

Creating Breakthrough Products from Hidden Needs

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Many managers want their organizations to develop breakthrough products and ask their R&D departments to come up with the equivalent of the iPod or iPhone. Unfortunately, the reality is very different—most organizations struggle to come up with novel product concepts, and of the thousands of new products introduced worldwide each year, product failure is more common than success. What are the reasons for product failure and what steps can companies take to avoid it? In this article we explain the key lessons from innovation research and how managers can apply them.

Avoiding Product Failure

The first lesson from research is that failure rates are high. For example, a recent survey found that of the hundreds of new food and beverage products introduced in the last few years in the US, 90% had failed (and were withdrawn from supermarkets within 3 months of launch). Food and drinks is a particularly challenging market but research in other sectors—from automobiles, to pharmaceuticals, to chemical products—shows that product failure is a (far too) common phenomenon.

Products sometimes fail because they do not function correctly. For example, although most people think of Apple as the archetypal innovative company, it has had its failures, notably the Apple Newton personal digital assistant that promised but failed to recognize handwriting. Similarly, both Unilever and Proctor & Gamble have introduced ‘power’ washing powders to remove stains but which damaged fabrics. Products must function correctly but research shows that this is a necessary but not sufficient condition for product success. Product differentiation is critical, that is products must stand out from the crowd. Truly differentiated products, which offer unique features that provide real customer benefit, have an 80% chance of success, whereas ‘me-too’ products that replicate competitors’ features have only a 20% chance. Creating breakthrough products requires a deep understanding of customers’ needs.

Making Market Research Work

Most organizations use traditional methods of market research—they carry out customer interviews, they undertake surveys and conduct focus groups. For example, over 200,000 focus groups were conducted in the US last year. However, traditional market research relies on direct questions, where customers are asked what type of features they would like in future products. Such questions are inadequate because most customers struggle to articulate their needs, or simply ask for improvements to existing features. Traditional market research traps companies into developing incremental, me-too products (with little chance of success). To get round this, leading companies are increasingly using sophisticated methods from psychology and anthropology to uncover customers’ hidden needs—those needs that they are unable to articulate or have not even recognized themselves.

Hidden needs analysis is the name given to a collection of tools and techniques for probing deeper than traditional market research. The main ones are repertory grid analysis, ethnographic market research, and lead user groups. Each of these techniques has major advantages compared to traditional market research tools and, when used in combination, they are very effective at uncovering customers' hidden needs.

Repertory grid analysis was developed by psychologists as a way to understand how individuals think and to uncover their so-called cognitive maps. This technique is ideal for developing new product ideas. It uses indirect questions and stimulates users to compare and contrast their experiences of existing products. Through the process of comparing and contrasting, customers' hidden needs can be revealed. Companies that have used repertory grid analysis in their market research include Biersdorf (the Hamburg-based manufacturer of global brands such as Nivea), Hewlett-Packard, and the IT service-provider Equant.

Another very effective technique for identifying hidden needs is ethnographic market research. This is based on the scientific methods developed in anthropology for understanding culture. When applied in a market research scenario, ethnography unveils both latent customer needs and the cultural drivers of product usage (be they national or customer segment-related). A common approach is to film customers and users using existing products and then conduct a deep analysis of what was observed and what customers said. Often it is the contradictions between what customers say they do and what they actually do, which provide the most insights. There is a systematic methodology for ethnographic market research and companies that have successfully applied it include Agilent, Bosch (see Box Case), Nokia, Nissan, and Unilever.

Lead users are customers who use products under far more demanding conditions than the majority. For example, to understand how better hygiene-related products could be developed for the operating room, 3M studied the requirements of field hospitals in combat zones. In demanding situations users often have to modify products to work around their limitations. By looking at such modifications, ideas for product improvements for the broader market can be obtained. Texas Instruments, Lego, and Cobra International (a world beating manufacturer of windsurfing equipment) have all made good use of the lead user approach.

Hidden Needs: Techniques and Organizational Issues

As more companies adopt hidden needs approaches, we at Cranfield School of Management are studying how they can be most effectively applied. We have identified two issues. Firstly, different techniques such as ethnographic market research and repertory grid technique are most effective when applied in parallel. In this way the unique insights from each technique can be contrasted to gain a deeper market understanding (see Bosch Packaging). The second key point from our research is that organizational barriers need to be overcome, if new methods of market research are to be adopted. Ironically, we have found that marketing departments in some companies are reluctant to adopt hidden needs approaches, as they view them as a threat to their status as 'market experts'. So in some companies it is R&D that is driving for new approaches to understanding the market.

Has your organization introduced a range of truly breakthrough products or services in the last 2-3 years? If not, then it is time to focus on developing the capability of your company to identify customers' hidden needs.

Bosch Packaging Technology—Differentiating the FXS 5100

Part of the Bosch Packaging Technology Division, the Bosch factory at Crailsheim (north-east of Stuttgart), designs and manufactures production line equipment for the pharmaceutical sector. Packaging systems typically cost 5-6 million Euro and are significant investments for pharmaceutical companies. In 2003 senior management at Crailsheim were considering whether to enter a new market where several companies already had strong products. An analysis of the incumbents' products showed that the Crailsheim engineering team could develop a product with higher specifications. However, management was seriously concerned that competition would be so intense that only a clearly differentiated product would be successful. To gain the market insights required, Crailsheim applied three techniques in parallel to identify hidden needs: ethnographic market research; repertory grid interviews; and a survey. A mass of data was collected and as the analysis was made, *'we started to think that we were on to something. It appeared that there were customer needs that the competitors had missed'*, says Klaus Schreiber (Head of Product Management). Based on the market insights, the FXS 5100 system has been a resounding success and so the worries about being a late entrant are a thing of the past. From an organizational perspective, the FXS 5100 project has also been important for Crailsheim. *'Bosch wouldn't have made the decision to enter the market without the depth of findings from the market study'*, says Schreiber, *'it has changed the way we look at market research'*.

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