthy organization. Business vitality and success flow from a steady stream of fresh ideas and opportunities that, when executed well, result in increased sales, improved profitability and sustainable competitive advantage.

However, many organizations are less than successful due to blockages in one of the major arteries of innovation, the idea creation front end or the idea execution tail end of the process. Let's look at some remedies for achieving vigorous innovation health and maintaining innovation fitness over the long term.

## **Innovation defined**

Innovation is the creation, development and implementation of new ideas that generate value by providing a business opportunity or solution to a business problem. It can take place at any phase of the new product process: ideation, product development, commercialization, market introduction, etc. In the R&D context, this

most often means generation, processing and execution of ideas that result in new products, processes and packages or improvements to the quality or cost of company offerings. Innovation may be incremental (continuous improvements), substantial (new products) or transformational (changing or creating markets or industries). In fact, most innovations are incremental, because substantial and transformational innovations often die on the vine for lack of the time, resources or vision to bring them to fruition.

In order for innovation to have value to an organization, it must be business-appropriate, and it must meet all internal and external criteria for business success. If the innovation is part of the visible product offering, it must be customer-/consumer-relevant. Ideas alone, ideas that do not meet these criteria, or ideas that are not acted upon do not meet the definition for innovation.

To maximize the chances for successful innovation, the following factors are critical:

- Strategic framework/context.
- Focus, leadership and culture.
- Technical competency and intelligence-gathering.
- Integration of business knowledge to drive toward understanding.

## **Strategy, focus, leadership and culture**

Strategy is the statement of intent that drives all actions of an organization toward the desired business result. Without getting into the semantics of vision, mission, strategy and plan, the kind of strategic statements we

are looking for are those stated in actionable terms.

Aspirational statements of strategy that don't spell out opportunity areas for focus, set boundaries or deal in specifics are not helpful. They create uncertainty and often result in innovation programs that are off-strategy and decisions that are sub-optimal.

To be fully effective, the strategic framework needs to be broadly communicated and understood. This requires consistency, clarity, cross-discipline translation and frequent repetition. A well-articulated business strategy leads to a fully aligned R&D strategy, which provides the basis for business-appropriate innovation programs.

Innovation is not something you can or should turn on and off. To make innovation a core competency in your organization, the skills and activities associated with innovation need to be practiced continuously. Doing so will also yield the benefit of creating a confident, well-informed organization possessing up-to-date skills and information in areas of technology and business that will prove highly useful in areas of R&D beyond the innovation programs.

Supportive culture and leaders are vital to creating and sustaining effective innovation programs. Leaders need to recognize that they reinforce behaviors through their words, and more importantly, their actions. Asking for or even demanding innovation does not result in innovation. Neither do organizational cultures that focus heavily on budgeting and accounting for time, keep strategic or business information from their R&D employees, or personalize criticism and dwell on errors of commission. Leaders in such cases serve as obstacles to innovation.

Far better are culture and leadership styles that encourage learning, share information broadly, protect time for thought and idea creation, see reasonable failures as a valid means of growing organizational knowledge and recognize and reward innovators. Here leaders serve as safe harbors and champions of innovation.

The culture must also be one of action. Although it is important for leadership to create a supportive environment, individuals also play a role and must believe that they can influence the world around them and transform their ideas into reality. Lacking this attitude, the R&D group will be reactive rather than proactive, and innovation will struggle.

### **Technical competency and continuous learning**

To drive successful innovation, the R&D group must pos-

sess the foundation of a solid technical background. Technical skills allow R&D to view the business situation in a manner distinct from other disciplines. The technically competent R&D group will define a problem and develop alternatives and solutions in a unique manner based on technical skills, experiences and training. Equally important to technical competency is the ability of the group to continuously build on that competency, by gathering intelligence and seeking out industry developments.

The technical competency of an R&D organization is also enhanced when the specialties within R&D such as chefs, food scientists, process engineers, package engineers and others share a deeper understanding of R&D areas outside of their own. But technical competency alone will not enable R&D to innovate in today's competitive business environment. To drive innovation, it is critical to have both knowledge and an understanding of as many aspects of the business as possible—technical and non-technical. The R&D group must develop knowledge in areas of business, supply chain and in general, the world around them.

A learning organization is critical to successful innovation. The group must look to continually expand their horizons. It is critical to not only acquire knowledge or information but also to actively process the knowledge to understand how the company can benefit from it.

### **Knowledge and understanding**

At this point, it may be important to distinguish between knowledge and understanding. Think about a product review where several samples were shown. Did you review the levels of ingredients and the process conditions, or did you review conclusions and implications for the project, with data as support? If you did the former, you were just presenting knowledge and are a long way off from an innovative environment. If you did the latter, you were processing information to understanding and are on the path to delivering innovation.

For successful innovation within R&D, the group needs to process that information to understanding, which says, I know what this means and its implications for what I do. This leap, where R&D is able to translate information from other parts of the business and integrate technical and business understanding, elevates the quality of the ideas. The greater the understanding for R&D of how a business works, the more potential the innovation has to drive performance.

Successful innovation thrives in the context of a strategic framework and a supportive environment. Innovation begins with information-/intelligence-gathering and knowledge-building activities. Active learning describes the process by which the R&D group translates this knowledge and information to understanding.

Information not carried to understanding is of little value and most certainly will not create business value. Creating understanding “tells a story” that identifies a potential benefit or opportunity, or defines a problem. Understanding leads to the generation of insights and the formation of ideas. The more diverse the knowledge and understanding base of a group or individual, the more targeted, actionable and executable the ideas will be. Innovation is delivered only when the ideas are executed and business value is created.

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**A tale of two companies: Chapter 2**

Now let’s revisit our friends at the two fictional model food and beverage companies, Schiffer-Branes Foods and Nirvana Food Processing, introduced in the October issue. You already know how the story ends: Nirvana wins and S-B—no surprise—doesn’t. But we’d like to take you through their differing scenarios from the point of view of innovation, and use them to compare and contrast the extremes of innovation practices.

**Innovation at Schiffer-Branes Foods**

The Schiffer-Branes people have a business strategy they are proud of: “to deliver above-average return to the shareholders, grow sales and profitability at a rate above the average for the category.” R&D management is pleased to work with this strategy because it leaves a wide open playing field for innovation. Since sales, capacity, cost and profitability information is regarded as highly confidential, S-B management has gone to great pains to share this information with only those having an overriding need to know. This does not include R&D.

Uncluttered by business and financial information,

and without significant input from other disciplines, R&D has assembled an eclectic portfolio of programs to achieve growth and profitability. Among other things, they are developing non-nutritive sweeteners based on genetically engineered ingredients for baby food, investigating packaging technologies for adding consumer benefits to their line of private label canned beans, and producing prototypes of carbonated cola beverages to compete against Coke and Pepsi.

Since these programs require technical competencies that S-B did not have, the rank-and-file R&D staff has found this work highly challenging, but they wonder why they have not received any particular recognition for their efforts. Occasionally, in fact, they have heard the word “doofus” bandied about in reference to senior management discussions of their R&D managers.

Although he was unable to attend R&D’s recent new product review, S-B’s president provided feedback to the vice president of R&D indicating strong support for innovation and encouraging R&D to accurately document the time spent on innovation in preparation of next year’s R&D budget. He also took time to remind the vice president of his displeasure with the recent failure of S-B’s new entry into the herbal nutraceutical cereal category with the words, “We don’t want another Rosehips Crunch!”

**Innovation at Nirvana Food Processing**

Nirvana’s strategy is similar in some ways to S-B’s. It also expects to outperform its competition. In a strategic plan developed with R&D’s participation, Nirvana stated its desire to “introduce major (less than \$50 million sales) new entries in good-for-you grain-based snacks and indulgent frozen desserts every two years, create significant product/package news every year for key beverage and snacks brands, and control supply chain costs below the rate of inflation.” To facilitate innovation and project management, all disciplines have been grounded in the consumer, technical, business/financial and supply chain information related to their work; they are well aware of its confidential nature.

Working with other disciplines, R&D has integrated their knowledge of technical possibilities, customer/consumer needs and business success factors to generate an array of ideas. Although the ideas have been good, over time the quality of the ideas seems to get even better. R&D’s project portfolio is stocked with a balanced array of high-potential technology development, new product/process/package development, proposition improvement and supply chain support projects at various stages of implementation.

Each project, from initiation through implementation, provides key learning experiences that improve the quality of the ideas to come.

At Nirvana, R&D staffers never need to wonder if their work is appreciated. Scientists, engineers and managers are often teased for being the stars of the Nirvana organization. After a recent update on innovation and new product development, Nirvana's president took the time to speak with the R&D organization to express her appreciation and belief in them. She lavished praise on R&D staff members for playing instrumental roles in creating and bringing opportunities to fruition at Nirvana. Strategic plans have always been delivered, and Nirvana's investment in R&D has been paid back many times over.

### Summary

What R&D delivers in terms of innovation is key to the success of the business. That's the primary reason companies invest in R&D. Company business and R&D leaders universally recognize this, yet very few organizations achieve successful innovation. Innovation within an organization should be a way of life, the manner in which problems, issues and opportu-

nities are solved or addressed. Critical to successful innovation is a future-oriented organization: visionary leaders receptive to and inviting of this positive energy, combined with skilled individuals and teams believing they can influence the future.

When an R&D organization gathers and integrates technical and business information (active learning) to achieve the broad understanding that creates insights and business building ideas, they supply innovation lifeblood to their company. When business leaders provide the strategic clarity and supporting culture for R&D to function within, the arteries for innovation are cleared for the lifeblood to flow. The result is vigorous innovation health and long-term innovation fitness. **FP**



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