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## When working on cross-functional teams, R&D members see their work in a whole new context.

*by Scott Gantwerker & Paula Manoski, Contributing Editors*

There was a time when R&D was expected to have skills in R&D and only R&D.

As progress has been made to build cross-functional teams, the requirements for R&D to become equal business partners on those teams has raised the requisite level and type of skills. With "speed to market" and "getting it done right the first time" the calls to action for most teams, the skills necessary to make these things happen require a new, enhanced set of skills within R&D. R&D team members need to understand success criteria and requirements in the greater business context and present opportunities, issues and risks persuasively in that context to other areas of the company.

In the past, R&D managers often were judged in terms of numbers — namely the number of people they had working for them. Likewise, R&D scientists were measured by the depths of their technical knowledge. This is how so-called "functional silos" began to develop and grow. The new success model for R&D will not be on technical knowledge alone or on the amount of authority a given title confers, but on R&D's influence across a greater spectrum of functions. The cross-functional model presents R&D members with a huge opportunity to grow, develop and become more valuable to the company. Improved and expanded skills are also highly valued in the job market and, accordingly, help to ensure long-term employability.

By increasing their cross-functional knowledge and understanding, R&D members will not necessarily become experts in other fields. They will, however, develop sufficient understanding to frame specific issues in a larger context; push back or challenge when needed; and engage more freely in exchanges about particular ideas and solutions. R&D groups with greater cross-functional skills do not detract from others on their team. By fostering team dialogue, they raise the cross-functional understanding of all team members, resulting in a better performance by everyone.

### Training, coaching, experience

There are three general ways for R&D to develop cross-functional skills within an R&D organization — training, coaching and experiential learning. All are important and best used in combination.

**Training** is a formal activity in which R&D students are exposed to a range of knowledge in a classroom-like setting. However, timing is critical in order to convert knowledge to true understanding. Hence, training should be provided when it likely will be used and practiced in short order.

**Coaching** can be a substitute or supplement to formal training. It is a vehicle by which managers or

senior technical staff members to share knowledge with more junior R&D members. It is typically practiced on a one-on-one basis and in the course of everyday work. Because it is timely, it reinforces the conversion of knowledge to understanding. Coaching relationships may be formal (as in a manager/subordinate relationship) or they can be spontaneous. Unfortunately, coaching is often overlooked as a result of time and workload pressures.

**Hands-on experience** is highly effective in developing new skills. While all R&D members eventually learn new functions and tasks, they can accelerate the process by crossing functional boundaries. An R&D member, for instance, may be assigned to marketing, manufacturing, quality assurance or sales. These developmental assignments provide a first-hand understanding of the roles and requirements of other disciplines. Employees also gain a fresh perspective of R&D work, sometimes from the vantage point of the client.

## Setting Expectations

In order to develop cross-functional skills within the R&D group, expectations need to be set for skills and the level of mastery required. A team member right out of school obviously will have limited skills in many cross-functional areas. More experienced staff naturally would be expected to have a higher degree of understanding in these same areas. High- performing organizations develop a "Skills Matrix" to articulate and manage technical and cross-functional skills development.

## A telling correlation

There is a strong correlation between project success criteria and the skills required by R&D members to maximize their effectiveness. For a project to be successful, it must clear hurdles across a range of issues, namely:

- Consumer
- Financial
- Quality and supply chain
- Safety/regulatory/legal
- Sales and customer

For R&D professionals to be fully effective, they must possess cross-functional skills in the same key areas:

*Consumer:* The core mission of any food or beverage company is to develop, manufacture and market products that meet consumer needs. The ability to understand consumers and consumer communication vehicles is critical to R&D's partnership role in product development or improvement.

R&D professionals should be knowledgeable in topics once considered the sole province of marketing professionals. These include, but are not limited to, a working knowledge of product concepts, product positionings (consumer target, frame of reference, point of difference), brand equity, marketing and merchandising techniques, as well as drivers of product preference and measures of purchase behavior (i.e. volume, velocity, penetration, trial and repeat).

*Financial:* It's often said that finance is the language of business. In order to provide support and make decisions, business leaders must have product benefits, issues and risks translated into financial terms. This language must also be understood by R&D so members can fully appreciate the impact of their work and improve their contribution to the business enterprise. In order to impact business decisions, R&D must be able to speak the language of business and frame R&D information in the appropriate financial context.

Most decisions to proceed with a project or kill it are financial decisions. The purchase price and product cost, as well as the required ingredients, materials and equipment, all affect the direction, viability and profitability of the project. Armed with the knowledge of how a project can be financially successful, R&D can proactively identify and resolve related issues and move a project forward. A better grasp of financials also can help R&D determine projects or project paths that aren't financially successful and advocate options or projects that are.

Specifically, R&D professionals must be able to read and build product costing models (including ingredient and material costs; supply chain costs; advertising & merchandising costs; overheads, etc.), understand the impact of capital costs on project viability, and work with the concepts and mathematics of wholesale and retail pricing, wholesale and retail margins and profit contribution.

***Quality & supply chain:*** All products developed need to be successfully integrated into a steady-state production operation. The more an R&D team understands how plants operate — the ways they measure performance and the practical constraints they face — the more successful the integration will be. The team also needs to understand these issues as they apply to procurement/purchasing and distribution/logistics.

Quality systems are designed to translate consumer and customer desire into a product proposition that is cost-effective, reliable and reproducible. R&D must

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understand the needs of the supply chain and be skilled in developing and operating quality systems to successfully translate product design criteria to ongoing production.

Many aspects of safety, regulatory and legal considerations are a part of traditional R&D technical knowledge, e.g. topics such as microbiology, chemical and physical hazards, allergens, pesticides, nutrition, labeling, claims, patents and intellectual property, etc. These subjects are largely driven by USDA, FDA, FTC or other laws and regulations. Many of these subjects, however, carry implications, driven by company practices, preferences, policies and risk profiles.

R&D needs to understand aspects of safety, regulatory and legal considerations that are driven by company-specific policies and, when appropriate, influence internal policy change, driving greater or lesser risks based on their informed perspective. This will help ensure the delivery of a product that is safe, legal and profitable.

***Sales and customer:*** Customer needs and requirements must be met for a business proposition to be successful. Because Sales is the primary point of contact for customer organizations (wholesalers, retailers, food service organizations, etc.), it obviously possesses a great deal of knowledge about customers. For effective development of new or improved product propositions, R&D must understand the needs and requirements of customers along with the sales activities required to keep the customer satisfied. Additionally, R&D should understand the operating/supply chain practices of various customers and how they impact product and package performance.

Understanding should be built in the following areas, including ACV (a measure of store shelf presence), shelf placement & slotting, pricing & retail margins, store promotions and customer Supply Chain factors such as warehousing & storage, shelf sets, handling and restocking practices, store stock rotation and package damage experience. FP

## Summary

With many companies having moved to the cross-functional team model for development project work, it has become ever more critical for R&D members to possess cross-functional skills to become fully contributing, equal partners on their teams. By raising their level of knowledge and understanding of the full set of factors affecting the business success of their programs they enhance team dialogue, plans and decisions. As knowledgeable business partners, they help to create a high performing environment, delivering greater business results and enjoying the work a lot more.

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