

## INTRODUCTION

The use of neuroscience and psychological research methodologies has become a hot topic in consumer research. With a high failure rate of new market introductions, despite initial successful testing with traditional sensory and consumer tests, product developers are seeking new approaches to aid in product design. Sensory marketing is a relatively new field but involves creating and influencing the product experience through the senses (sight, sound, touch, taste, smell). The perceptive-hedonic experience of products, routinely measured with liking scores, can be investigated deeper by collecting the emotional responses that color and even influence the experience via the senses. Understanding the impact of taste, smell, sight, sound and feel on overall product perception can help in product development, innovation, design and optimization. Further, it is imperative to marry the brand perception, packaging experience and product attributes (such as sensory attributes or aesthetics) to convey one cohesive message to create the optimal consumer experience. Through measuring the non-conscious consumer response to products, concepts and before/after results it is possible to make decisions for product development, marketing, and in developing product claims. Using a sensory marketing approach as well as neuroscientific and psychological methodologies, it is possible to better understand consumer needs (and product need-gaps) to build better products (a top-down as opposed to a bottom-up approach to research), and consumer technical models for innovation. If we start with understanding consumers using a combination of qualitative and quantitative research with applied consumer neuroscience, then we can build a real story into the drivers of behavior and liking of consumer products.

Neuro- and psychological science can help market researchers and product developers better understand these unconscious motivators and reactions. We will address how different methodologies can be used to assess the holistic consumer experience, bringing together marketing and product development.

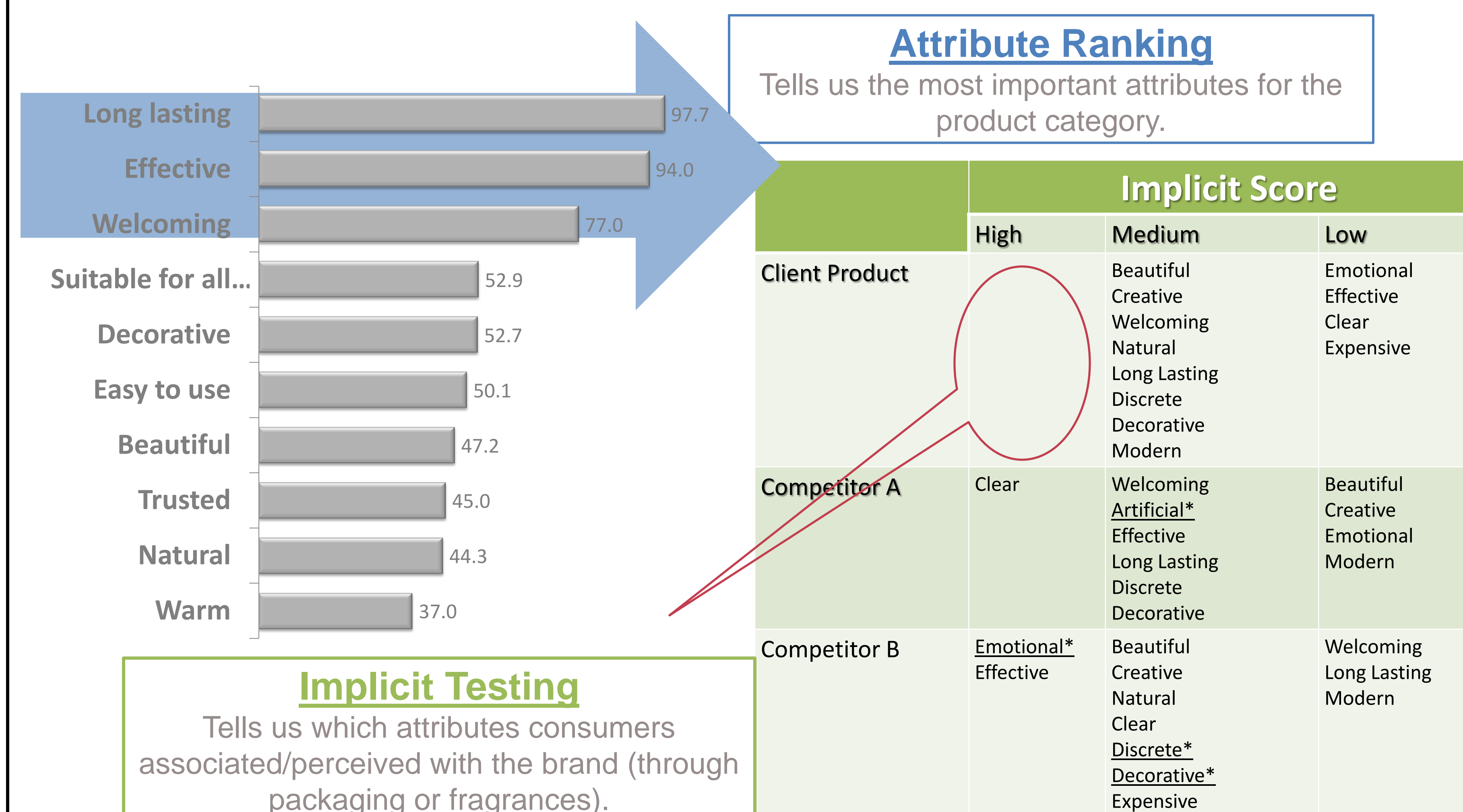
Additionally, cohesion of product messaging is a key issue in the product experience. Agreement must be met between the emotions and the meanings conveyed by a product and the meanings and emotions conveyed by branding through packaging and marketing strategies to achieve a positive and holistic consumer experience.

## Applied Consumer Neuroscience



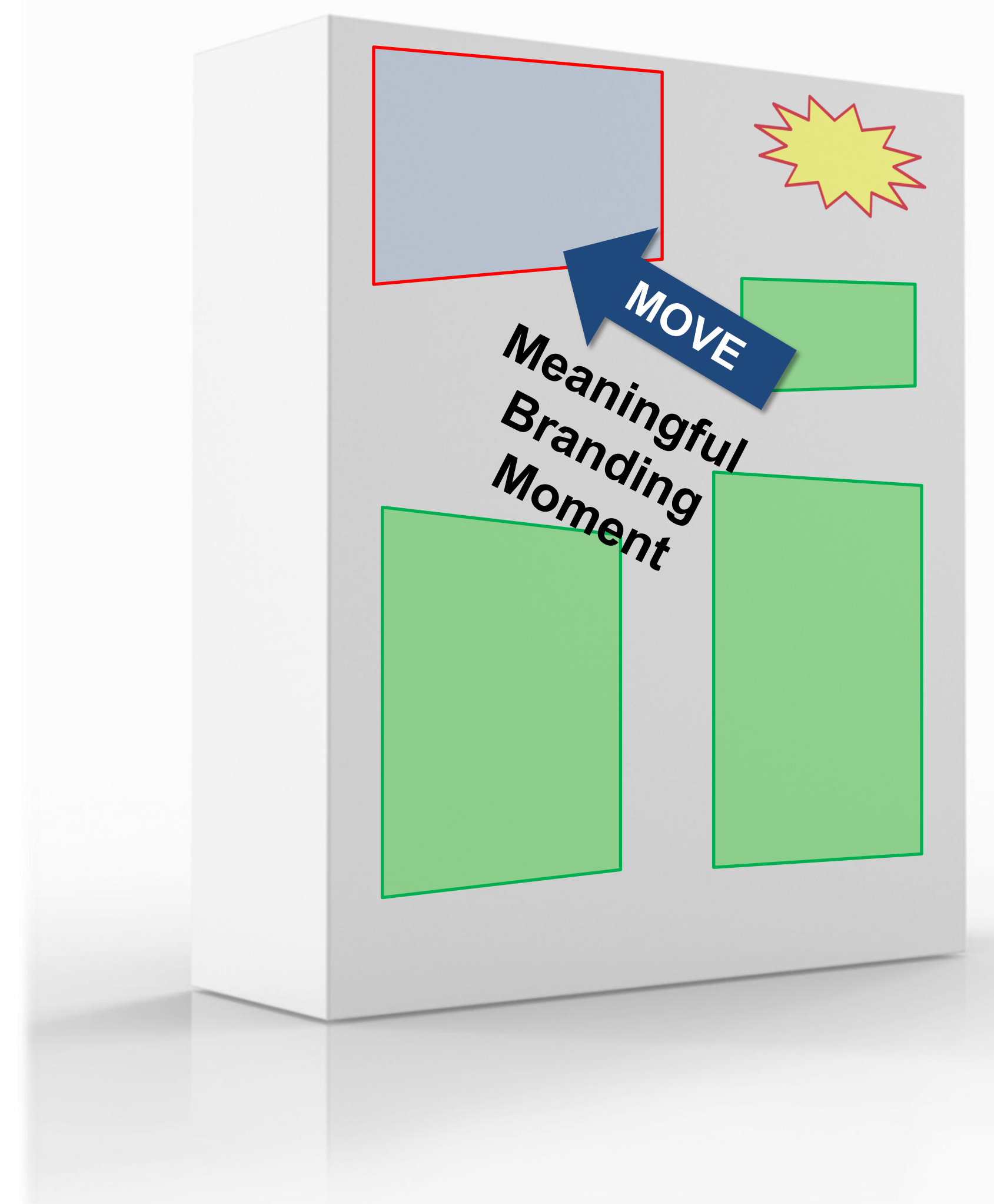
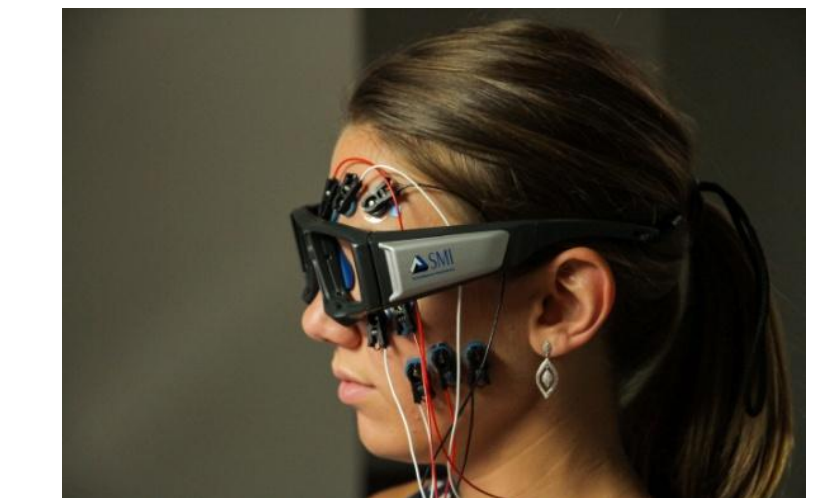
## BRAND ASSESSMENT

Knowing how consumers perceive your brand compared to other brands can provide insight into consumer **need gaps** that can drive innovation and uncover innovation opportunities. To uncover these unmet needs we combine powerful tools from traditional market research, MaxDiff (ranking product attribute words from most to least important), and from psychological research, Implicit Testing (IT), to uncover how brands and products are fulfilling (or not) these needs (need gaps). The MaxDiff tells us which product attributes and perceptions were most important to consumers, while the IT told us how the brands performed on these attributes and perceptions.



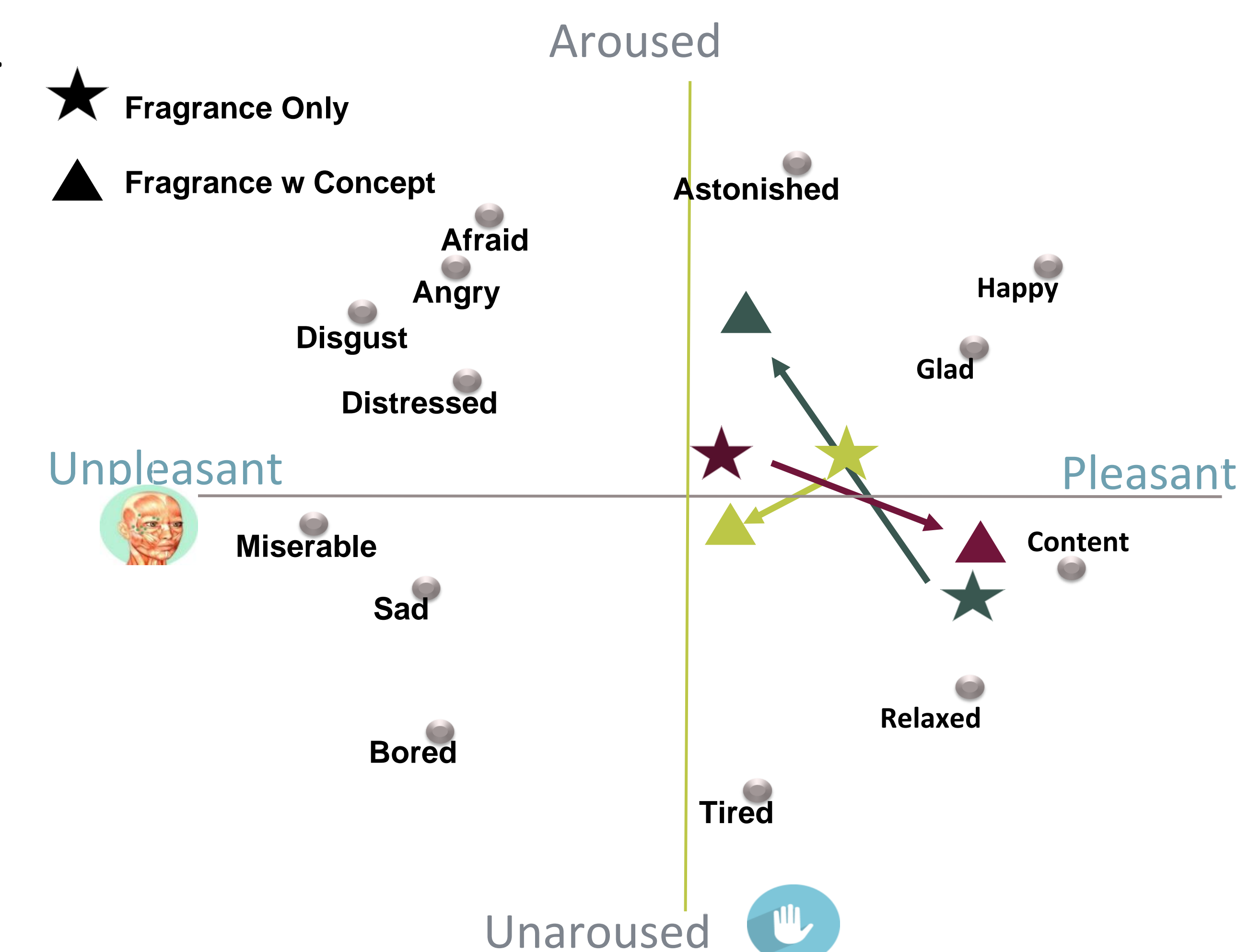
## PACKAGE ASSESSMENT

When the product is seen on the shelf, it creates an immediate impression on the consumer. Perceptions are communicated and expectations are established. Therefore it is important to ensure that these initial impressions are communicated correctly. We assessed consumer reaction to product packaging by having the consumers see and hold the products in packaging while we measured them physiologically. Using autonomic measures for arousal (skin conductance), motivation (heart rate variability), emotional valence (fEMG), and eye-tracking, we were able to observe consumers' emotional responses as well as the specific package attributes that were eliciting positive and negative responses. Findings were used to help identify elements of the packaging that were working well or against building a positive consumer experience and ultimately influencing purchase.



## SENSORY COHESION

Strong brand messaging and attractive packaging are key to enticing consumers to purchase products. But if the product experience does not meet the consumer expectations, then repurchase is unlikely. Additionally, many consumers will smell personal care products on the shelf. Therefore, it is important that key sensory elements such as fragrance match the brand messaging and packaging. We assessed consumer reactions to product fragrance by having the consumers smell the product while being measured physiologically. Consumers were exposed to the fragrance alone and then the fragrance paired with the product concept and packaging to assess both the hedonics as well as the fit of the fragrance to the concept, brand and product. Using autonomic measures as described above for arousal, motivation and emotional valence, we were able to observe consumers' emotional responses and the appropriateness of the fragrance for this product.



**Fragrance Testing:**  
Hedonics testing showed all fragrances as equally liked while neuro testing revealed that **Fragrance 1** induced happiness and **Fragrance 2** was most exciting, **Fragrance 3** however was neutral.

**Fit to Concept:**  
Fragrance 1: happy -> boring  
Fragrance 2: relaxing -> exciting/novel  
**Fragrance 3: neutral -> comforting/appropriate**

We recommended to move forward with **Fragrance 3**, in order to not alienate the consumer base while still introducing a new appropriate fragrance.

