

The End of Creative Guesswork

How AI and neuroscience are unlocking
a path to high-performing creative

In marketing, we call creative an art, not a science. What if that's the problem?

Creativity might be your organization's secret weapon, but it's still driven by gut feeling. Despite its potential impact, creativity remains the least optimized variable in marketing campaigns.

THE REALITY IS SOBERING:

Most creative simply doesn't land. Research shows 89% of ads aren't noticed or remembered². Nearly 4% of those who register are remembered positively², while 7% leave a negative impression². Even when you're confident in your creative, the odds remain just that...odds.

As GenAI tools level the playing field, creativity that works can cut through the noise. In a world where many ads are forgotten, brands balancing creativity with accountability may well pull ahead.



Creativity is the last legal unfair competitive advantage we have.¹

– Dave Trott



¹The Irish Times, *Creativity is the last legal unfair competitive advantage*, 2021.
²David Trott, *Creative Blindness*, 2019.

Creative momentum gets lost to subjective decisions

- Everyone has personal opinions, tastes, and preferences, including the buying teams you're trying to win. But there's no guarantee the two will align.
- Too many cooks in the kitchen can lead to stalled creative, more revision cycles, increased time and budget, and ultimately, campaign underperformance.



An enterprise marketing team develops two bold, creative concepts for a new AI platform. Internal feedback is split, and without a shared decision-making framework, they default to a focus group. The results are mixed. One concept tests better in one region, and the other elsewhere. Leadership leans into personal preferences. The team is stuck. After weeks of compromise and rework, they launch a hybrid. It's polished and safe, but lacks the clarity and punch of either of the originals.



The science of creative impact

Creative testing used to revolve around the focus group: marketers gathered a handful of consumers behind a one-way mirror to share thoughts, feelings, and gut reactions to new campaigns. For decades, it was considered the gold standard for gauging an idea's resonance.

But as marketing has grown more complex and audiences more distracted, the cracks in this approach have started to show. Today's creative environment demands speed, scale, and nuanced understanding. Delayed insight leads to decisions based on incomplete or misleading feedback.

01

Traditional focus groups are slow, biased, and cost-prohibitive

Focus groups take time to organize, cost a lot to run, and are shaped by groupthink and selection bias. They rely on conscious recall and self-reporting, which are rarely comprehensive. In a fast-paced market, waiting weeks for uncertain feedback is both inefficient and a performance risk.

02

Most of us don't know why we like or dislike something

People struggle to explain their reactions. Interpretations and decisions can be driven by emotion, memory, and context, and self-reported feedback is often unreliable. When creative choices are shaped by these inarticulate impressions, even strong ideas can miss the mark. As Dan Ariely put it, humans are “predictably irrational”, a concept grounded in years of behavioral economics research³.

³Dan Ariely, *Predictably Irrational*, 2025.

Calibrating creativity for maximum impact

None of these are new problems.

For decades, we've been told that technology would transform creative decision-making. Promises of groundbreaking innovation based on the latest adtech have come and gone, only to return again. But the reality never matched the hype.

This time, we believe it's different.

Advances in AI and neuroscience have converged to give marketers greater clarity. We can now simulate how an audience responds to creative content, based on brain activity and eye movement. With this data, we make associations to focus, engagement, cognitive load, and memory retention.

Here's how it works:

01

Brainwave data can be correlated with what people report feeling and processing, and how well detail is recalled after brief exposure.

02

Eye-tracking data can show where attention goes what viewers notice, miss, or dwell on.

Large datasets comprised of these signals can be processed by AI models to predict creative performance before a campaign even launches.

Creative intelligence at work

As part of Intercept Labs, we've partnered with the world's leading neuroscience vendors to pioneer the next generation of creative testing and optimization. The result is Intercept Cortex, a platform that puts behavioral science at the heart of creative decision-making.

Cortex is powered by AI trained on the responses of over 300,000 people worldwide, using both EEG (brainwave) and eye-tracking studies.⁴ This training draws on years of academic research and real-world testing in consumer neuroscience, resulting in a platform to simulate human response.

When you upload creative, Cortex quickly generates heatmaps and performance scores, predicting how an audience sees, feels, and remembers your content.

A powerful dataset

Our database is balanced across a 50/50 split between male and female. It represents individuals aged 18–55 from the USA, UK, EU, Asia, and South America. With over 100 billion behavioral data points (and counting), Cortex reflects diversity of the global marketplace. The platform is continuously updated, adding roughly 100,000 new data points every year.⁴

Tested for more impactful creative

Data is collected in controlled, 5-second exposure windows, at the earliest moments of attention and impression. The approach combines experimental rigor, peer-reviewed science, and strict standards of data hygiene, including raw EEG filtering, quality thresholds, and cross-sample normalization.



95%+

accuracy in AI-based
eye-tracking predictions⁵



100B+

data points from real
human brain responses
and visual behavior^{4,5}

⁴NIH, *Neuroscientific Analysis of Logo Design: Implications for Luxury Brand Marketing*, 2025.

How Cortex scores creative

Cortex evaluates every asset across four key dimensions:

- **Attention:** Records what the viewer sees first, how long they focus, and the visibility of key elements. Powered by eye-tracking data.
- **Emotion:** Assesses emotional resonance. E.g., does the content generate positive engagement? Driven by brainwave and implicit response data.
- **Cognition:** Evaluates clarity, ease of understanding, and potential cognitive overload. Based on comprehension and learning metrics.
- **Memory:** Predicts whether viewers will retain the message and brand after brief exposure. Validated through recall modeling.

Each simulation delivers actionable benchmarks and optimization recommendations, comparing your creative against industry standards and top performers.

Practical use cases

- **Pre-flight creative readiness reports:** Assess how your creative will perform before launch and spot weaknesses in clarity, focus, or engagement.
- **Neuroscience-based heatmaps:** Visualize where eyes land and what gets missed.
- **Ad clarity and attention scoring:** Quantify the clarity of your message and your ad's attention-grabbing power.
- **Creative variant comparisons:** Compare multiple creative versions side by side to find the top performer.
- **Creative optimization recommendations:** Get targeted, AI-powered suggestions to improve layout, CTA visibility, messaging hierarchy, and more.



⁴NIH, *Neuroscientific Analysis of Logo Design: Implications for Luxury Brand Marketing*, 2025.
⁵Neurons, *The science behind Neurons*, 2025.

The new rules for B2B marketing leaders

The move from intuition to intelligence can improve outcomes and transform the way marketing organizations operate. Creative becomes a powerful lever for differentiation, alignment, and performance. The transformation begins with asking the right questions: internally, among agency partners, and across the organization.

Here's a practical framework for B2B leaders:

Checklist for creative accountability

01

How do we currently quantify efficacy of creative?

Are we using behavioral data and neuroscience-backed insights, or relying on click-through rates, gut feel, and isolated feedback? Accountability demands that we tie creative to business results.

02

Do we rely on preference or performance data to validate creative decisions?

It's natural for stakeholders to have opinions, but performance data trumps preference. AI and Neuroscience let us move beyond 'I like it' or 'it feels right' to measurable, predictive indicators of what can work in market.

03

How much time and budget do we spend on creative revisions?

Review cycles and subjective debates can burn resources and erode morale. Data-driven creative lets teams focus their energy where it matters: building assets that move the needle.

04

How much of our A/B testing budget is compensating for underperforming creative?

Testing variants is vital, but it's more efficient to launch with creative validated against a dataset.

05

Can we defend our creative direction in front of sales, finance, or the board?

When creative is optimized and validated, marketing leaders can speak the language of outcomes as well as ideas. This shifts creative from a perceived cost center to a demonstrable growth lever.

After the checklist: how to align your organization

Asking questions is the easy part.

To realize the potential of creative intelligence, marketing leaders must champion a new kind of conversation, one that fuses creativity with science and demands more from every asset. Consider auditing your creative process and mapping out how creative decisions are made today.

Your business can then adopt behavioral benchmarks. A neuroscience-powered platform such as Intercept Cortex can score and compare assets before, during, and after launch. Combined with investment in training and upskilling, you reap the benefits of AI for your creative.

Your organization beyond creative guesswork

Applying the tools of creative intelligence changes the dynamic:



Bringing science into the creative room, there's no need to argue over gut feeling. Teams can evaluate what's working and what isn't before campaigns reach the market.



Faster, more confident decisions are possible, to reach consensus faster. Creative reviews shift from 'what do we think?' to 'what do we know?', translating to fewer meetings and more execution.



Reducing waste increases ROI when you validate creative up front. Marketing teams can reduce spend on underperforming campaigns and costly last-minute revisions. Media dollars could go further when creative is already optimized.

As the landscape is flooded with AI-generated content, these qualities can differentiate leaders.

CMOs and brand leaders make a difference

Creative intelligence bridges the gap between art and measurable business outcomes. In a commoditized landscape inundated by AI content, standing out requires a disciplined approach:

Differentiate with precision

Generative AI tools make producing creative easier than ever, intensifying competition for audience attention. Teams that ground their creativity in data-driven insights and behavioral science can achieve meaningful differentiation.

Align teams around proven results

Creative decisions should be defensible beyond personal preference. From sales to finance, when your stakeholders see creative justified with real behavioral data, alignment can accelerate, investments can become easier to defend, and confidence can grow across the business.

Empower creativity without guesswork

Actionable, data-driven feedback frees creative teams from continuous revision cycles. Instead of second-guessing decisions, they can confidently focus on innovative, impactful ideas.

Reclaiming creativity as a strategic advantage

As Dave Trott famously said, "Creativity is the last legal unfair competitive advantage we have¹." In the age of AI, that advantage includes a new toolset that blends inspiration with validation.

For B2B marketing leaders, the imperative is clear: bring data and creativity together and lead the charge into a more accountable future. The brands that do can win more attention and keep it.



Interested in discovering exactly how AI and neuroscience can transform your creative efficacy?

[Book a call with Intercept](#) to explore how Cortex optimizes for marketing success.

¹The Irish Times, [Creativity is the last legal unfair competitive advantage](#), 2021.