

Consumer Product Research and Development – A Stepping Stone for Success

Personal and household care products manufacturers all the time create novel concepts, make use of the latest available ingredients, utilise innovative application methods, generate newer product attributes, benefits, etc., keep varying, and modifying product formulas. Do you know why?

You guessed it right. In this industry, novelty sells and to succeed, one needs to keep coming up with newer ideas, to influence people. How should we go about doing this?

Effective research and development

Consumer requirements and demands keep changing. Country regulations are becoming stricter. In these circumstances, product manufacturers have no option but to look to their research and development (R&D) personnel for recourse. The R&D team have either to improve upon the current product by modifying or sometimes even have to dream out an entirely new product line as required. The secret lies in effectively brainstorming the consumer product manufacturer's research and development teams for creativity and technical ingenuity, so that they create interesting products on a near continuous basis.

The pressure to create a superior product will only increase with the passing time. To create a successful product a company requires not only skilled R&D personnel, but also the entire working group responsible for total product development.

Market research discovers where a product needs lies. The company management responsible for new product launches then arranges to advice the

relevant development personnel, either in house or to a team of product / ingredients suppliers, to develop the product. It also prepares the company marketers to be ready to launch the product created so that the company can effectively notch up higher sales. Every department responsible for product development should be clear about the tasks assigned to them and be aware of what shared operations their colleagues are responsible, so that they successfully complete the assignment. The entire product development team should work like, a well-oiled system so that they are able to develop the best possible product within the quickest possible time. To achieve this, good communication and teamwork is crucial. The R&D group should also be creatively challenging, technically competent, well skilled, be aware of regulatory requirements and needs of the consumer. They should not only collaborate closely with ingredient suppliers, but also be in tune with the end-use manufacturers and consumers.

R&D scene today

All major product development initiatives start with the following two general hypotheses:

1. A significant proportion of consumers have a problem that we need to solve by providing a suitable unique product.
2. Make use of a newly discovered technology to meet consumer needs in a better way than is currently available.

Traditionally market researchers unearthed emerging interests of consumers and marketing orchestrated the creation at every stage of the new product development process. However, nowadays

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it is no longer isolated with marketing alone, as any department can initiate development of newer concepts. In fact, many companies expect R&D members to get proactively involved in the process so that they are able to understand and predict future consumer needs.

First of all, the company establishes the need for a product to fill the positioning gaps existing in the current consumer market. The next step is to gain complete understanding of the product concepts, its type, texture, application, cost limitations, timing etc. This is only possible when there is extensive communication between marketing and R&D personnel, wherein everyone, based on their individual expertise, give critical inputs for development and providing a reality check on product feasibility, and fine-tuning the original product design envisaged. Once we are able to achieve, a complete understanding, we form the team to create the product line, consisting of experienced formulation chemists enabling the development of the final product that will satisfy the target concept within the specified time.

Many companies employ staff chemists who have spent years learning raw materials, consumer products functions, and the manufacturing process of specific product categories. Companies that do not have their own employees use the services of industry experts employed with contract firms known for their competence and creativity. In either case, it is important to maintain a constant flow of communication between all stakeholders, to ensure that the project is on track and on time.

Product positioning

Understanding consumer needs in detail helps one determine performance characteristics required for consumer appeal. Targeting consumer need is a significant challenge and companies with the help of formulation chemists normally direct all their efforts to satisfy them, producing products with optimum performance. The most important challenge for a company is to strike a right balance in defining the target consumer. If you define the target narrowly, then optimising product performance becomes easy, even though the market size may turn out to be too small to provide sufficient sales and justify the project in the first place. If, on the other hand, you make the target broad enough, it will become very difficult to optimise the product formula. It is without doubt, very difficult for any formulator to develop a product that will equally satisfy the needs of all types of consumers.

Quality and novelty

Today, consumers want products that delight them. This puts pressure on both formulators and marketers, as they have to achieve a delightful product keeping cost under strict control. The consumer market is already crowded and so a quick entry is vital. Quality today has moved beyond mere quality class, to an intense focus on creativity in all dimensions that suppliers too have to face consumer demands in the same measure as that of a manufacturer marketer. The fragrance industry too has to be aware of consumer trends as consumer's interest in quality and novelty drives development of fragrances for use in product applications. Today, consumers want products to perform what it claims to do; otherwise, they will give it back or never buy it again. Incorrect product claims will turn consumers away from the product manufacturer, not for that specific product alone, but also for other marketed brands of the same manufacture.

Close collaborations

The biggest noticeable change that is happening now is in the relationship between a supplier and a manufacturer. Suppliers nowadays are equally concerned of the quality of the final product as much as the manufacturers themselves. Today, all stakeholders responsible for the product launch play an active role in the overall outcome. As ingredient suppliers focus more on the ultimate needs of the consumer, it becomes easier for them to meet the manufacturer's requirements.

Nowadays, raw material suppliers are upfront in cooperating with one another, becoming more responsible to involve themselves in product development programmes resulting in positive synergy, by carrying out performance testing, safety testing, consumer market research, etc., thereby helping users expedite quick product launch.

Manufacturers are now demanding suppliers do more testing and research on products promoted by them for use in the industry. Earlier, suppliers believed that end-user manufacturer is fully responsible to figure out how to use the ingredient supplied. This is no longer valid, as nowadays it is ingredient suppliers who have to determine how and where to make best use of the material. Manufacturers are rapidly developing new products and demands on suppliers to take part in the scientific and development process will only increase.

Benefits of collaborations

Joint effort is mutually helpful to both suppliers and manufacturers. The raw material supplier gains valuable consumer insight allowing them to develop technologies that accurately target consumer need. The product manufacturer, on the other hand, gains early access to new technology of the supplier, helping them in influencing the process development of ingredients closely

matching their needs. The end-use manufacturer's R&D personnel get involved in the project early, helping the raw material supplier's team know if and how a particular material can be used. In the same manner, the suppliers production team also participate and can let the manufacturer know if the raw material is something they are able to make or not.

Today, fragrance suppliers and end-use manufacturer also team up closer, driven up by faster product cycle time to market the product.

Let us also not to forget the marketing team's involvement in the entire product development process, because they are the ones who are going to be the driving force to commercialise the project and rake in profits.

The higher frequency of speciality products launches and increasing propriety chemical knowledge is also responsible for this closer relationship. Product development will however not be complete without finalising a consumer-likeable fragrance and this happens in the product base concurrently with the other development phases. Early involvement helps the fragrance R&D group to evaluate the fragrance hedonics in the product base and carry out compatible stability studies much earlier in the product cycle, enabling them to make rapid troubleshooting modifications, if necessary.

It is very clear that now R&D no longer means simply discovering a new chemical and then forgetting about it all.

Upcoming challenges

R&D team members, unlike in earlier times, have to contend with much more demands from consumers and end use manufacturers. Continual technological advances confront them with newer issues virtually every day. The advances in ingredient scientific knowledge are such that R&D has a completely new set

of challenges. This includes understanding the material, resources, availability, and the best method to incorporate and make it work all within governmental regulations.

All these pressures calls for R&D to innovate new product concept prototypes by not only delivering high hedonic cost effective fragrance materials that excel technologically, but more importantly satisfy customer expectations and fulfil needs. Most fragrance houses can deliver excellent fragrances, but what differentiates one from the other is the value added performance that it brings to the buyer to count as an advantage. This is achievable only when technical ingenuity, combines with science, innovative research, imaginative chemistry and inspiring artistic creativity. In addition, the product introduced should reach out to the global market.

All ingredients — whether colorants, preservatives, sunscreens, or fragrances — are subject to governmental regulations. To survive in this environment every developer must be well versed in international regulations that apply to their respective product category and market segments. Other issues like pressure to comply with VOC regulations and the need to adhere to aggressive timings and ever-changing style and fashion trends also exist at large.

The winning group

Every company has its recipe for creating a successful R&D team. The members should be knowledgeable, hardworking, experienced, dedicated and take pride in their contribution to the total group. They should also have good communication and co-ordination skills and be committed to create the best possible product within the constraints of time and economy. A winning team is one whose individual members are able to respond to pressures they encounter on the technical, regulatory and global

marketing environments. This is easy to say than do. In reality putting together, a performing team is not only difficult, but will also take a lot of time.

Teams often comprises of individuals with diverse backgrounds and perspectives, which may sometimes lead to conflicts in the successful completion of a project. One can avoid this if an agreeable realistic goal is set before starting the project. There should be a clear understanding and agreement among team members on their individual goals and their team's goals. It is important that communication between team members is open and free from any malice. Communication, high creativity and the ability to see beyond the surface is essential, so that plans can synergistically integrate with other diverse issues relevant for the success of the plan.

While educational background, good corporate resources are important, encouragement and the opportunity to explore are also paramount. Every one in the team should be encouraged to share their experiences. Cross-training between product categories can provide variety and brings a fresh approach to development. Company management, as a decision maker, should be like a coach supporting the staff and encouraging innovations.

However, the most important statement to declare is that any team is successful only if the management empowers its members and allows them to pursue their goals with minimum interference.

Looking into the future

Superior products are developed only when there is a total collaboration of management, marketing and R&D. The way the future looks now, it is certain that the R&D team of suppliers will have to take on the responsibility of doing more work on formulation development related claims support, design

newer delivery system, and look more toward the desired consumer benefit.

The future will only see an increase in collaboration and communication between suppliers and manufacturers who will become more transparent, and share information of their product requirements, so that suppliers will be able to deliver better ingredients at shorter time interval.

The challenge for R&D will be to understand the increasing complex science that is involved in the newer ingredients. R&D formulators will slowly grow and start performing typical marketing functions, in terms of product image building and message to consumers.

Technology will drive the future, and ingredients will be able to provide very specific benefits in targeted areas with product claims becoming increasingly sharper.

In this competitive consumer industry, product research, and development will play a crucial role in the ability of the company to compete effectively. Consumers will not be satisfied to maintain *status-quo* and so it will be necessary for R&D personnel to make efforts to improve their technical capabilities and their understanding of human behaviour on a continuous basis. R&D staff, who will to strive to acquire this understanding and stay abreast of the technological progress, will only have a distinct advantage to maintain an upper hand in developing and designing products of tomorrow.

ADDITIONAL READING

1. Is Stability Testing of Consumer Products Really Necessary? by Sitaram Dixit; Chemical Weekly; Aug 7, 2001.
2. Product Development – A Perspective by Sitaram Dixit; Chemical Weekly; Jul. 9, 2002.