Case History

Confused by the number of front end tools? How Kraft Foods is using three different techniques

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When it comes to the Front End, practitioners sometimes find themselves with an abundance of riches. There are just too many tools today to decide which ones work best. In this article, author Toni Tiedemann walks readers through three different techniques used by her former company at the front end, comparing the strengths and limitations of each.

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The first part of the new product development process is, well, fuzzy. But regardless of approach, structure, mission or task, starting with the needs of the market you hope to serve is essential. This article examines the strengths and weaknesses of three different qualitative approaches to developing consumer insights at the Fuzzy Front End of the new product development process.

Improving the Hit Rate

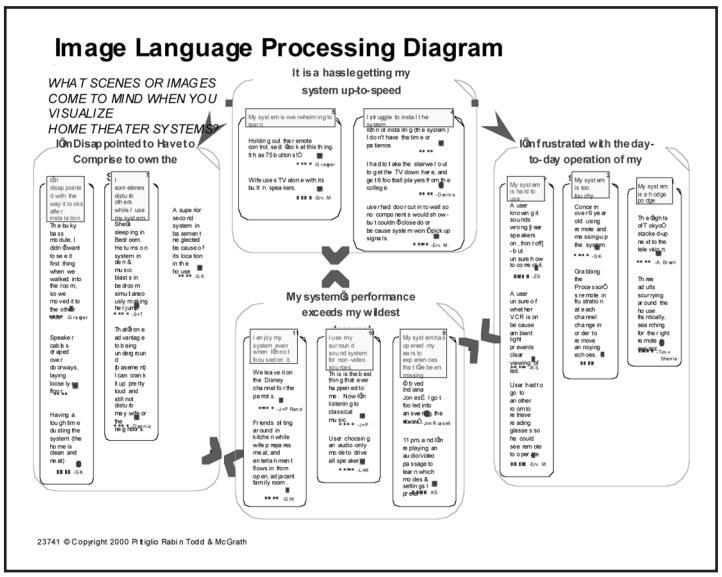
Over a two-year period, NPD professionals in one of the key divisions of Kraft Foods went on a mission to improve the hit rate in creating winning new product ideas. Armed with a fresh segmentation study and management blessing, several initiatives were begun using different approaches to developing in-depth consumer insights. The first approach taken was a pilot program based on methods adapted from the quality field known as Concept Engineering. Often used in the industrial or high tech settings, Kraft wondered if this rigorous approach would be applicable to less complicated products like snacks. Two drill sights were chosen: one to explore the needs of Healthy Snackers and one to explore the needs of Emotional Snackers.

Concept engineering

For those who are unfamiliar with the process, Concept Engineering is a very structured, team based approach to obtaining and analyzing ethnography data. A team was assigned to each of the drill sites chosen. They were trained in observation and interviewing skills and worked in pairs to conduct 25-30 interviews total or about 6 interviews per pair. But in Concept Engineering, conducting the interviews is just the beginning. What differentiates the Concept Engineering process from other ethnographic approaches is the application of a rigorous team based method of analyzing the interview data collected. Transcripts are produced and then processed looking for two different types of information. First, the team looks for images or word pictures that reflect the consumers' or customers' motivations and the context in which they use the category under study. Second, team members review each transcript looking for statements that contain clues to consumer or customer needs.

After the transcripts are scrutinized and nuggets of learning extracted, the analytic work begins. The teams transpose their data on to 3x3 sticky notes, and then proceed with the aid of a skilled facilitator to reduce the data to a manageable set and to organize it into ever-broader themes. The final step in the process involves determining the relationships between each of the broad level themes that have been identified. The end result is two maps. (See Exhibit 1 on this page.) One is an image map that organizes direct consumer quotes into a detailed understanding of the consumers' or customers' world. The second is a requirements map which details the underlying needs the consumer is trying to solve through category or product usage. Needs that appear on this second map are then prioritized and used as stimulus in new product ideation. As a result of this highly involving process, the team builds a deep common understanding of consumer motivations and the needs the consumer is trying to solve.

Exhibit 1: Image Diagram



The results of the pilots were impressive: Both teams were energized by the in-depth knowledge they had gained through this rigorous process. Ideation sessions were conducted that had a rich grounding in knowledge of the market. New product concepts were developed and tested with a success rate of over 50 percent.

While enthusiastic about their results both teams had questions. One team wondered whether other more traditional (easier/faster) methods would have yielded the same insights and results. The other team noticed that the insights gained didn't fit the quantitative segmentation seamlessly. This coupled with turnover on both teams resulted in the desire for additional work. Latter that year, each team went back to their original drill sites with alternative approaches.

Comparing Three Different Front End Techniques

Technique	Pros	Cons
Concept engineering	Produces in-depth knowledge Provides a detailed list of consumer needs Gains team alignment	Resource intensive Takes longer than other methods May miss information of and emotional or psychological nature
Focus groups	Easy and quick Requires fewer team resources	Understanding developed is broad but may lack depth Needs uncovered more likely to be the obvious Less effective in gaining team alignment and commitment
ZMET	Provides insights that are both narrow but and deep Uncovers emotional/psychological dynamics in depth	Less effective in providing a list of functional needs/requirements Also less effective in gaining team alignment and commitment

Focus groups

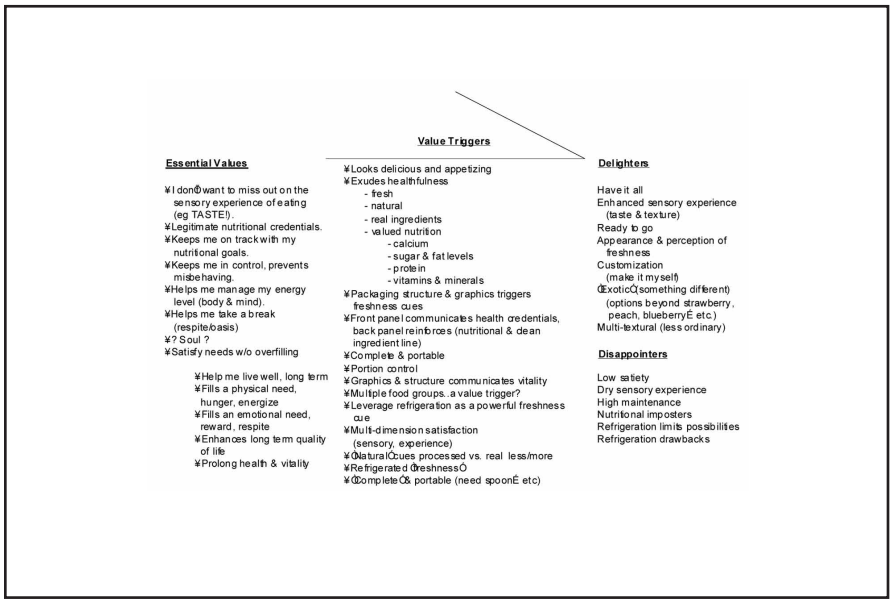
Team 1, which had been looking into the needs of Healthy Snackers, turned to focus groups led by a professional moderator. The moderator was skilled at this framework for understanding consumer needs and motivations that Kraft had routinely used before. This approach called for the moderator to conduct focus groups and organize the data into themes that included among other things; situations of use, core values, delighters and dissatisfiers. (See Exhibit 2 on page 22.) Like Concept Engineering the framework used in this approach had its roots in the House of Quality methodology, but it had been adapted to a focus group format.

> "Over a two-year period … Kraft Foods went on a mission to improve the hit rate in creating winning new product ideas."

Because the team was looking for a tool that would be "just at good" as Concept Engineering, but that would be less work, a systematic comparison of the results of the two methods was conducted. Not surprisingly, both methods converged on broad themes. The two methods differed however both in breadth and depth of understanding. In a loose quantitative comparison of the two methods, Concept Engineering identified a greater number of themes both in terms of the consumer's basic mindset as well as the consumer's needs. Little was uncovered in the focus groups that was not uncovered in the Concept Engineering, but the reverse was not true. Metaphorically stated, more treasures were unearthed by Concept Engineering. The two methods also differed when it came to dimensionalizing the themes that were uncovered. Since consumer understanding is built from the ground up in Concept Engineering (many very specific statements are aggregated to create themes which are aggregated again into higher level themes) each map contains a great deal of rich detail underlying key themes. In addition, the Concept Engineering output provided a much richer understanding of how the themes related to each other. While not a perfect metaphor, the focus groups provided a list of cities, the Concept Engineering provided a map detailing their relative location and zoom in capabilities that offered navigational detail.

Perhaps most critically, in terms of using qualitative research at the front end of the new product development process, the focus groups uncovered a smaller and more obvious list of consumer needs. Using the output from Concept Engineering as a foundation for ideation provided more jumping off points and a richer set of stimuli. While in the current environment of scarce resources, the team liked the idea of hiring a moderator to do the insight work for them, they acknowl-

Exhibit 2: The House of Quality



edged that doing so resulted in less powerful, less complete consumer insight. One team member who was involved in both processes summarized it this way: Concept Engineering was an excellent way to extend our skills….. Gives us a better way to analyze/ make use of ethnographic data. Leads to consumer insights we would never have uncovered any other way.."

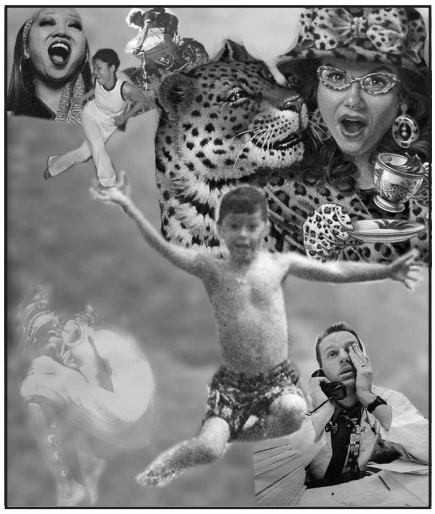
Using ZMET

Team 2, the one focusing on Emotional Snackers, took a different approach. In reviewing the outcome of the Concept Engineering work versus the quantitative data from the segmentation study, the data seemed less emotionally rich than expected. The team turned to a tool called ZMET (Zaltman Methaphor Elicitation Technique). ZMET is a process that relies on using projective techniques and metaphor to uncover the structure of meaning in a consumer's thoughts and feelings regarding a particular topic. Consumers are asked to select several images from materials they have at home that represent their thoughts and feelings regarding the topic studied. In- depth probing is used to explore the metaphors, their meaning and their relationships to one another. The interviews are further augmented by working with each consumer to create a digital collage of images which helps the interviewer further explore relationships between themes. (See Exhibit 3 on this page.)

Once again the two methods converged in terms of their ability to uncover general themes. However, in contrast to the Concept Engineering work, the ZMET analysis provided insights that were both narrower and deeper. While Concept Engineering provided a broad map with very good depth across multiple dimensions, ZMET provided enormous depth on fewer topics. The psychological dimensions of emotionally based snacking were better deliniated by the ZMET method. Consistent with this, ZMET was able to tap into less socially desirable or more negative aspects of the snacker's experience. In all, a richer picture of these snackers' relationship with snacking emerged. Consistent with this, the in-depth understanding of psychological motivations provided nuances between subsegments of the target that had not emerged through other methodologies. One such nuance did lead to a new direction for the team's ideation efforts.

In terms of providing input for new product ideation, ZMET provided a different level of information. Concept Engineering identified a broader range of needs and product attributes that were explicitly outlined

Exhibit 3: An example of the output from ZMET



in the output. As noted earlier, this explicit list of needs can be used directly as jumping off point for ideation. The output was, if you will, ideation friendly. In contrast, understanding of specific product needs was less detailed and less explicit in the output from ZMET. A list of consumer needs could be generated from the ZMET output but doing so required an additional step. Also the list that could be generated was more fundamental, more psychologically oriented and less detailed. As input for ideation specifically, the data was less rich.

Using all three

Each of the tools presented here has a role in the market researcher's tool kit. Overall, focus groups did only a fair job of providing understanding of the dynamics of a particular target's snacking preferences. The output was far less rich both in terms of understanding core motivations and in generating a list of consumer needs. Based on this experience they appear to fall short as an exploratory tool for the fuzzy front end of the new product development process. They would not be my preferred tool for understanding complex issues, products or motivations.

In contrast, Concept Engineering is a powerful, though resource intensive, process that yields rich insights into both motivations and needs. It is useful in many contexts but is particularly powerful where issues and products are complicated and the topic matter is fairly rational. This process provides the two benefits that the other methods did not:

First, the output of Concept Engineering includes an explicit and detailed set of needs that can be used as is to generate new product ideas. Second, the process involves the new product team directly in the gathering and analyzing consumer insights and needs. This provides a level of shared knowledge and commitment that the other methods do not afford.

While Concept Engineering is a powerful tool, it too has some disadvantages. It is highly labor intensive and in some cases is more rigorous than is necessary. It is likely to stop short in terms of uncovering unconscious motivations or psychological nuance. The use of metaphor in ZMET is a powerful tool in moving beyond the intellectual alibi or information that is easily accessed on a conscious level. In categories and tasks that require this type of understanding, for example exploring new product or positioning opportunities for an image based categories like a soft drinks or perfume, ZMET is likely to prove a superior tool. It is less likely, however, to produce a broad list of functional needs in a category where the product is rational and complex.