

INNOVATIONS, FORMULATIONS, OPERATIONS & MORE

Food Processing

PutmanMedia

foodprocessing.com

A Breath of fresh air

Oral care brands mint new product lines

Organize R&D for
business results

Evaluate
e-business
ROI

R&D organizational design & development:

An enabler of organizational clarity, or a prime source of confusion.

In a perfect world of skilled, motivated, empowered, multifaceted professionals and businesses with highly supportive cultures, organizational design is a low-value-added activity. In the world we live in, however, people and businesses are limited and imperfect. Appropriate organizational design is an important enabler of staff and business processes needed for efficient operation. It will also provide clarity of purpose and refine channels of communication, accountabilities, roles and decision-making processes.

While there is no single organization design that is best for every situation, there are important factors that should be considered in selecting, designing and developing your R&D organization to maximize R&D's contributions to business success.

Design and development

Organizational design and development is the process by which an organization and its individuals change and evolve to become more effective. What kind of R&D group should you be to support and lead your company into the future? How will you best prepare your people to meet the challenges of the evolving roles that R&D and individuals will play in the future?

R&D leaders need to constantly look at their organizational structure from present and future-oriented points of view to identify opportunities for improved effectiveness and business results. Will your company be raising the requirement for innovation, thereby creating the need for a ramped-up new product effort in conjunction with sales and marketing? Has it launched a large number of new products requiring stewardship support in alliance with quality assurance? Is it moving into a major cost reduction mode requiring technical leadership and support to identify and qualify opportunities in collaboration with supply chain?

Start with a blank sheet of paper and look at the R&D work ahead of you. Then consider the following eight points as you put together an organizational design and development program.

Linkage to strategy

While many organizations look only to organizational design and development when things are not going well, it is important to look at it as part of an ongoing process. The most important first step to meaningful R&D design and development is to clearly understand where and how the business intends to grow and win in

the marketplace. R&D organizational design and development is a logical outcome of an ongoing business and R&D strategic process and begins with identification of current business strategies, current competencies, work processes, alignment to business counterparts and overall performance. Design and development options are then viewed in the context of gaps identified between the current and desired future state.

R&D budget

In enlightened organizations, R&D budgets are determined by expectations placed on R&D to deliver elements of the strategic plan. Budgets are committed for the long term and adjusted on an annual basis. In these situations, organizational design and development and R&D budgets are created together and are likely to be well-aligned. In other organizations, R&D budgets are set annually, reflecting the company's desired investment in R&D and/or desired change in spending from the previous year. Here, practical limits are placed on the degree of change an R&D organization can achieve through staff increases, facility improvements and outside spending. This creates a greater but still achievable challenge, requiring focus on design and development options that do not require increased budgets. These include staff adjustments, changes to work processes, building cross-functional relationships, internal training and development, etc.

Focused change

Organizational design can be a key enabler of change for an R&D organization. Once an area is identified as weak, the focused redesign of the organization will most certainly result in positive change. The design of an R&D group can help bring focus to an area of emphasis that may be underdeveloped. In organizations where balance has been difficult to sustain with respect to near-term and long-term development programs, separation and dedication of resources for technology development and product development should be strongly considered. Similarly, where cost and quality maintenance/stewardship programs have been neglected in favor of new product or technology programs, the dedication of a group to stewardship will bring improved results and focus.

Reporting and working relationships

One of the key points traditionally emphasized in organizational design and development is the organization's

structure. Although this is important and may have great impact, it is generally more helpful to consider working relationships. The success of an R&D organization can in large part be gauged by how effectively it collaborates with business partners in other functions. Innovation, new products and cost improvements, among other programs, require that ideas are generated, developed and commercialized effectively. This requires the ability to link up with business partners (most often sales, marketing and operations/supply chain) to shepherd projects through their life cycles. Working relationships are strengthened and supported with clear definitions of roles and responsibilities in work processes to a much greater extent than the limited relationships identified on an organization chart. Strong links are fostered by knowledge, communication, shared goals and trust.

Core technical competencies/competitive advantage

All R&D people are not created equal. Educational backgrounds will vary considerably from food science, culinary and process engineering to package engineering, microbiology, sensory and analytical, etc. R&D areas that provide a source of competitive advantage should be identified and internally developed. Outsourcing should be considered as an effective means of delivering R&D results for all others.

Specialized support functions within R&D (sensory, microbiology, analytical, etc.) are the groups that are often considered for outsourcing. When maintained as in-house groups, their contributions need to be such that they are providing leadership and creating competitive advantage relating to unique or proprietary knowledge, understanding of the business and products, quality and consistency of work, cost, priority and timeliness.

While focusing on how to improve and change an R&D group, it is equally important to recognize from where your success to date has come. There are many silent heroes within R&D organizations who possess precious knowledge and understanding of technologies, products and processes. R&D leadership must identify and place appropriate value on those technical skills. In many cases these core competencies may reside in a few key people. Careful consideration should be given and plans developed to both continue development and perpetuate core competencies for the organization.

Staffing options

Should you construct your organization primarily from deep specialists, broad generalists or a mixture of the two? Technical strength, business savvy or a blend? Are you better off to staff with experienced professionals or fresh graduates; homegrown or acquired talent?

The answer lies in balance. The most effective R&D organizations create a balance between the necessary number of deep specialists and the remainder of broad generalists. This provides for development and maintenance of valued competencies and offers flexibility to respond to changes in project requirements.

To better understand the context for R&D work and strengthen the links across business functions, effective organizations place value on developing business and professional skills along with technical skills through coaching, training and work experiences. They strive for multiple aspects of diversity across their staffs, including cultural diversity, educational diversity and diversity of experience level. The most successful organizations are able to continually bring in new talent to learn from the experienced members of the R&D staff and to challenge the beliefs and paradigms of the established organization. This results in a culture of healthy criticality and heightened innovation.

Skill development

Coaching of R&D staff members is a primary role of R&D managers and senior technical people. Coaching should include "hard" and "soft" skills: technical, communication, business linking, project planning, business understanding, etc. In many organizations, this coaching role is forced into the background by the pressures of the day. In other organizations, contributions that senior technical staff makes to coaching and development are often overlooked or undervalued. Coaching and sharing can benefit both the coach and the junior employee. It capitalizes on diversity of situations through the sharing of thought processes, planning techniques, problem-solving approaches and ideas in general. Coaching needs to be actively promoted and supported by organization structure.

Training is an important part of organizational development, including technical, business and professional training. Teaching basic general management skills helps provide individuals with a better picture of how R&D relates to the larger business entity, and helps guide the plans and decisions made relative to R&D programs in the future. It also promotes greater cross-functional understanding and enhances communication.

Experiential development is an often-overlooked but critical aspect of development. This includes the movement of individuals among R&D roles and across functional boundaries. For an R&D professional, this may include assignments in marketing, manufacturing, quality assurance, sales, etc. These developmental assignments build a firsthand understanding of the roles, needs and challenges faced by other key segments of the company. They also allow individuals to view R&D as an R&D client would, building valuable perspective and healthy criticality that can pay great dividends should the individual fill a future leadership role.

Succession planning

Do you or other functions within the company have the talented individuals with the potential to fill the key roles in the future R&D organization? In the time frame needed? Identifying and developing the potential within individual R&D members through coaching, training and development assignments is crucial to the long-term sustainability of an effective R&D organization.

A tale of two companies-Chapter 4

Let's revisit our fictional polar opposite food and beverage companies, Schiffer-Branes Foods and Nirvana Food Processing. From organizational design and development points of view, the paths will be quite different, exemplifying best and worst practices in this important area of R&D management. By following best practices, Nirvana will build greater organizational clarity, leading to R&D effectiveness and competitive advantage. By ignoring these practices, Schiffer-Branes will suffer organizational confusion, resulting in R&D ineffectiveness and erosion of market position.

Organizational design and development at Schiffer-Branes Foods

Despite changes in business direction and fortunes, Dr. Ernest Maladroit, S-B's vice president of R&D, has steadfastly maintained the same organization for many years. Maladroit and his staff are wary of change: He points to a time in 1985 when his boss tried a change that was disastrous and for morale, and made the staff uncomfortable. Although the staff complains that relations with the marketing and operations groups are difficult, there is no initiative to improve the situation.

The organization is built around technical specialties, beverage technology, cereal technology, snack technology, etc., and staffed with the best scientists in their fields. Employee development includes technical conferences, short courses and trade shows. S-B's scientists are clearly industry experts, but this does not create a competitive advantage. S-B is slower to the market than its competitors, and Maladroit has difficulty staffing projects in new business areas.

Dissatisfaction is brewing within the company over the amount of money spent on R&D and the return. With project timetables moving fast and the need to be right the first time in the marketplace, there is a growing realization that the R&D department is not delivering.

Organization design and development at Nirvana Food Processing

At Nirvana, the R&D organization is considerably more fluid and adaptable. Changes occur on a regular basis to better align R&D for the future. These changes provide opportunities for the R&D staff to learn and grow. No one in R&D bats an eye at changes since they understand the underlying thinking and seem to thrive on change.

R&D vice president Maxwell Albright has built an R&D organization around a handful of specialists in key snack and beverage areas and a larger number of cross-trained generalists in multiple areas. He also uses outside R&D resources as needed. Albright believes in cross-functional development experiences for his R&D employees; three members of his staff are on assignments in marketing, QA and sales. He feels that when employees return to R&D, they will be in a position to perform at a higher level and help coach others in R&D

as well. These cross-functional assignments, coupled with training and coaching, have broadened the staff's perspective and enhanced interactions across the business. Although project teams face difficult challenges, there is mutual respect among the groups, and they share many experiences and a common understanding of the key business issues.

A new snack technology will be introduced this year that breaks the "rules" in Nirvana's competitive arena. These products came out of the technology group formed three years ago to focus on longer-term development projects. The increased investment in R&D is about to pay off, big time.

Effective organizations place value on developing business and professional skills along with technical skills through coaching, training and work experiences

Summary

The need for R&D organizational redesign or development is inevitable given the changing business environment. As an outcome of the strategic planning process, organizational design and development should be regularly reviewed to maintain the best fit to business needs. R&D and business leadership need to develop an understanding of the current situation and desired future state. This includes identification of current business strategies, current competencies, work processes, alignment to business counterparts and overall performance. Design and development options are then viewed in the context of the gaps identified between the current and desired future state. Depending on the magnitude of the gaps and the urgency of change, design and development can range from coaching, training and development within the context of the current organizational structure to more dramatic retraining and organization restructuring. The optimum organizational solution is unique to each business situation and changes over time. The R&D group that is appropriately organized, effectively trained and deployed in accord with stated goals, is ideally positioned to deliver desired results including innovation, new product development and supply chain support. **FP**

Scott Gantwerker and Paula Manoski are former R&D executives with Quaker Oats and Pepsi-Cola and the principals of Quality R&D Partners (QRDP). They hold advanced degrees in food science, engineering and business and work with technical and business leaders in the food & beverage industry to raise the effectiveness of their R&D teams through assessment, planning, training, and hands-on coaching. They can be contacted at www.QRDP.com.