

The Four Moments of Experience

Streamlining the process of packaging development

Alejandro Salgado-Montejo • Carlos Velasco • Luis Ariza • Rodrigo Salgado • Ana María Moreno

Preface

- Problem: There are no clear guidelines to connect ideation and innovation, design, and evaluation when it comes to the development of product packaging.

- Solution: Develop a framework that incorporates concepts from cognitive, sensory, affective sciences, and understands product packaging in terms of four moments of experience: Navigation, buy, use/consume, discard/disconnect.

- Insights: *Navigation* focuses on the elements of the packaging that facilitate identifying the product. The *buy* moment encompasses the process of evaluating the sensory elements that are part of the packaging and the expectations they generate about the product. It also focuses on how to influence purchase intent. In the *use/consume* moment, packaging becomes part of the consumption experience. The objective here is to evaluate how packaging design elements influence consumer evaluation and satisfaction. The *discard/disconnect* moment is centered on the experience of disposing or ceasing the use of the product.

- Conclusion: To ensure a more evidence-based approach when designing products, it is necessary to incorporate market research earlier in the process of packaging development. By having a clear framework (i.e., the four moments of experience) it is possible to have more control on the potential return of investment generated by the packaging of the product.

Introduction

Packaging can account for up to 80% of the total cost of manufacturing a product. However if managed carefully, packaging can be an important asset to increase brand value. Packaging can help consumers navigate and choose from a wide array of brands and anchor both emotions and sensory experiences to the brand (Hine, 1997; Spence, 2016). Hence, packaging can enhance the influence of a brand in the marketplace (Ampuero & Vila, 2006). Indeed, it has been argued that packaging can be a more credible source of product claims than other marketing means such as, for example, advertisements (Fajardo & Townsend, 2016).

From a sensory marketing perspective, a product's packaging has multiple layers which are differentially associated with consumer processes and which brands can capitalize on to build brand equity. According to Krishna, Cian, and Aydınoğlu (2017), the outer part of a product's packaging is relevant for purchase, whereas the intermediate and inner packaging of a product might be more important for the actual experience of the product, that is, its consumption. Furthermore, before and during purchase, the packaging can help consumers create predictions of the product based on a wide array of sensory attributes (e.g., Krishna, Cian, & Aydınoğlu, 2017; Velasco, Woods, Petit, Cheok, & Spence, 2016). These predictions come in the form of emotions and feelings (e.g., feeling anxious about the quality of the product), cognitive appraisals (e.g., thinking that the product has the right price based on its perceived quality), and sensory expectations (e.g., expecting the product to be sweet or soft, see figure 1).

Figure 1. The influence of packaging design on consumer decisions

1. The consumer identifies the product

Color, symbols, and packaging shape can influence product recognition.

- Appropriate use of color can increase category, flavor/aroma, and brand recognition.
- "Consumers gravitate towards familiars symbols" (Slade-Brooking, 2016, p. 42).
- The shape of the packaging can convey sensory attributes of the product category, be used as a visual differentiatior, or become a symbol that is easily identified across cultures.

2. The consumer evaluates the product based on design attributes

Consumers can interpret design attributes in terms of:

- Emotions (e.g., Feeling anxious when buying an unkown brand).
- Cognitive appraisals (e.g., Justifying the price of the product based on its quality).
- Sensory expectations (e.g., Expecting the product to be sweet or soft).

3. A purchase decision is reached

Packaging claims have one of the strongest influences on consumer decisions

Sensory elements that are part of the packaging facilitate specific predictions about the product. Therefore, it is fundamental to understand the role of these elements in swaying the consumer to choose one product over another. Take, for example, how shapes embedded in the packaging (or the packaging itself) can communicate information such as the flavor of the product or its value (e.g., Salgado-Montejo et al., 2015; Velasco, Salgado-Montejo, Marmolejo-Ramos, & Spence, 2014). Color features (i.e., hue, brightness, and/or saturation) which are congruent with the brand meaning and the flavor of the product may facilitate the search for the product in the marketplace (Cavazzana, Larsson, Hoffmann, Hummel, & Haehner, 2017; Velasco et al., 2015; Velasco, Woods, et al., 2016). Even the sonic attributes of packages (that is, the sounds derived from our interaction with packages, se Spence & Wang, 2015) and their textures may also provide differentiation characteristics both for branding and product experience (Salgado-Montejo, Velasco, Maya, & Spence, 2015; van Rompay, Finger, Saakes, & Fenko, 2016).

If managed correctly, product packaging can help a brand grow its market share and return of investment by enhancing the speed at which a consumer finds the product in the shelf, fine-tuning the expectations generated by the design elements that are part of the product, and creating a positive experience when opening, consuming, and discarding the packaging. The need for a fast and effective framework to develop and evaluate packaging across its many stages (from ideation to market research) becomes even more pressing when firms face the challenges of breaking cultural barriers and standardizing messages across countries.

For product packaging to generate value for the brand it must fulfill at least four functions. First, packaging must *capture the attention of the consumer* (Bialkova, Grunert, & van Trijp, 2013; Mugge, Govers, & Schoormans, 2009). Second, it must *generate the right expectations about the product*, no matter its category (e.g., Kauppinen-Räisänen, 2014; Wei, Ou, Luo, & Hutchings, 2015). Based on the packaging, the consumer should be able to discern the nature of the product (i.e., its category and use) as well as some of its attributes (i.e., imagine what using/tasting the product would feel like). Third, packaging must help *create unity and consistency across markets and cultures* (e.g., transferability). There is a need to develop packaging that can convey similar expectations, feelings, and experiences in any shelf in the world (or that can easily adapt, at the very least); packaging should help a brand become more

easily accepted in different cultures (van den Berg-Weitzel & van de Laar, 2001). Fourth, given that packaging is a tangible expression of the brand, it must *facilitate the construction of associations, emotions, and memories* (brand knowledge) in the mind of the consumer (Keller, 2013; Wheeler, 2013).

Currently there is a wide range of options to test the impact of packaging (via both traditional and novel methods), that is, evaluate the extent to which packaging conforms to one more of the elements describe above. However, we have identified five challenges that might be common to all of them:

1. No matter the method that researchers use, clear guidelines are needed to test both packaging attributes and their relation to consumer processes. In other words, it is critical to standardize what "impact" means in the context of packaging development and evaluation. Such standardization can help to track the contribution of a product's packaging to brand equity in time. What dimensions of a product's packaging need to be assessed? What role do usability, design elements in the packaging, and emotional engagement play in brand equity? Be it qualitative or quantitative, new or traditional; the possibilities offered by market research firms can only be harnessed if testing is consistent and allows the measurement and tracking of a packaging's performance. A brand may be enamored by quantitative methods now but if in the future they want to explore other options, how do they integrate their results throughout time if each method is measuring something different?[1]).

2. Packaging evaluation appears late in the process of packaging innovation and design, which in turn reduces the possible interventions and increases costs if something needs to be changed. In other words, most stages of the design process happen without consumer research. It is not surprising, then, that it is hard to connect design with research in later stages of the process.

3. Packaging evaluation takes a considerable amount of time and this makes it expensive and difficult to implement in the early stages of packaging development. One of the reasons why it is not possible to incorporate testing in, for example, the design phase of the process is because it does not fit its timing. An evidence-based approach is needed, one which allows researchers, firms, and designers to work with the time limitations imposed by the market.

4. Product and packaging experience are typically designed separately. One team talks about flavor, smell, or "feel" of the product and the other about packaging. The likelihood that one can generate an accurate expectation of the product via its packaging increases when the product and packaging are developed together, or at least in close connection. From a multisensory design perspective, the product and its packaging should be seen as single entity whose different characteristics work together to create a specific consumer experience.

5. Cultural barriers in packaging development can be difficult to break. We are now faced with the challenge of designing packaging for many cultures, regions, and countries, that is, packaging which is transferable. This poses the challenge of standardization vs. personalization, which directly impact costs and revenue.

To tackle the five challenges mentioned above, it is necessary to develop a framework that considers the cognitive, sensory, and emotional dimensions of the consumer in relation to packaging. What is more, this framework needs to provide a simple and overarching process so that it is possible to standardize questions and measuring procedures, and facilitate decisions on a global scale. The framework we propose in the following pages has two objectives: first, to offer researchers the possibility of guiding and getting involved in each of the steps that are part of packaging development (many which are currently out of reach to many market researchers); and second, to reduce uncertainty for marketers and brand managers by tackling each of the challenges mentioned above and by offering them a way of thinking about packaging that standardizes the questions that are needed to tie packaging development and evaluation to the return of investment.

The four moments of experience: A framework for packaging design

By turning to sensory science, experimental psychology, neuroscience, and marketing, we have created a framework that can be implemented from the early stages of ideation to the moment of presenting the packages to actual consumers. Our framework is based on the premise that, regardless of culture, category or consumer profile, there are four moments of experience (FME) when a consumer interacts with a product (figure 2). These four moments are the core experiences that define: 1) how easy it is to identify a product when presented with a wide range of choices, 2) what expectations are formed about the product when deciding whether to buy it or not, 3) key drivers for purchase, and 4) what emotions and memories are formed throughout the entire process of interacting with the product (e.g.,

rejecting a product because the packaging is not recyclable). The FME offer a consumer-centered framework to drive the return of investment.

Figure 2. The four moments of experience (FME) framework

Navigation. The moment of navigation spans from when the consumer begins to walk around a super-market (or store) and up to the moment when the packaging attracts the attention of the consumer. Attention can be covert (i.e., non-conscious eye movements – saccades) or overt (i.e., conscious eye movements – visual fixations) and influenced by a wide array of sensory features (e.g., shape and color). Color can help a packaging stand-out, be it because the package has a signature color (e.g., Cadbury Chocolate) or because it can be associated with an attribute of the product (e.g., flavor or strength). Shapes can facilitate identification because the packaging may have a distinct contour (e.g., the triangular shape of the Toblerone packaging) that is easily spotted. Importantly, both implicit and explicit knowledge about the different multisensory characteristics of a product or the category (e.g., their textures, sounds, and even smells) can also guide consumers' attention toward a product's packaging. Notably, research completed in the last 30 years show that congruency[2]) between elements that are part of the packaging facilitates product identification on the shelf (e.g., Mandler, 1982).

Buy. While we may think that the moment of purchase is a far more conscious experience than, for example, finding a product, the consumer is not always aware of all the sensory attributes that may help him/her choose (Underwood, 2003). The moment of purchase is defined as the process of weighing options, forming expectations about the product (in a conscious or non-conscious manner), and deciding to acquire the product. This process involves past experience, contextual information, and the sensory attributes of the product. Variables such as aesthetics (e.g., color, curvature, symmetry, texture) and anthropomorphism (i.e., human-like forms) can influence sensory expectations (Salgado-Montejo, Alvarado, et al., 2015; Westerman et al., 2013; Westerman et al., 2012), emotions (Elliot & Maier, 2014; Haverkamp, 2013; Labrecque & Milne, 2012; Labrecque, Patrick, & Milne, 2013; Palmer, Schloss, Xu, & Prado-

León, 2013; Velasco, Michel, et al., 2016), and the product's purchase likelihood (Salgado-Montejo, Tapia Leon, Elliot, Salgado, & Spence, 2015).

Use/consume. This moment begins when the consumer interacts with the packaging to open it and ends once the consumer has finished using or consuming the product. The ability of the packing to preserve the product, as well as the effort required to open the packaging, the materials used, and the number of layers of packaging (i.e., outer, intermediate, and inner) can all influence the consumption experience (Krishna et al., 2017; Ybxoll et al., 2006). There is evidence that elements that are part of the packaging can alter the perception of the sensory and hedonic attributes of a product, as well as consumer's evaluations and attitudes. For example, research suggests that a product's packaging visual design can influence the perceived flavor (Hine, 1995; Velasco, Woods, et al., 2016), quality, potency (e.g., Wan, Woods, Salgado-Montejo, Velasco, & Spence, 2015), pleasure, and satisfaction associated with the corresponding product (Spence, 2016).

Discard/Disconnect. Once the consumer has finished using or consuming a product it is necessary to disengage from it. If the product is reusable or can be saved for later, the consumer will seek to store it in some way (e.g., closing a water bottle or placing headphones inside a pocket). In contrast, if the product is consumable, the consumer will eventually need to dispose of the packaging.3) This moment of experience is, in many categories, the forgotten moment (Sand, 2017). Many brands have assumed that once the consumer has finished using or consuming the product, interactions cease and the experience ends. However, sustainability has become a responsibility and a competitive advantage. The growing concerns on the impact of human life on the environment has increased the importance of designing an ideal discard/disconnect moment (da Cruz, Ferreira, Cabral, Simões, & Marques, 2014; Vanderroost, Ragaert, Devlieghere, & De Meulenaer, 2014).

At the core of the FME are the consumers' senses and emotions. Note that, while some senses were mentioned in each of the FME, all of them can be involved in any or in all the moments of experience of a product's packaging. This is relevant because any innovation processes should seek novel ways of incorporating the forgotten senses (e.g., hearing) in the categories they target and should consider which sensory attributes have the greatest impact on each of the moments. The FME allow us to have clear goals that are common to the processes of ideation, innovation, design, and evaluation.

Guidelines to implement the FME in ideation and innovation, design, and evaluation

It is important to bear in mind that our objective is not substitute existing frameworks, rather, we offer a novel approach that furthers our conceptualization of packaging as a key brand element and which connects ideation and innovation, design, and evaluation. Below we describe how to implement the FME in the ideation and innovation, design, and evaluation stages.

Ideation and innovation

We present ideation and innovation together because one cannot exist without the other; to innovate we must get ideas, organize the information generated or gathered, and develop a strategy that turns the idea into a product. During the ideation process, one first needs to determine whether the aim is 1) to create a product that does not exist, 2) improve an existing product, or 3) seek to learn from a specific category or product. When developing a new product, especially when it is groundbreaking (think of the iPod touch or the Gameboy), the analysis of the FME should focus on the possible interactions between the consumer and the product at different moments of experience, as well as both the sensory and affective impressions that will be targeted. It is necessary to develop an early "image" of the product (or prototype, it can be in a piece of paper, painted on a whiteboard, or even made from cardboard); it does not have to be beautiful or even exact. It should provide both designers and potential consumers a means to interact with the packaging concept. Afterwards, those who prototype should test the product for possible interactions and potential issues with the product in each of the four moments.

If the objective is to improve an existing product, it is key to first develop questions in terms of the FME. Here are some suggestions:

1. Are there any existing studies that may facilitate ideation/innovation? What insights do they provide when framed using the FME?
2. Is there a color code for our flavor/category/attribute? Can we break it?
3. Is there a shape that would make our packaging stand-out?

4. Who is the leader of our category? Are there any sensory elements that make it stand-out?
5. What will make our packaging stand-out?
6. What kind of information (e.g., taste, quality, etc.) do consumers look for when searching for packaging in our category?
7. Are there any strong elements in our packaging that directly influence purchase intent? Do any of our competitors have them?
8. Will changing element "X" in the packaging influence the consumption experience (i.e., taste, pleasure, satisfaction)? Will the impact be positive or negative?
9. Have we checked if changing the packaging influences the taste/feel/experience of the product?
10. What sensory experiences could add value to the brand and facilitate positive emotional experiences?

Table 1. An analysis of the Toblerone packaging using the FME framework

Attribute	***Possible Effect***	***Moment of experience***
Colors: Gold Red	The color of a logo often becomes a key component of a brand's identity, that is, of marketing touchpoints such as packaging and advertising. Such cue is so important that the brand may become intrinsically linked to a color (Labrecque et al., 2013).	Navigation
Packaging Shape: Triangular packaging	Novel packaging grabs consumers' attention and increases the probability of an involuntary attention response (Labrecque et al., 2013).	Navigation
Colors: Low Saturation	The low-saturated packaging can trigger higher price expectations than the high-saturated package (Becker, van Rompay, Schifferstein, & Galetzka, 2011).	Buy
Packaging Shape: Triangular packaging	Product designs that are atypical attract more attention (Schoormans & Robben, 1997).	Buy
Typography: Angular	Angular variants are considered more expensive than the rounded variants (Becker et al., 2011).	Buy
Packaging Shape: Triangular packaging	When considering contour, people tend to prefer designs that are more typical (the rounded designs) although their attention may be captured by the atypical and less-preferred angular designs. (Westerman et al., 2012). Participants seem to find the angular contoured designs more annoying than the round designs (Westerman et al., 2013).	Consume
Product Shape: Triangular	Angular product shapes may inspire intense taste sensations (Becker et al., 2011).	Consume
Outer packaging material: Paperboard	A major advantage of paper and paperboard is that it can be recycled as fiber and used to make new paper and paperboard materials (Marsh & Bugusu, 2007)	Discard

If we want to learn from a specific product or category, a possible approach is to analyze as many sensory attributes as possible (in the end, our everyday life experiences are multisensory). The idea is to identify in which of the FME a specific design attribute has an influence (if any) and describe its potential effect. Ideally, the effect of each attribute should be backed-up with hard evidence. Table 1 provides an example of how to analyze a product for benchmarking purposes or as a diagnostics tool using the FME (see table 1).

Other potential options to back-up intuition in the ideation and innovation stage is to use experts from different fields (e.g., artists, designers, researchers) or existing studies and bank on their experience/knowledge to validate the process. For elements such as color, shape, or even texture, it is possible even to look up different terms on the internet and then do an analysis of the first four pages on the image tab of a search engine (e.g., what colors appear when one googles “sweet products” or what shape features are common when one searches for “cute products”). While this may initially look like an amateur technique, it is undeniable that search engines such as Google have some of the best algorithms for association and their database is the Internet(!). A team with good skills in visual studies, image interpretation, or data mining can take advantage of the many patterns that appear in the search results of the image tab offered by Google. Online research is also a good option, with Prolific Academic and Mechanical Turk offering results in a matter of hours and more advanced platforms such as NetQuest in a matter of days (see Salgado-Montejo, Velasco, Maya, Woods, & Spence, 2016, for an example on how to implement online studies to study packaging).

Design

If the ideation and innovation process was carefully executed, design is easier to implement. Any insights produced in the previous stage can be delivered to the design agency as way to direct the process. The idea here is not to tell the designer what to do but to offer guidelines as to what would be more successful in terms of product experience, brand equity, and return of investment. After the design agency has presented the first drafts of the packages, it is possible to repeat the process described in the previous stage (see table 1) and determine whether the design is generating the intended experience in each of the FME.

In this stage, there is also the possibility of taking advantage of previous knowledge. The client may have a series of past studies that can answer some questions about the design process. The research agency may have relevant information from other projects. By analyzing the results and insights from past studies using the FME as a framework, it is possible to organize the information in terms of potential guidelines for design.

The example presented in table 2 illustrates the analysis of a vanilla yogurt from the baby food category. This analysis includes some of its possible failures in the design. In particular, Table 2 describes the current problem in the product’s packaging design and potential recommendations that would improve the product’s performance in the marketplace. Such changes impact specific moments of experience, namely, navigation (brand recognition and product category), the moment of purchase (congruence between the elements and the product), and the moment of consume and discard (shape and material of the packaging). The recommendations forwarded aim, among others, is that the firm does not incur in high expenses with the design company or the research agency.

The FME framework helps to create a common language between designers and researchers. By gaining a deeper understanding of how design creates value (through the sensory elements of the packaging), it is easier for researchers to fully appreciate the work of designers, and for designers to appreciate the work of researchers.

As a final note for the design phase, in the coming years, the rise of computational models, machine learning, and artificial intelligence in market research will make the aforesaid analyses faster and more accurate (Brynjolfsson, 2017). These artificial systems will change the game by turning a process of hours or days into an instant, real-time, interaction.

Evaluation is the natural territory of researchers; it is what they know best. However, because of the diversity of methods and the many ways of analyzing data and managing knowledge, there is a need for a framework that creates a common language that facilitates the evaluation of how impactful is the design a of product. We propose that the FME framework is a good start which can help the different stakeholders in the process of packaging development to integrate different methods and approaches. Figure 3 presents potential methods that can be used to evaluate each of the FME. Multi-method approaches tend to work better since they provide information from different stages of information processing (i.e., conscious and automatic) and therefore offer a more complete approach of the consumer. It is important to take into account that cognitive, emotional, and sensory experience all have implicit and explicit

components, which underscores the importance of utilizing more than one method to fully understand consumers' experiences.

Table 2. Example of a design brief using the FME framework to analyze a vanilla yogurt from the baby food category

Problem	***Design Recommendations***	***Impact***	***Moment of Experience***
The brand logo is in a size and position that makes it difficult to recognize.	Place the logo in a centered position and increase its size.	Consumers will be able to recognize the brand of the product from a farther distance.	Navigation
The color contrast between the background and text makes it difficult to read the product information. *In addition, the color used for the text is not congruent with the baby food category.*	Change the text color by one that is consistent with the category and has a higher contrast with the background to make it more readable.	The consumer can identify the product category more quickly and with ease.	Navigation
The packaging contains too many elements, which makes the product difficult to recognize from a far distance.	Remove repetitive information on the package, making emphasis on relevant product information (brand, category, taste, differentiating attributes).	The relevant product information will be processed more efficiently by consumers.	Navigation
The color of the packaging does not convey the flavor of the product. Currently the brand is using blue and white to denote flavor.	Use a color block (a strip) or a background that communicates the flavor of the product (yellow is commonly associated with vanilla flavor).	The consumer can identify the taste of the product, without having to read the information. On the other hand, differentiating the flavors with colors makes the product stand out among other products.	Navigation
The typography used to present the product category (baby food) is angular, which is not congruent.	Use a more curved typography.	Curved shapes represent soft and creamy textures and are associated with sweet tastes and pleasant odors.	Buy
The packaging does not feature any illustrations or photographs, which might reduce hedonic expectations.	Add photographs or illustrations that represent product attributes and increase hedonic expectations.	Using photographs or illustrations generates a higher perception of quality which may increase purchase intent. It also helps to associate the product more quickly with a flavor or category.	Buy
The shape of the packaging has angular corners. That, again, might signal concepts that do not necessarily relate to babies.	Make a rounder package.	Round packaging is easier to use and generates a perception of being less hazardous.	Use/consume
After opening the packaging, the product must be consumed immediately, since it cannot be sealed again.	Design a reusable cover for the product.	In the baby food category, it is important that the product can be re-sealed. A package that allows the product to be consumed at various times may increase consumer purchase intent, because the product is not wasted if it is not consumed immediately after opened.	Use/consume
The material of the lid is aluminum foil and has direct contact with the product, which at the time of disposal may come in contact with clothes or other objects causing an undesired mess. On the other hand, aluminum foil may be considered a hazardous material for a baby.	Design a reusable lid of a different material.	A lid that is easier to discard and is not perceived as a threat to a baby, may increase willingness to buy, and in turn, might make the discard moment pleasant to the consumer.	Discard/disconnect

Figure 3. Techniques that can be implemented to evaluate packaging in the FME

Navigation

This moment is highly automatic and requires methodologies capable of measuring reaction times and implicit processing

Suggested techniques and methods

- Visual search (with or without eye-tracking)
- Reaction-time tasks
- Mouse-tracking based tasks

Buy

Evaluating a product and choosing whether to buy it or not includes both automatic and conscious processing.

Suggested techniques and methods

- Scales and questionnaires
- Reaction-time tasks (e.g., Go-no-go)
- Mouse-tracking based tasks
- Interviews
- Facial expressions and emotion evaluation
- Sensory analysis

Use/ Consume

Many senses converge in this moment. Conscious and automatic processing play an important role. Elements from both the product and the packaging should be considered.

Suggested techniques and methods

- Sensory analysis
- Behavioral observation
- Scales and questionnaires
- Reaction-time tasks
- Interviews

Discard/ Disconnect

The forgotten moment. Perceptions and beliefs will play an important role. Sensory information and context can help define if the experience is pleasant or unpleasant.

Suggested techniques and methods

- Behavioral observation
- Interviews
- Questionnaires
- Material evaluation
- Literature survey

Some methods are indeed more efficient in some of the four moments. Still, the FME provide an inclusive framework and allow information from any research approach to be incorporated.

Having described the four moments of experience and some of the guidelines to implement the FME in ideation and innovation, design, and evaluation, below, we move on to present some case studies that were developed in collaboration with Suave Gold® (a toilet paper brand) and Van Camp's® (a tuna brand). The advantage of the FME for evaluation is that it guides the process of data collection and integrates different methods. In addition, it provides a bird's eye view of a category, brand, or market.

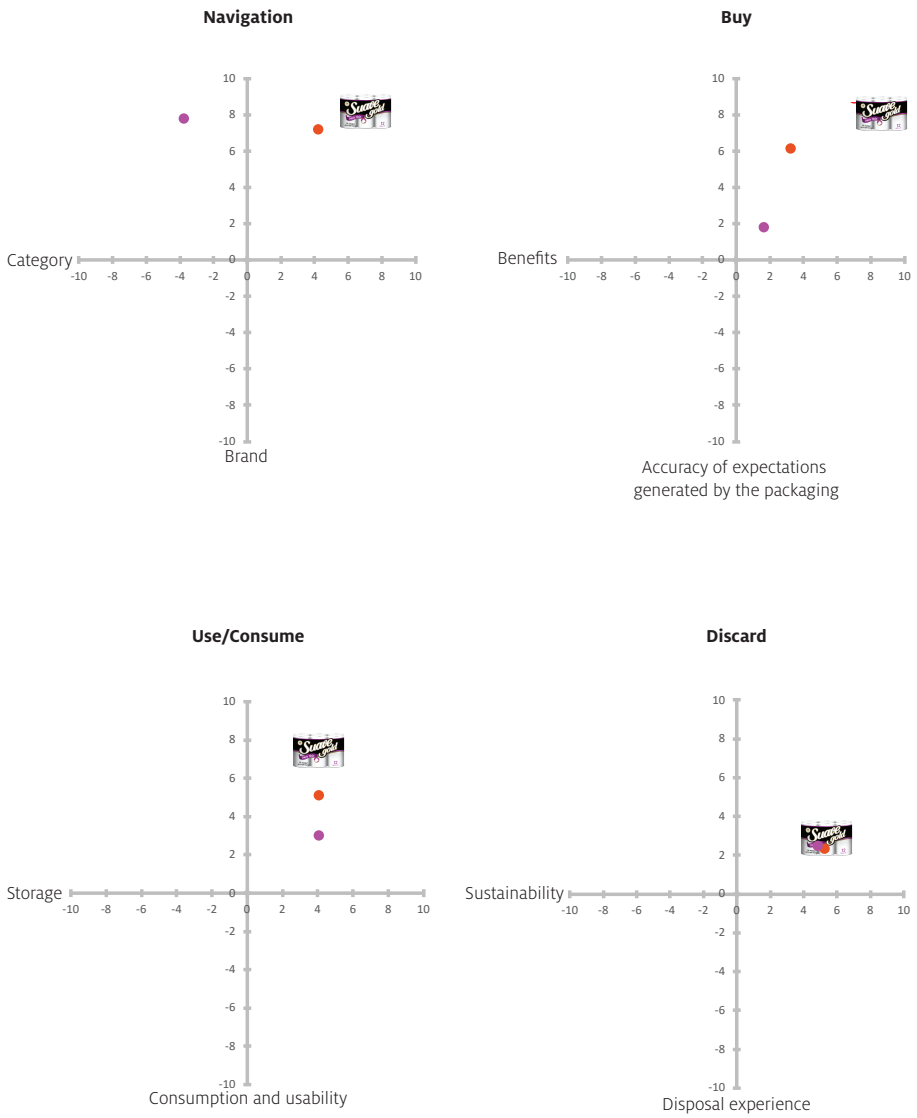
For instance, it is possible to use eye tracking to determine the order and speed at which different packaging elements are processed, determine the impact of color and other sensory features in brand and category identification using reaction times, and ultimately create a single index that helps us understand the performance of a brand in the navigation moment. In the buy moment, it is possible to use scales, reaction times, and qualitative analyses to evaluate which sensory attributes are translated into product benefits and help the consumer anticipate what trying/using the product might feel like. For the use/consume and discard phases, scales, observational methods, interviews, and sensory experiments can shed light on the way in which the consumer interacts with the product's packaging in its latest stages and what it represents to her/his product experience (see figure 3, for a summary of

possible methods and techniques). Furthermore, because the FME comprises the entire process of product development, claims made in the ideation and innovation stage or hypothesis developed in conjunction with designers can be validated during the evaluation stage. It is our hope that the following examples (figures 4 and 5) illustrate how the FME framework may be used to integrate results and gain relevant insights to develop more competitive products.

Case study: Suave Gold®

Suave Gold ® is the market leader in Colombia and a strong brand in the toilet paper category in several Latin American countries. As figure 4 shows, Suave Gold® leads in the navigation, buy, and use/consume moments. The three brands that were analyzed are tied in the discard moment, which could be seized as an innovation opportunity. Typeface, color contrast, and a well-placed product window all facilitate navigation for Suave Gold®. What is more, easy identification of key benefits from a distance (e.g., quantity and quality) may be enhancing the product's purchase intent.

Figure 4. Results of the FME study conducted for the Suave Gold® band

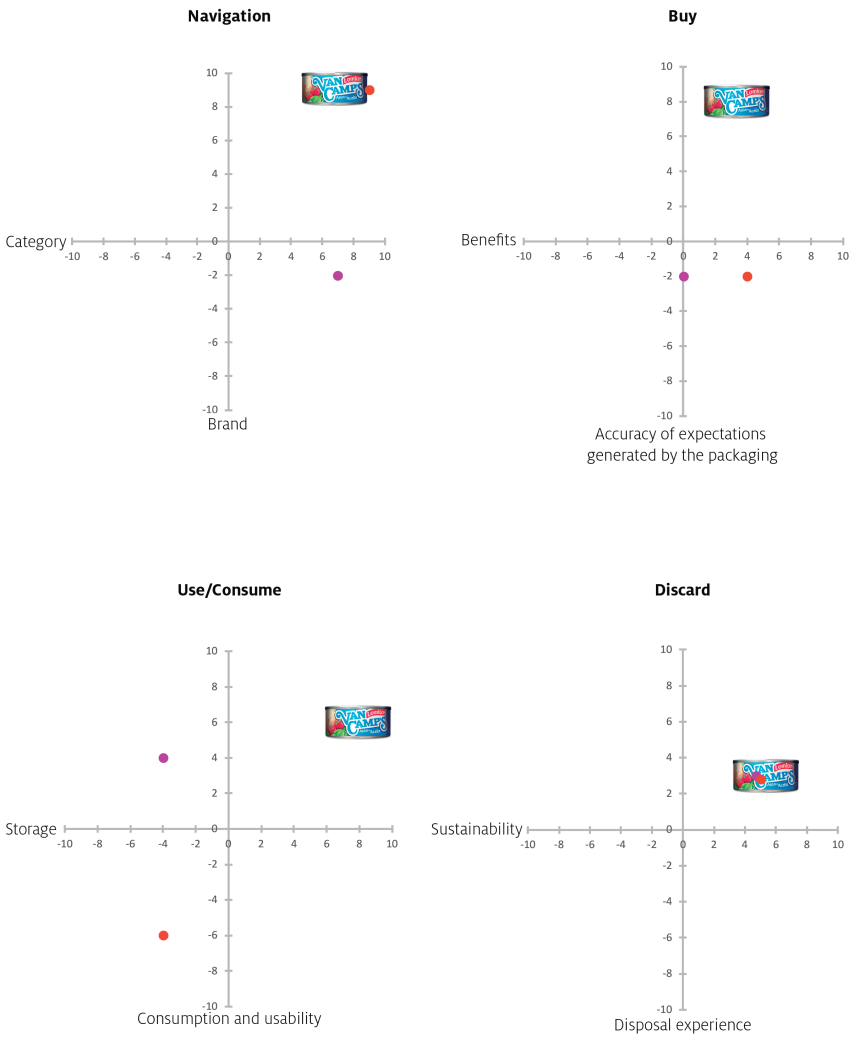


The violet and orange dots represent two different brands from the same category. The label in bold denotes each of the FME and the labels in each of the two axes represent the two factors that were measured and for which an index was created ranging from -10 to 10. In the navigation moment, we evaluated how easy and quickly consumers identified the brand and the category of the product. In the buy moment, we focused on the key benefits communicated by design attributes (e.g., softness, quality, resistance) and on how well matched were the expectations and the experience of using the product. For the use/consume moment, we analyzed the experience of storing and conserving the product, as well as of opening and using the product. Finally, for the discard phase we evaluated how sustainable was the material of the packaging and how easy and pleasant was the experience of disposal of the product.

Case study: Van Camp's®

Van Camp's is the market leader in the canned tuna category in Colombia. We applied the FME framework to Van Camp's and to two additional brands (see figure 5 for a summary of the results). Van Camp's and one of its competitors present an adequate performance in the navigation moment suggesting that consumers can easily identify the brand and the category in less than two seconds. In contrast, the other competing brand that was analyzed succeeds in conveying information about the product category but has a low brand differentiation. The analysis shows that key elements (i.e., symbols) facilitate identification in Van Camp's, whereas color seems to be the main driver for its competitors. Van Camp's has an excellent performance in the "buy" moment, which shows that here lies one of its greatest differentiation moments relative to the competition, given that both competitors fail to create the right expectations about the product (see figure 5). However, the buy moment could be further improved by communicating key benefits that can drive purchase behavior and positive attitudes towards the brand. Whilst an analysis of the use/consume moment suggests that Van Camp's is the category leader, in this specific moment of experience there is room for development, which would further increase the distance between Van Camp's and its competitors. Finally, the discard phase is the weakest point of the category and underscores the potential for innovation. Figure 5 shows in detail the performance of the Van Camp's packaging, as well as of two competitors in each of the FME.

Figure 5. Results of the FME study conducted for the Van Camp's® band



As in figure 4, the violet and orange dots represent two different competing brands from the same category. The label in bold denotes each of the FME and the labels in each of the two axes represent the two factors that were measured and for which an index was created ranging from -10 to 10. In the navigation moment, we evaluated how easy and quickly consumers identified the brand and the category of the product. In the buy moment, we focused on the key benefits communicated by design attributes (e.g., softness, quality, resistance) and on how well matched were the expectations and the experience of using the product. For the use/consume moment, we analyzed the experience of storing and conserving the product, as well as of opening and using the product. Finally, for the discard phase we evaluated how sustainable was the material of the packaging and how easy and pleasant was the experience of disposal of the product.

The FME show the strength and weaknesses of each brand and category when it comes to the consumer's interaction with their corresponding packaging and potential roads for improvement. The results above demonstrate that, by analyzing strengths and weaknesses, in each of the FME it is possible to gain a better understanding of the key factors that make a brand successful in a specific category. The analysis presented in this case study can also be used to determine the overall impact of a brand in a category, the distance between brands, and the key drivers for consumption.

Conclusions and how the FME are tied to the return of investment

The FME provides a comprehensive framework for packaging design and evaluation, one which considers consumer-packaging interaction, multisensory perception, and affective processing. More specifically, this framework places the consumer at its center and allows one to conceptualize and design specific brand experiences based on a product's packaging. Packaging, as a key element of a brand and as a means for experience design, can have a significant impact on how consumers interface with a firm and in the end on the firm's revenue.

Finally, the FME increase the return of investment because they reduce the number of iterations that are needed to develop a successful product. They also draw attention to key factors that have an impact on consumer decision-making. Another important strength of the FME framework is that it provides a common language for ideation and innovation, design, and evaluation and binds them together to create an evidence-based and multidisciplinary process. Furthermore, by highlighting design elements and experiences that are shared by most consumers, the FME allow for the design of products that may be successful across different markets. Ultimately, the FME assess how effectively design elements help consumers find a product in the shelf, communicate key benefits and competitive advantages, generate accurate expectations about the product, aid in creating a pleasant consumption experience, and ultimately make the world a better place by being sustainable.

Acknowledgement

The authors would like to thank Freddy Gonzalez, Sales Vice-President and Pasquale Limone, Regional Business Development LATAM, from Papeles Nacionales de Colombia for allowing us to present the Suave Gold® case study.

Additionally, the authors would like to thank Julián Peñalosa, Marketing and Sales Manager and Liliana Pacheco, Marketing and Sales Sub-manager from Seatech International for allowing us to present the analysis of the Van Camp's® brand in order to illustrate the FME.

Endnote

1. Each research method may have a specific way for collecting data and generating insights but our research questions should be similar, so that we can integrate findings and take advantage of multimethod approaches.

2. Congruency is defined based on associations made by consumers (e.g., liking a specific color with a flavor after seeing it many times in the super-market). Understanding how consumers process related vs. unrelated information can be critical to understand how consumers find and select a product.

3. A third instance of this moment of experience would be logging-out or exiting a website, app, or software.

References

Ampuero, O., & Vila, N. (2006). Consumer perceptions of product packaging. *Journal of Consumer Marketing*, *23*, 100–112.

Becker, L., van Rompay, T. J. L., Schifferstein, H. N. J., & Galetzka, M. (2011). Tough package, strong taste: The influence of packaging design on taste impressions and product evaluations. *Food Quality and Preference*, *22*, 17–23.

Bialkova, S., Grunert, K. G., & van Trijp, H. (2013). Standing out in the crowd: The effect of information clutter on consumer attention for front-of-pack nutrition labels. *Food Policy*, *41*, 65–74.

Brynjolfsson, E. (2017). How AI is already changing business.

Cavazzana, A., Larsson, M., Hoffmann, E., Hummel, T., & Haehner, A. (2017). The vessel's shape influences the smell and taste of cola. *Food Quality and Preference*, *59*, 8–13.

da Cruz, N. F., Ferreira, S., Cabral, M., Simões, P., & Marques, R. C. (2014). Packaging waste recycling in Europe: Is the industry paying for it? *Waste Management*, *34*, 298–308.

Elliot, A. J., & Maier, M. A. (2014). Color psychology: effects of perceiving color on psychological functioning in humans. *Annual Review of Psychology*, *65*, 95–120.

Fajardo, T. M., & Townsend, C. (2016). Where you say it matters: Why packages are a more believable source of product claims than advertisements. *Journal of Consumer Psychology*, *26*, 426–434.

Haverkamp, M. (2013). *Synesthetic design: Handbook for a multisensory approach*. Basel: Birkhäuser Verlag GmbH.

Hine, T. (1995). *The Total Package: The evolution and secret meanings of boxes, bottles, cans, and tubes*. Boston: Little Brown & Co.

Hine, T. (1997). *The total package: The secret history and hidden meanings of boxes, bottles, cans and other persuasive containers*. (P. Burgess, Ed.). Boston, MA; London: Black Bay Books.

Kauppinen-Räisänen, H. (2014). Strategic Use of Colour in Brand Packaging. *Packaging Technology and Science*, *27*, 663–676.

Keller, K. L. (2013). *Strategic brand management: Building, measuring, and managing brand equity*. Harlow, UK: Pearson Education Limited.

Krishna, A., Cian, L., & Aydınoğlu, N. Z. (2017). Sensory Aspects of Package Design. *Journal of Retailing*, *93*, 43–54.

Labrecque, L. I., & Milne, G. R. (2012). Exciting red and competent blue: The importance of color in marketing. *Journal of the Academy of Marketing Science*, *40*, 711–727.

Labrecque, L. I., Patrick, V. M., & Milne, G. R. (2013). The Marketers' Prismatic Palette: A Review of Color Research and Future Directions. *Psychology & Marketing*, *30*, 187–202.

Marsh, K., & Bugusu, B. (2007). Food packaging - Roles, materials, and environmental issues: Scientific status summary. *Journal of Food Science*, *72*. doi:10.1111/j.1750-3841.2007.00301.x

Mugge, R., Govers, P. C. M., & Schoormans, J. P. L. (2009). The development and testing of a product personality scale. *Design Studies*, *30*, 287–302.

Palmer, S. E., Schloss, K. B., Xu, Z., & Prado-León, L. R. (2013). Music-color associations are mediated by emotion. *Proceedings of the National Academy of Sciences of the United States of America*, *110*, 8836–8841.

Salgado-Montejo, A., Alvarado, J. A., Velasco, C., Salgado, C. J., Hasse, K., & Spence, C. (2015). The sweetest thing: The influence of angularity, symmetry, and the number of elements on shape-taste matches. *Frontiers in Psychology*, *6*, 1382.

Salgado-Montejo, A., Tapia Leon, I., Elliot, A. J., Salgado, C. J., & Spence, C. (2015). Smiles over frowns: When curved lines influence product preference. *Psychology & Marketing*, *32*, 771–781.

Salgado-Montejo, A., Velasco, C., Maya, C., & Spence, C. (2015). Diseño sinestésico de envases: el envase multisensorial y los cuatro momentos de experiencia Synaesthetic packaging design: The multisensory packaging and the four moments of experience]. *El Empaque + Conversión*, *1*, 22–28.

Salgado-Montejo, A., Velasco, C., Maya, C., Woods, A. T., & Spence, C. (2016). Consumer understanding in the age of Entrepreneurship: Using experimental psychology and online testing to massify research. In *Research Renovation* (pp. 1–8). ESOMAR.

Sand, C. K. (2017). Reducing food waste in packaged food. *Food Technology*, *4*, 126–128.

Schoormans, J. P. L., & Robben, H. S. J. (1997). The effect of new package design on product attention, categorization and evaluation. *Journal of Economic Psychology*, *18*, 271–287.

Spence, C. (2016). Multisensory packaging design: Color, shape, texture, sound, and smell. In *Integrating the packaging and product experience in food and beverages: A road-map to consumer satisfaction* (pp. 1–22). Oxford, UK: Woodhead Publishing.

Spence, C., & Wang, Q. (2015). Sensory expectations elicited by the sounds of opening the packaging and pouring a beverage. *Flavour*, *4*, 35.

Underwood, R. L. (2003). The Communicative Power of Product Packaging: Creating Brand Identity via Lived and Mediated Experience. *Journal of Marketing Theory and Practice*, *11*, 62–76.

van den Berg-Weitzel, L., & van de Laar, G. (2001). Relation between culture and communication in packaging design. *Brand Management*.

van Rompay, T. J. L., Finger, F., Saakes, D., & Fenko, A. (2016). “See me, feel me”: Effects of 3D-printed surface patterns on beverage evaluation. *Food Quality and Preference*. doi:10.1016/j.foodqual.2016.12.002

Vanderroost, M., Ragaert, P., Devlieghere, F., & De Meulenaer, B. (2014). Intelligent food packaging: The next generation. *Trends in Food Science & Technology*, *39*, 47–62.

Velasco, C., Michel, C., Youssef, J., Gamez, X., Cheok, A. D., & Spence, C. (2016). Colour-taste correspondences: Designing food experiences to meet expectations or to surprise. *International Journal of Food Design*, *1*, 83–102.

Velasco, C., Salgado-Montejo, A., Marmolejo-Ramos, F., & Spence, C. (2014). Predictive packaging design: Tasting shapes, typefaces, names, and sounds. *Food Quality and Preference*, *34*, 88–95.

Velasco, C., Wan, X., Knoeferle, K., Zhou, X., Salgado-Montejo, A., & Spence, C. (2015). Searching for flavor labels in food products: The influence of color-flavor congruence and association strength. *Frontiers in Psychology*, *6*, 1–10.

Velasco, C., Woods, A. T., Petit, O., Cheok, A. D., & Spence, C. (2016). Crossmodal correspondences between taste and shape, and their implications for product packaging: A review. *Food Quality and Preference*, *52*, 17–26.

Wan, X., Woods, A. T., Salgado-Montejo, A., Velasco, C., & Spence, C. (2015). Assessing the expectations associated with pharmaceutical pill colour and shape. *Food Quality and Preference*, *45*, 171–182.

Wei, S. T., Ou, L. C., Luo, M. R., & Hutchings, J. (2015). Psychophysical models of consumer expectations and colour harmony in the context of juice packaging. *Color Research and Application*, *40*, 157–168.

Westerman, S. J., Gardner, P. H., Sutherland, E. J., White, T., Jordan, K., Watts, D., & Wells, S. (2012). Product design: Preference for rounded versus angular design elements. *Psychology and Marketing*, *29*, 595–605.

Westerman, S. J., Sutherland, E. J., Gardner, P. H., Baig, N., Critchley, C., Hickey, C., … Zervos, Z. (2013). The design of consumer packaging: Effects of manipulations of shape, orientation, and alignment of graphical forms on consumers’ assessments. *Food Quality and Preference*, *27*, 8–17.

Wheeler, A. (2013). *Designing brand identity: An essential guide for the whole branding team*. Hoboken, NJ, USA: John Wiley & Sons, Inc.

Ybxoll, A., Janson, R., Bradbury, S. R., Langley, J., Wearn, J., & Hayes, S. (2006). Openability: Producing design limits for consumer packaging. *Packaging Technology and Science*, *19*, 219–225.

The Authors

Alejandro Salgado-Montejo, Neurosketch, Colombia and International School of Economic and Administrative Sciences, Universidad de La Sabana, Colombia

Carlos Velasco, Center for Multisensory Marketing, Department of Marketing, BI Norwegian Business School, Norway; Neurosketch, Colombia; and Institute on Asian Consumer Insight, Nanyang Technological University, Singapore

Luis Ariza, Neurosketch, Colombia.

Rodrigo Salgado, Neurosketch, Colombia.

Ana María Moreno, Neurosketch, Colombia.