



Product Design and Packaging

Mobile Phone Study

THE BUSINESS CHALLENGE

↳ Consumers of mass-market technology products often slot into two basic categories:

- those for whom a product's design is of paramount value
- those for whom a product's features are of paramount value

A major international manufacturer of consumer technology products sought to understand at a deeper level how differences in mobile phone designs would impact buyer's purchase decisions. After learning about neurological testing's ability to dive to the deep subconscious level of the brain, they commissioned NeuroFocus to conduct full-brain, EEG-based research to uncover consumers' true preferences and prejudices.

NEUROFOCUS APPROACH

↳ Applying neuroscience to market research **provides clients with clear, accurate, reliable, and actionable results that surpass the capabilities of conventional methodologies.** This study served as a prime example of how neurological testing is capable of isolating key findings with a scientific precision that traditional research techniques cannot match.

Only full-brain, EEG-based neurological testing is capable of measuring responses at the precognitive, subconscious level of the mind—before the conscious mind can be influenced by distorting factors such as education levels, language differences, cultural/ethnic backgrounds, and more.

Since the subconscious is where product interest, purchase intent, and brand loyalty are formed, testing there reveals consumers' true responses and indicates their intentions.

NeuroFocus employs three complementary but distinct technologies to capture this critical but elusive information:

- High-density arrays of high-resolution EEG sensors acquire **actual brainwave activity across up to 64 separate sectors of the brain, at 2,000 times a second**
- Pixel-level **eye-tracking** equipment determines the precise location of visual focus
- **GSR (galvanic skin response) sensors** measure variations in the skin's electrical conductance, serving to affirm degrees of emotional engagement

NeuroFocus breaks test results out into three primary NeuroMetrics:

- **attention**
- **emotional engagement**
- **memory retention**

An overall Neurological Effectiveness score is composited from these NeuroMetrics. In addition, three Marketplace Performance Indicators are derived from them as well:

- **purchase intent**
- **novelty**
- **awareness**

STUDY DESIGN ↳ NeuroFocus constructed a comprehensive study regimen designed to uncover consumers' responses to two core design elements:

- the overall dimensions of five different models of mobile phones
- varying designs of the faceplate on five other, different phones

A total of 48 subjects were tested, screened for:

- **Age**
- **Gender: 50% male, 50% female**
- **Segmented equally into:**
 - Phone purchasers who favor features
 - Phone purchasers who favor external design

In addition to the neurological testing conducted to extract these brainwave-based reactions, NeuroFocus also designed a **Deep Subconscious Response test to tease out subjects' precognitive reactions to four key product attributes:**

For the "dimensions" cell:

- streamlined
- long-lasting

For the "faceplate design" cell:

- easy viewing
- delicate

Deep Subconscious Response testing captures unique brainwave 'signatures' generated by certain key words or phrases. By recording subjects' responses prior to exposure to a specific stimulus—in this study, the ten cell phones—and once again after exposure, NeuroFocus can isolate and evaluate any measurable lift that occurs in the second response. This result can be exclusively attributed to the association between the word or phrase and the stimulus in the subject's subconscious mind.

NeuroFocus also conducted an articulated response study to parallel the neurological testing performed. The intent was to determine levels of resonance and dissonance between the two methodologies.

KEY RESULTS AND INSIGHTS

↳ In the “dimensions” portion of the study, NeuroFocus’ testing revealed three key findings:

- The segment who value design over features responded subconsciously most strongly to the two phones with the smallest overall dimensions. Both achieved the highest neurological effectiveness scores among the five phones tested, and yielded the highest purchase intent scores as well.
- Those subjects for whom features rank above design responded most strongly to two phones with intermediate dimensions. The neurological effectiveness scores matched the “design” segments’, but the purchase intent score was actually higher for one of these phones.
- In the Subconscious Response test, for both segments the concept “long-lasting” resonated highest for the two largest phones, while the concept “streamlined” resonated highest for the smallest phone

In the “faceplate design” portion of the study, NeuroFocus’ testing revealed three key findings:

- For the majority of participants, one of the phones with the largest faceplate had the highest neurological effectiveness, and the highest purchase intent
- Between the two segments, the ‘design’ group scored a higher effectiveness rating for the phones with the smallest faceplates
- In the Subconscious Response test, the “easy viewing” concept resonated for the largest faceplates, while “delicate” resonated least for the phone with largest dimension

Gender differences:

Dimensions category:

Male/NeuroMetrics scores:

- the largest phone scored the highest for attention
- the next-smallest phone scored highest for emotional engagement
- an intermediate-size phone scored highest for memory retention

Male/Marketplace Performance Indicators:

- an intermediate-size phone scored highest for purchase intent
- the next-smallest phone scored highest for novelty
- the largest phone scored highest for awareness

Female/NeuroMetrics Scores:

- two intermediate-size phones scored highest for attention
- the smallest phone scored highest for emotional engagement
- an intermediate-size phone scored highest for memory retention

Female/Marketplace Performance Indicators:

- the two smallest phones scored highest for purchase intent
- an intermediate-size phone scored highest for novelty
- an intermediate-size phone scored highest for awareness

Faceplate category:

Male/NeuroMetrics:

- the phone with the smallest faceplate scored highest in attention
- the phone with the next-largest faceplate scored highest for emotional engagement and memory retention

Male/Marketplace Performance Indicators:

- a phone with an intermediate-size faceplate scored highest in purchase intent
- two phones with intermediate-size faceplates scored highest for novelty and awareness

Female/NeuroMetrics:

- the phone with the smallest faceplate scored highest in attention
- a phone with an intermediate-size faceplate scored highest for emotional engagement
- a phone with an intermediate-size faceplate scored highest for memory retention

Female/Marketplace Performance Indicators:

- Two phones with intermediate-size faceplates scored equally highly for purchase intent
- the phone with the smallest faceplate scored highest for novelty
- a phone with an intermediate-size faceplate scored highest for awareness

Articulated response results:

The results of the self-reporting component of the research largely matched the findings drawn from the neurological testing components:

- in the “dimensions” category, consumers assigned preferences for the smaller phones
- in the “faceplate size” category, consumers also assigned preferences for the phones with the smaller faceplates

CLIENT ACTIONS ↳ Based upon their assessment of the value of this brainwave-based research methodology and its applicability to many of the company’s other consumer electronics product offerings, the client commissioned an on-premises NeuroLab. That facility has been completed, staffed by NeuroFocus, and is currently being utilized on a full-time basis by all of the client’s consumer products divisions.

BUSINESS VALUE DELIVERED

↳ This research produced findings that, for the first time, reflect **how consumers actually value key elements of mobile phone design, where it matters: at the deep subconscious level of the brain.** The implications are clear for the product design, manufacturing, and marketing areas. Smaller/streamlined are attributes that consumers of both genders assign as top desirables, although the range of desirable size is extended among some segments to include larger versions.

NeuroFocus' recommendation was to leverage this knowledge for maximum impact by highlighting overall dimensions and faceplate size in marketing materials (especially at point-of sale). Knowing—with scientific certainty—that consumers attach high value to those characteristics provides a specific foundation for branding, product feature messaging, and packaging. Driving those points of differentiation across all consumer touchpoints, from web sites to advertising to in-store marketing, can have a synergistic effect on consumer perceptions, purchase intent, and brand loyalty.

BEST PRACTICES AND LESSONS LEARNED

↳ A slight trade-off was observed between the “streamlined” and “long-lasting” attributes, with perceptions registering that smaller might mean less durable. NeuroFocus' recommendation on how best to address this issue was to develop messaging about how advanced manufacturing techniques can now produce devices that are not only smaller in size but also more sturdy and reliable than ever before.

Similarly, a perceived trade-off was discerned among test subjects regarding the “easy viewing” and “delicate” attributes. To address that issue at the subconscious level of the brain, NeuroFocus recommended that messaging about the proven technology behind touch-screen devices be integrated into messaging across all consumer touchpoints.



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