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Quirk's Marketing Research Review
JANUARY/FEBRUARY 2024
VOLUME XXXVIII NUMBER 1
WWW.QUIRKS.COM

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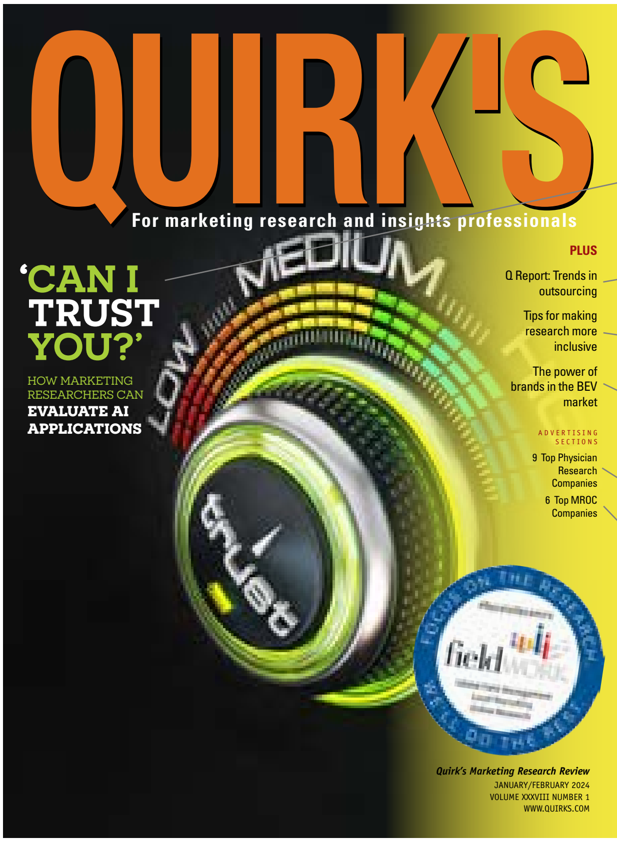
Quirk's Marketing Research Review
January/February 2024 • Vol. XXXVIII No. 1



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In Case You Missed It

news and notes on marketing and research

••• new product research

Images are better shorthand for line extensions

Research from the Ehrenberg-Bass Institute for Marketing Science at the University of South Australia exploring how colors and images can help identify line extensions has found that images, rather than colors, are much better at communicating product variety.

For the article, "How to signal product variety on pack: an investigation of color and image cues," perceptions of 1,853 customers to 576 products in the U.S. packaged goods market were analyzed. The study showed that only 56% of product varieties had a color that was commonly expected by category buyers.

"As images are less ambiguous, they have more power to convey variety than colors. Yet for marketers, it's common practice to signal a new line extension by mimicking the colors used by competitors," says article co-author Ella Ward. "We recommend using images where possible and protecting the master brand by keeping variant colors to 25% of the pack face or less."

The research draws upon empirical consumer research on how consumers identify and recall information about brands in their memories. "In our study we found that competing brands use similar colors to signal 84% of the variant types analyzed but consumers associated a color with only 56% of those types," Ward says. "Concerningly, there was a disconnect between colors used in practice and those expected by customers, with these aligning only 16% of the time. When we assessed images however, we found that 23% more consumers were able to link these to product variants."

••• shopper insights

Bring back the showrooms?

New research finds renewed value in retailers returning to an old concept – the store showroom – particularly when larger, big-ticket durable goods are involved.

Using data from more than 380,000 transactions at a leading Italian furniture retailer, researchers studied whether customers' sensitivity to delivery lead time – also known as fulfillment – differed when sales were made through store showrooms, online or by phone using a printed catalog.

Study findings suggest that retail showrooms make customers less sensitive to lead time than online or catalog channels. "When people go into a showroom and they see the product and talk to store employees about it, they simply don't care as much about the long wait time," says Fei Gao, co-author of the Management Science article, "Channel changes choice: An empirical study about omnichannel demand sensitivity to fulfillment lead time."

"What we find is that you don't really need to speed up the delivery process too much; you can make better use of your stores," Gao says. "Once people have seen the product personally, they know more about it and it reduces what we call 'information uncertainty.' Especially for furniture, you don't want to buy something that's too big for the space, and when you're buying online, you may not be sure if it will even fit."

By Joseph Rydholm, Quirk's Editor

Area man recounts CX nightmare

Qualtrics' recent 2024 Consumer Trends Report highlighted the value of listening to customers as a prerequisite for delivering an outstanding experience. Reading through the report (which you can download for free at the company's website after registering), I couldn't help but think of my own recent trip to the particular hellscape known as telecommunications tech support.

A full retelling is beyond the scope of this space (and, frankly, it would be cruel to subject more people beyond my poor family to my detailed and profanity-laced recaps) but I'll try to keep things brief.

This past fall, a crew excavating for a different utility severed the line through which our tiny lake home gets its glacial wi-fi service. Calls to the offending company went nowhere so I contacted the internet provider, Brightspeed – which is in the process of taking over the systems of CenturyLink, our original provider – to see if they could dispatch a tech to take a look.

Over the next two months I reached a combination of almost two dozen phone calls, online and app-based chats, Twitter/X DMs and in-person interactions before the problem was finally resolved.

Qualtrics trend: Digital support is the weakest link in your customer journey.

Brightspeed has myriad feedback/support systems – digital, analog, you name it – and I availed myself of every one I could find and still had an awful experience.

It was, in a nutshell, what Strother Martin's prison warden character in the film "Cool Hand Luke" so memorably said was "failure to communicate." Service appointments were missed or cancelled with no warning. Attempts to later check on the appointment status on the app or online either yielded no information or unhelpfully vague language. When the technicians did show up they often had no understanding of the situation – or the authority or ability to fix it.

Eventually, a temporary line was installed above ground but getting it buried required another round of calls, chats and texts.

Contrast that to a more recent experience with our home internet. Late one Sunday afternoon our router started acting up and all of my troubleshooting wasn't doing the trick. I called the internet provider, US Internet, a small, locally based firm, and worked with a technician for about 40 minutes with no luck. "Well," she said, "we can have someone stop by between now and 8 p.m., if that works?"

Wait, you mean I don't have to endure long waits and garbled hold music, phone representatives who seem incapable of uttering any sentences that aren't on their scripts, missed appointments, empty promises and buck-passing?

An hour later the tech arrived, swapped out our router and we were back online.

Now, I'm aware of scale and I get that US Internet's service area is tiny compared to Brightspeed's and that its customer service team is probably fielding a fraction of the calls Brightspeed receives. And I realize that if every Brightspeed rep spent 40 minutes on every call, customer satisfaction scores would crater even more, so I understand why big companies employ the triage approach to handling customer problems.

(It would be less galling if all of these companies didn't crow so much about how much they care about us and how committed they are to providing excellent service. Actions speak louder than words and their actions are often a middle finger to every customer. Better to just shut up.)

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Joe Rydholm can be reached at joe@quirks.com

Qualtrics trend: Consumers don't give feedback like they used to…so companies must listen in new ways.

Of course, after all of this I got the obligatory "How'd we do?!" survey from Brightspeed. I didn't bother to respond. I've already said and written enough. To Qualtrics' point, Brightspeed could "listen in new ways" to my experience by doing a CSI-like forensic examination of all the words of explanation and complaint I typed or spoke into their various existing feedback systems but that's not realistic – at least not yet. (AI, anyone?)

One bedraggled Brightspeed tech I spoke with apologized profusely for my travails and said that the integration process has been full of growing pains. He swore that when he has brought up problems to Brightspeed management they have been sincerely interested in trying to do better. Dear god, let's hope so.

QUIRK'S

OUTLOOK 2024

COMMENTARIES BY INDUSTRY LEADERS ON THE YEAR AHEAD

Welcome to Quirk's Outlook 2024! We asked research companies to offer their viewpoints on a range of topics – from artificial intelligence to mental health care – to delve into some factors that will make an impact in the year ahead.

Canvs AI discusses how AI and text analysis can help researchers better understand consumers. aha insights shares how its insights technology can address large amounts of data. Decision Analyst offers eight steps for better advertising. CIRQ explains the history and importance of ISO certification. Veridata Insights and Clarafy Research Solutions discuss the impact research can make on mental health care. Fuel Cycle explores how AI can be effectively implemented to gather insights. Glimpse shares six AI adoption tips for insights professionals.

We hope this section will provide a glimpse into 2024 and a sample of tips and tricks to make this year a success!

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Unlocking consumer empathy at scale with generative AI

How AI is supercharging storytelling and elevating insights

JARED FELDMAN
Founder and CEO, Canvs AI

While it may seem ironic, one of the biggest benefits of generative artificial intelligence for insights leaders may be in helping to better understand how consumers really feel and why.

Consumer empathy – deeply understanding customer emotions and perspectives – has become a strategic imperative. The preeminent behavioral economist Daniel Kahneman, author of "Thinking, Fast and Slow," found that upwards of 90% of human decisions are guided by emotion over pure logic. Thus, understanding how people feel is crucial for influencing choice and behavior. For organizations looking to build empathy with customers and guide better decisions, capturing and analyzing emotional feedback is a strategic priority.

Yet at the very moment organizations need greater alignment with consumer emotions, they face a tidal wave of unstructured feedback that hides these insights in plain sight. By 2025, over 80% of customer feedback will be unstructured across sources like survey and community verbatims, chat logs, social posts and reviews. But analyzing emotion and meaning from text at scale has remained out of reach for most businesses. Most researchers found "traditional" text analysis solutions to be over-complex and under-accurate.

This problem is well-illustrated by one of the most "structured" forms of unstructured customer feedback: open-ended survey questions. Although these questions make up a small fraction of a typical survey, they offer a powerful platform for respondents to freely express their thoughts and feelings. Yet, despite their potential, even these responses are underutilized as a source of key insights due to the inefficiencies and inaccuracies inherent in text analysis.

Now, consider the vast ocean of customer feedback that exists outside of formal feedback channels such as consumer reviews, online chat logs, customer support interactions and social media comments. If the open-ends from surveys aren't being analyzed, these sources don't stand a chance. In a nutshell, organizations are lacking the essential tools to decode and utilize one of their most strategically valuable data sets.

This tension between the strategic need for consumer empathy and the operational challenge of extracting insights from text defines one of the most important opportunities for generative AI in the enterprise today. When grounded in real consumer data (the kind companies already have mountains of), generative AI can act as an empathy engine – revealing both the emotions and needs hidden within unstructured text.

Enter generative AI for consumer insights

It's an understatement to say that AI has captured the current professional zeitgeist, and naturally has leaders in nearly every field thinking about the implications for their companies and work. Consumer insights and customer experience management are not immune. At first glance, generative AI may seem out of place in a discussion of text analysis (which implies understanding text that's been written by humans), but current large language models (LLM) are nearly as good at comprehending as they are with generating (part of the magic of a ChatGPT is the natural language interface). Additionally, LLMs can be combined with AI-powered natural language processing (NLP) and sentiment analysis to help accelerate the understanding and organization of text. Finally, the popularization of generative AI has raised awareness about the importance and power of unstructured data analysis for business value.

The AI advantage: Turning feedback into foresight

It's perhaps ironic that the business value of AI for insights is to enable human understanding by improving the way organizations understand consumer feedback. But understanding what's being "said" in unstructured comments alone isn't enough; organizations need multiple layers of analysis to put what's being said into context. Context like the emotions being expressed around a topic or experience. Context like the differences between various segments of your audience (or sample). For example, what are the meaningful generational differences between how ad creative is consumed? Or perhaps what are the meaningful generational connections?

So how should insights leaders think about the tangible return on their AI insights investments? In working with hundreds of insights groups, we've identified three primary categories of financial value from AI technologies insights:

1. **Deeper insights and consumer empathy.**
2. **Insights team productivity (i.e., time savings) and happiness.**
3. **Data value enhancement.**

Deeper insights and consumer empathy through text analysis

The saying goes that you miss 100% of the shots you don't take, but you also miss 100% of the insights you don't analyze. Because unstructured text has been challenging to analyze consistently at scale, many organizations aren't using text to generate core insights, instead they are typically cherry-picking verbatims to add to reports. By lowering the complexity barrier while increasing accuracy and nuance, text can now be viewed as a primary source of insights. In fact, because open-ended responses provide a less restrictive form of feedback, research and CX teams can strategically incorporate more open-ended feedback and potentially reduce survey length and fatigue as a result.

Capturing emotion is another important benefit of AI-powered text analysis. Advanced AI can not only detect positive and negative emotions, but it can also identify and measure nuanced emotional feedback. The AI can determine that the respondent expressed positive feelings but also that the product evoked happy memories and nostalgia. This kind of nuanced emotion analysis is particularly valuable for creative and product testing.

The power of analyzing unstructured text really emerges when these lenses of analysis combine to reveal how consumers feel and why. As such, the insights discovery tools to empower the exploration of data are nearly as important as the analysis of the text itself.

Insights productivity and happiness

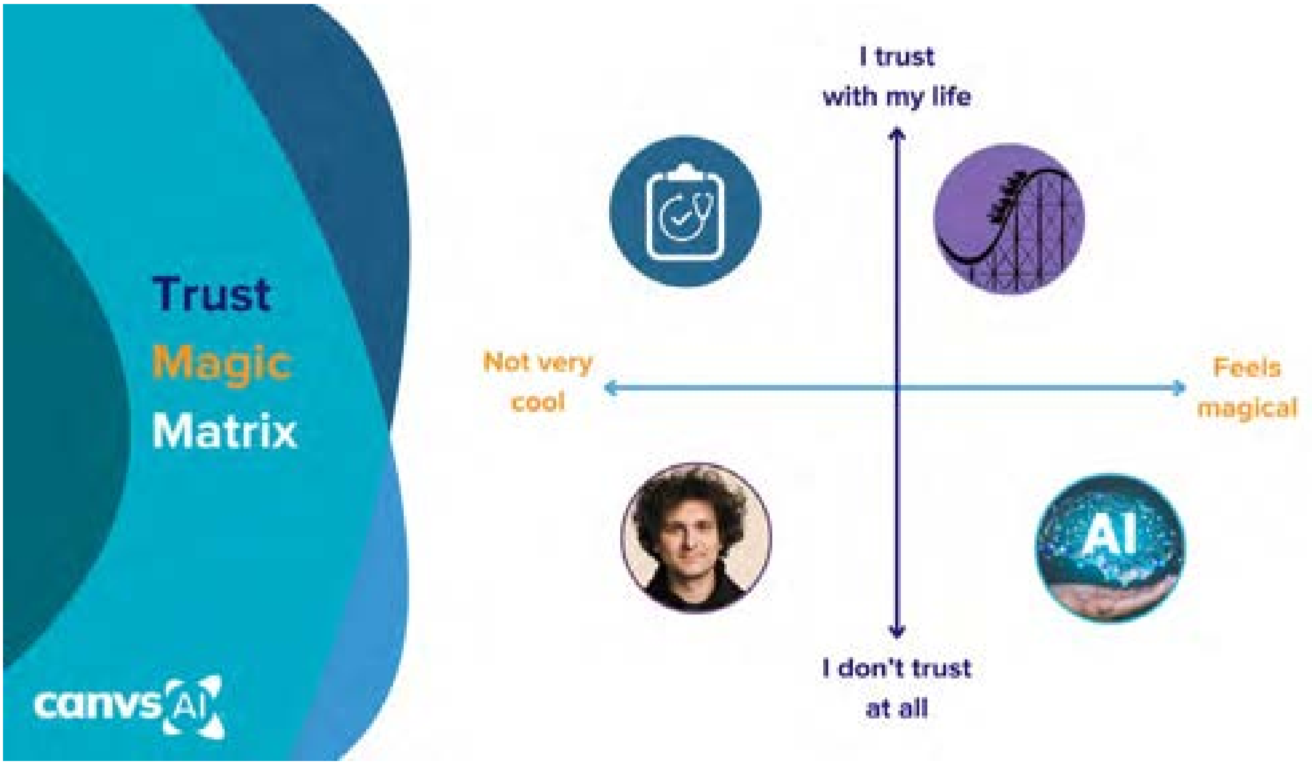
Any organization that's "coded" the verbatims from a survey knows how time consuming and tedious this work can be. If not completed internally, the work is often outsourced to specialist shops, adding time and expense to research cycles. Naturally, this approach isn't even feasible for very large-scale data sets like product reviews and NPS/CSAT studies that generate thousands or even tens of thousands of responses on an ongoing basis. Given this backdrop, the productivity gains from automating the analysis of open-ended text are likely obvious. Users of Canvs, for example, report reducing human work time from weeks to just an hour. But perhaps more importantly, automation tools get your most valuable asset – your people – out of the weeds of reading verbatims and into higher-level analysis of what the text means and what to do about it. The quality of life improvement from this alone can be significant!

As AI text analysis becomes integrated into the research and/or CX technology stack, previously unstructured text data can be structured into topics, themes and emotions and operate as a "first-class" data citizen for further analysis, like demographic crosstabs or observing trends over time (via longitudinal tracking studies, etc.). This is where AI starts to impact the value of the underlying data set.

Data value

Data has long been called the "new oil" of our modern economy. This analogy is primarily meant to convey that data fuels the engine of decision-making and value creation (the way the "old oil" turned the gears of the mechanical age). But to take the analogy a bit further, AI helps make data a more productive asset by maximizing both access and the decisioning power of data. We've already touched on the access issue of unstructured text, where AI expands the available use cases by reducing complexity and time from analysis. But AI, particularly generative AI, is also helping organizations use that data more effectively by providing an intuitive, natural-language interface. AI is supercharging data fuel efficiency.

In practical terms, insights and CX organizations can do more with their consumer feedback, extracting the maximum insights value possible. For example, you can distill the nuance of how customers describe a particular



experience or product, ask for structured recommendations from the AI or even generate buyer personas and new product ideas. You've suddenly turned a data set of unstructured text comments into an interactive customer panel combined with a research analyst.

But what about hallucinations?

As "Ethical Machines" author Reid Blackman notes in a recent Harvard Business Review article on generative AI, hallucinations are a significant impediment to trust and ultimately the adoption of generative AI in any business-critical context. As a naturally skeptical and evidence-based cohort, insights professionals are rightly cautious of putting their faith in AI-generated insights. A mental model for thinking about this trade-off is what we've coined as the Trust-Magic Matrix. The horizontal axis runs from "not magical at all" to "full-of-wonder level magic," while the vertical axis spans from "don't trust at all" to "trust with my life." Most applications of generative AI sit at the bottom right quadrant of the matrix; it feels magical but we're not quite ready to trust it with our lives. The job of smart applications of AI may be to find ways to build trust into the systems despite the inherent limitations of LLMs.

At Canvs AI, we've been applying AI to the challenges of understanding modern language for many years and have taken the approach of providing full transparency into the specific verbatims being analyzed, taking a trust-through-verification approach. Additionally, restricting analysis to just the data you bring into the system provides another layer of safeguard. We've found that providing the ability to customize the system through rules allows researchers to guide the analysis in partnership with the AI. We believe ultimately that the benefits of AI automation for text analysis significantly outweigh the drawbacks, particularly when some thoughtful data validation and citations can be incorporated.

The future of insights: Empathy elevated

As we move towards a future dominated by unstructured feedback, AI's role in turning this feedback into valuable insights will become increasingly crucial. Understanding the 80% of consumer feedback that is unstructured unlocks organizations' abilities to achieve consumer empathy. By unlocking the true potential of consumer feedback, businesses can become more customer-centric, responsive and ultimately successful.

canvs.ai

QUIRK'S OUTLOOK 2024

ADVERTISING RESEARCH

Decision Analyst

Unlock the power of advertising

Eight steps to creating better advertising

JERRY W. THOMAS
President and CEO, Decision Analyst

Advertising is all about changing human behavior. It's a powerful tool, if used properly, to persuade people to think and act differently. Advertising can be used to achieve evil ends but it can also be used to pursue noble purposes and great causes. For example, advertising can encourage us to drink alcohol responsibly, buckle our seatbelts, drive within the speed limit or go vote. Advertising can also suggest that we eat more chicken and buy more peanut butter. In the hands of skillful marketing executives and expert researchers, the promise of advertising is the power to change the world.

Advertising can:

- build brand awareness
- set the consumer's mental agenda (what they think about)
- communicate facts and information
- change behavior through the power of suggestion
- evoke strong emotions and link those emotions to the brand
- create a model or ideal that consumers choose to identify with

So, how can a client, advertising agency and research agency work together to create effective advertising?

1. STRATEGY
Sound strategy, based on facts and evidence, is essential to the creation of effective advertising. Good upfront research plays a crucial role in identifying strategy possibilities. Positioning and messaging concepts can be tested among target audiences to create a map, or a blueprint, for a brand's advertising. Strategy concepts should be developed and tested before any advertising is created.
2. THE RIGHT TARGET MARKET
Targeting is a key element of strategy and deciding who to target is not a simple matter. Identification of an optimal target market can be determined as a byproduct of strategy concept testing. Who is responding most positively to the winning strategy concepts? We have seen great advertising campaigns fail because they were aimed at the wrong audience.
3. ADVERTISING TESTING
It's best to test new creative at the storyboard or animatic stage (i.e., the rough stage) and at the final production stage. Early-stage testing allows rough commercials to be tweaked and fine-tuned before you spend the big dollars on final production. Testing the finished commercials gives you extra assurance that your advertising is on strategy and working. Testing also provides the diagnostics to help your creative team take a marginal commercial and edit it into a much stronger one. Testing (or pre-testing, as it's sometimes called) is the feedback loop that leads to constant improvement.
4. ONE TESTING SYSTEM
Use the same testing system consistently. There is no perfect advertising testing system. Some are better than others, but any system will help improve your advertising. The secret is for everyone to learn a testing system so that they fully understand how to interpret the results. The better everyone understands how the system works, the better advertising will become in the long run.
5. COMPETITIVE BENCHMARKING
General normative databases are not good benchmarks to evaluate your advertising. Norms tend to be too low a bar because normative data contains many failed commercials. The long-term objective is evolving **action standards.** One way to develop good action standards is competitive benchmarking.

Test your major competitors' commercials so you can make sure your advertising is better. Through this type of competitive benchmarking, you can begin to develop good action standards (i.e., test scores that will lead to increased sales).

6. **MODELING**
   Use a mathematical model or scoring system that takes multiple measures into account and derives an overall score for each ad execution. It doesn't matter that an ad has great persuasion if it does not register the brand name. It doesn't matter that an ad registers the brand name if no one notices the commercial itself. An ad must attract attention, register the brand name, communicate core messages and/or images and create interest in buying the brand. Advertising must do multiple things to be effective. All the key variables must be put together intelligently to come up with a composite model of advertising effectiveness.
7. **HUMAN JUDGMENT**
   Look at all the ad-testing results holistically. Review the research findings in relation to the objectives of your marketing plan. Read the open-ended questions and study the diagnostics so that, even if a commercial fails, you are learning how to make the next one better. Take all the survey questions and results, as well as marketing variables and competitive conditions, into account. Don't blindly accept the test results. Informed human judgment remains important.
8. **CONTINUOUS IMPROVEMENT**
   Clients and agencies need to accept that continuous advertising improvement is the goal. Advertising creative executions should be tweaked and refined based on pre-testing feedback to make sure they are on strategy. Repeated ad pre-testing provides a powerful feedback loop so that a brand's advertising can become better and better over time. If a company and its agency pay close attention to the ad-testing results, advertising can become a powerful platform for long-term brand growth.

Good advertising is extremely powerful, and long-term continuity of on-strategy advertising maximizes its power. We have seen brands transformed through great advertising. We have seen companies destroyed through poor advertising. Short-term advertising works by building awareness, educating and setting the agenda. It works long-term by projecting a brand image and attaching strong emotions to the brand. The potential and promise of good advertising should never be underestimated.

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ARTIFICIAL INTELLIGENCE

Effectively using AI for insights

How AI will affect market research in 2024 and beyond

RICK KELLY
Chief Strategy Officer, Fuel Cycle

Within two years, AI will become an essential tool to researchers and their stakeholders, presenting a dramatic shift in the way insights are captured and delivered. While initial AI product implementations have focused on qualitative data, we also see significant enhancements to creating and analyzing quantitative data. We expect that AI applications will help drive massive efficiencies in existing research processes and enable organizations to scale insights-led decision-making dramatically.

Despite our enthusiasm, our research has found that throwing AI into insights applications without careful implementation can degrade quality. The foundational AI models we use, the way data is structured and the way we prompt AI models to generate results can significantly impact the quality of analysis produced by AI. I'll cover why this matters and an initial experiment we've done that will hopefully empower your evaluation of AI insights applications.

AI adoption among researchers

While there is substantial coverage of AI in industry periodicals and conferences, most researchers have yet to adopt it widely. Every year, Fuel Cycle publishes The State of Insights report based on responses from validated brand-side research practitioners. In Q4 2023, only 15% of corporate researchers said they're using AI to aid their insights reporting and 46% said they "never" or "rarely" use AI.

Despite current adoption of AI, the uses for research are already coming to light, both from industry practitioners and academics. Two highlights from recent academic work identify the potential for AI impact on our industry:

- Researchers at UC Berkeley and Columbia University found that synthetic respondents provide reliable data: "Using AI-based tools is a reliable augmentation or even substitute for human brand perception surveys. We find that automatically generated sentences can be used to create perceptual maps that broadly match those created from human surveys."[1]
- Researchers at Wharton and OpenAI found that survey research is a job function most prone to automation via generative AI. Given that about 80% of the U.S. workforce could see at least 10% of their tasks affected by AI, survey researchers, who often engage in tasks like data analysis, questionnaire design and report writing, might find a considerable portion of their work either automated by these technologies.[2]

A consistent concern that surfaced in qualitative interviews is confidence in AI-generated results. AI application users have frequently highlighted the fact that AI models are prone to hallucinations (made-up results that are presented as facts), which impact their confidence. This makes sense; after all, we can't make confident decisions if we don't trust the analysis.

To understand why this is important, let's review the concept of Jobs To Be Done in the context of insights.

Jobs To Be Done

As articulated by the late Clayton Christensen, the concept of Jobs To Be Done is a framework for understanding the underlying need behind every business transaction. In essence, when stakeholders engage insights professionals, they are "hiring" them to fulfill a specific job. In the context of insights, that job is to equip decision makers with the clarity and confidence needed to act. It's about transforming data into a strategic asset that reduces decision latency and financial overhead while enhancing the quality of outcomes.

Using this framework, we can ask: What is the job to be done by insights in an enterprise setting? Succinctly stated, businesses "hire" market research and insights to support leaders in making confident decisions. This doesn't mean confident decisions at any cost or timeframe but rather, optimizing both to enhance the decision-making process. It's a delicate balance where time, cost and confidence intersect.

As we integrate AI into insights, the goal isn't merely to expedite or cheapen the process but to elevate the quality of decision-making. The use of synthetic respondents, for instance, might reduce costs but the crux lies in whether it genuinely improves how insights are utilized in the enterprise. That's the key metric for success.

Throwing AI at a problem doesn't guarantee success; it must be a purposeful integration. True success lies in enhancing the job to be done of insights – improving not just speed and cost but also bolstering decision-making confidence. The intelligent application of AI in insights isn't just about throwing AI at business problems but understanding the job to be done and executing it well.

AI model selection and prompt engineering trade-offs

Not all AI models are equal, meaning the selection of underlying models for insights generation is an important consideration. Take, for instance, GPT-3.5 vs. GPT-4. GPT-3.5, while less expensive and faster, tends to be less accurate than GPT-4. GPT-4, though more costly and slower, offers significantly higher accuracy. These differences aren't just limited to GPT models but include a wide array of solutions.

This diversity in model capabilities underscores the importance of selecting the right LLM for research studies. The choice of model directly impacts the quality and reliability of the results but it's only part of the equation.

The other critical aspect is prompt engineering – a technique akin to programming in a natural language. Prompt engineering is about strategically structuring the inputs for AI to elicit specific, high-fidelity outputs. It's a nuanced process where the way questions or commands are framed can dramatically influence the AI's response. This approach is crucial because using generative AI isn't just about deploying technology; it's about harnessing it with precision. Effective prompt engineering ensures that AI addresses the problem and yields accurate, insightful results.

Evaluating the impact of different models and prompts

Given the potential for different outcomes based on model selection and prompting techniques, we conducted an experiment to assess whether different AI models and prompt engineering techniques would impact researchers' acceptance of AI-generated results. Our participants were a blend of 23 corporate researchers and research suppliers, most of whom held neutral views regarding the role of AI within their field.

The experiment involved generating four distinct versions of executive summaries based on discussions from Fuel Cycle's research communities. These discussions varied widely in scale, with comment volumes ranging from dozens to thousands of responses. This variability was intentional, designed to test the robustness of AI analysis across different data sets.

Each participant was exposed to results from one discussion only, which had been analyzed in four unique ways. To ensure a fair comparison, we concentrated our efforts on a select group of LLMs and corresponding prompt engineering strategies. We included Anthropic's model and GPT-4, both without and with advanced prompt engineering techniques – namely, Tree of Thoughts and Chain of Density.[3] Llama and GPT-3.5 were eliminated in our internal evaluations beforehand due to underperformance.

For the Anthropic and GPT-4 models, we maintained consistent prompts to ensure any observed differences in performance were due to the models and techniques themselves, not the variability in the input. Our goal was to craft prompts that could coax the best possible outcomes from each model, thereby offering a clear comparison of their capabilities in analyzing and summarizing complex research discussions.

We found the following:

AI model selection and prompt development can influence research results.

- GPT-4 alone displayed strong performance; GPT-4 + the prompt technique "Tree of Thought" improved results.
- 21 of 23 respondents said they either "strongly agreed" or "agreed" that results generated using this approach were "clear," "human-like" and "useful."
- GPT-4 performance and accuracy can be degraded with prompt techniques that aren't designed with the outcome in mind.

Prompt refinement should be a key consideration in R&D efforts.

- Researchers and research providers should account for trade-offs in cost, speed and accuracy when developing generative AI solutions.
- Anthropic and GPT-3.5 are cheaper and faster than GPT-4 but have other performance trade-offs.

Analysis of significant amounts of data consistently took seconds.

- Processing as much as 3,000 discussion board comments and transforming it to an executive summary took under a minute, a process that we estimate would take 24 human working hours.

This design aimed to shed light on the practical trade-offs between different AI tools and methodologies in a real-world research setting, ultimately guiding us toward more informed decisions about integrating AI into market research.

As AI models begin to play a pivotal role in the research process, the findings from our experiment underscore the importance of model selection and prompt engineering in producing useful results that improve the Job To Be Done that insights are "hired" for.

Selecting the right AI model and mastering prompt engineering are not just operational tasks but strategic decisions that can significantly affect the quality of insights generated. Researchers and organizations must weigh the trade-offs to ensure that AI drives efficiency and also fortifies the confidence in decisions made.

AI will become an indispensable tool for many insights practitioners in the future but we need to do it right. With careful implementation, the promise of AI to empower insights-led decision-making is within grasp, promising a future where data transforms seamlessly into strategic action.

www.fuelcycle.com

1 * Li, et al., "Language Models for Automated Market Research: A New Way to Generate Perceptual Maps." Latest revision: August 2023.

2 Eloundou, Manning, Mishkin and Rock, "GPTs are GPTs: An Early Look at the Labor Market Impact Potential of Large Language Models." March 21, 2023.

3 See promptengineering.ai for initial guidance on developing prompting techniques.

Mental health stigma persists but research shows paths to improve access

Research helps market researchers understand the nuances of mental health to better navigate sensitive topics

TOM LITTLEJOHN
Chief Operations Officer, Veridata Insights

ADAM SLATER
Founder, Clarafy Research Solutions

Mental health remains a major issue in American life. Many issues arise but even more questions and seeming contradictions emerge:

- Most recognize it to be a major issue in society; few want to talk about it.
- Many want to utilize mental health therapy; relatively few actually do.
- Despite more attention paid to suicide prevention post-pandemic, suicide rates reached a record high in 2022, now averaging close to 50,000 deaths per year.

Recent research conducted by Veridata Insights and Clarafy Research sheds new light on these issues and offers clues – both to society to improve the situation and to market researchers on how to navigate sensitive topics.

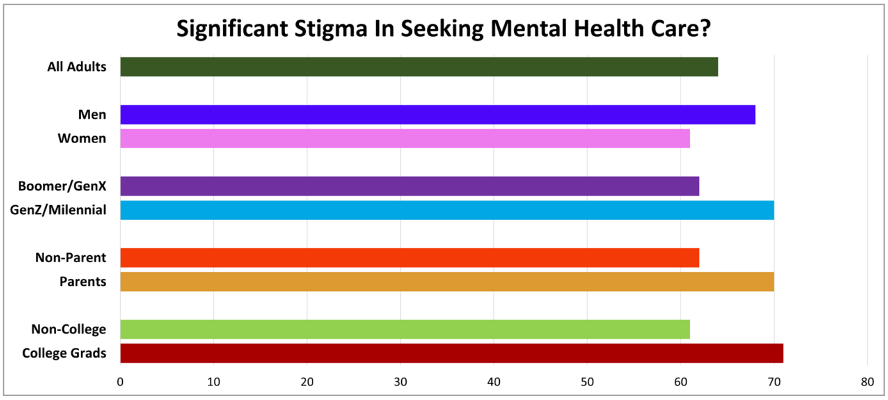
METHODOLOGY

The survey was conducted online among 1,249 American adults between November 2-15, 2023. The margin of error for a survey of 1,200 is +/- 2.8%.

MAJOR FINDINGS

A significant stigma continues to exist for seeking mental health care

- Two-thirds of Americans agree that there is a significant stigma associated with seeking mental health care; 29% believe this strongly. Only 11% disagree.
- Agreement is strongest among college grads (71%), parents (70%) and younger generations (67%). This supports previous research on how younger generations tend to be better attuned to mental health concerns than older cohorts.
    - Younger generations have pushed for "mental health days" and embraced the value of therapy more than others. Our survey shows that 25% of Millennials and Gen Z are "in therapy," and 43% have seen a therapist in the past year. More promising is that over two-thirds of these age groups have seen a therapist at some point in their lives.
    - Conversely, only 13% of Boomers and Gen X report being "in therapy" and fewer than one-fifth have seen a therapist in the past year. In contrast to their children's generations, half of older Americans have never seen a therapist.
- The data is a reminder of the stress parents are facing. Our research shows that parents are "in therapy"

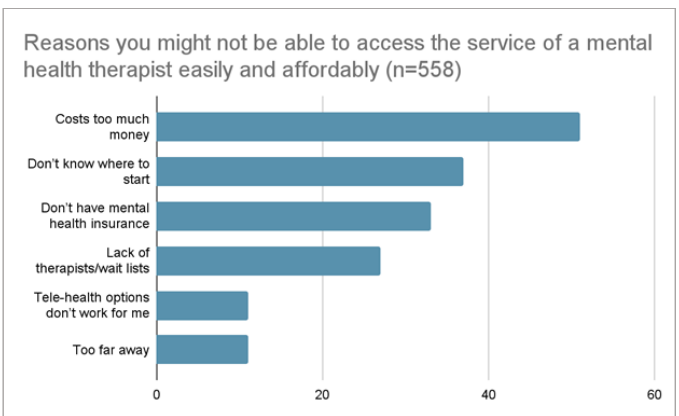


at nearly double the rate of non-parents (27% vs. 15%), with 70% of parents having been in therapy at some point in their lives vs. 53% of non-parents. Some of this is driven by age but the data shows that parents are utilizing therapy more than other groups.

- Men are more likely than women (67% vs. 61%) to agree that there is significant stigma in seeking mental health care. Perhaps due to that perceived stigma, men do not seek therapy more than women. Women are more likely to have seen a therapist during their life (63% vs. 53%) but the genders are equal in having seen a therapist in the past year. Women are more likely to be "lapsed" therapy patients (32% to 25%), having seen a therapist a year or more ago.

Of the 1,249 respondents surveyed, nearly half could not or were not sure they'd be able to access a mental health therapist easily and affordably.

- When we dug into the reasons why, cost unsurprisingly rose to the top. Half of this group with "questionable access" is cost-based ("too much money") and 33% said their insurance would not cover mental health care. Taken together, 28% of all adults surveyed may want access to professional mental health services but do not have the money. Exploring this "questionable access" group further:
  - Over one-third indicated they "don't know where to start," indicating an opportunity to educate. Moreover, many in this group overindex as being more likely to think about suicide (43%). Other groups of importance include men (45%) and Gen Z (48%).
  - Additional access barriers included: A lack of therapists/wait lists (27%), telehealth options not working for them (11%) and being too far away (11%).
- Takeaway: While providing funding may be challenging from a public policy standpoint, the data suggests paths to improve access to care: A) broaden access for those whose insurance doesn't provide coverage (or advocating that insurance companies universally include coverage plans), B) increase the supply of mental health care providers to meet growing demand and C) improve telehealth technology and/or communications to make people more comfortable with utilizing telehealth.



IMPLICATIONS FOR MARKET RESEARCHERS

Despite the sensitivity of mental health and suicide, a strong majority (57%) said they would be willing to engage in future research. This included a majority of those who couldn't or weren't sure if they would be able to access mental health care, with a majority of that cohort who wouldn't even know where to start. Those more likely to think about suicide were most likely to want to discuss further (66%). These are promising signs for conducting further research.

As an industry and a society, the better we can understand the topic of mental health, the better equipped we can be to help address the issue and potentially save lives. Through further studies, market researchers can contribute to uncovering actionable insights to make a positive change. The simple act of asking a question allows us to offer help. In our survey, we reminded respondents about the new 988 national hotline to help support those who are having suicidal thoughts.

Another takeaway is that online market research can be a valuable tool for sensitive topics. It may lead to a better way to recruit respondents and the anonymity offered may boost engagement for longitudinal projects compared to standard qualitative screening and recruiting methods alone.

Addressing the issue of mental health requires a collaborative effort across society and as market researchers we must contribute as best we can. Our research shows that many are neglecting their mental health and avoiding professional care. Many prefer to confide in friends, family or their spouse/partner. However, it's mental health professionals that are best equipped to evaluate mental well-being. These societal and internal barriers to seek professional help are harmful, so we should speak about them often to continue to bring light to this dark subject.

veridatainsights.com
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QUIRK'S OUTLOOK 2024

AI AND QUALITY

CIRQ

25 years later, ISO is still ahead of the times

How the world's leading authority on quality protects our industry's best practices, even as they evolve

JULIANA WOOD
Managing Director, CIRQ

ALISA WEINSTEIN
VP, Marketing, Full Circle Research

The parameters in which we conduct market research and insights work are constantly changing. This report alone highlights the great shifts we expect to see in the next 12 months. Yet the desire to develop highly-productive environments and deliver the highest-quality output never wavers.

There are many familiar with International Organization for Standardization (ISO), a worldwide federation that sets global standards for trusted goods and services. These standards define benchmarks for businesses to ensure reliability, build consistency and shape quality, while simplifying choices for consumers. Organizations that earn certification prove their commitment and capability to comply, thereby increasing consumer trust in their offerings.

In 1998, the British Standards Institution (BSI) published one of the first standards specifying minimum service levels for quality assurance, executive responsibilities, data collection and data processing in market research projects. BSI used ISO 9000, the world's most widely used quality management system standard, as its framework.

Much has changed in the decades since. The timeline below highlights the evolution to our industry's current iteration, ISO 20252:2019 Market, opinion and social research, including insights and data analytics. What the timeline doesn't answer is how an international mark of quality anticipates our needs – and stays one step ahead.

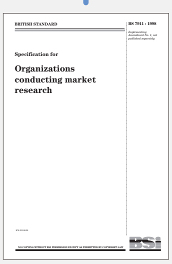
How the revisions get made

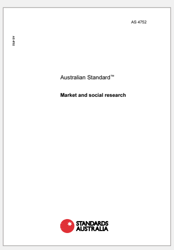
ISO membership is comprised of national standards bodies, each maintaining and approving multiple technical committees (TCs) – ISO approves and publishes the standards; the TCs draft, manage and maintain the standards. Every member body that is interested in a subject has the right to be represented on that standard's TC.

When a standard is up for review, or a member body feels a change should be addressed, a working group (WG) is formed. This will be the case in

History of ISO 20252

1998 - Using ISO 9000 as the framework, the U.K. publishes BS 7911:1998, establishing market research-specific criteria for best practices.





2000 - A Standards Australia committee publishes AS 4752 for market and social research.

2004 - Experts from 20+ countries form a technical committee to develop the first version of ISO 20252, setting the requirements for quality management systems for market, opinion and social research.

2006 - ISO 20252 publishes, marking the shift of the standard from national standards authorities (Australia, U.K.) to global standards (ISO).

2009 - ISO 26362 publishes. This standard is specific to access panels in market, opinion and social research.

2024, when ISO 20252:2019 is slated for its five-year review. A WG of highly-vetted SMEs will examine the current requirements of the standard to ensure its relevancy and applicability to all business within the market research project life cycle, as well as recommend changes that reflect new or emerging methodologies.

What the revisions may be

While revisions under consideration have not yet been cemented, data quality is always a priority; three other concepts stand out.

AI

Any inclusion of best practices regarding AI will take shape under a task group on new technologies, with experts from Austria, Canada, Japan, Spain, U.K. and the U.S. as members. "While reliable, tested and relevant AI-based solutions are likely a few years away, it's the right time for the TC to start the conversation with experts, develop guidelines and address AI best practices," says Sanjeev Dixit, VP, Reason Research, which has been certified to ISO 20252 since 2014. "Ethical use of AI applications is of utmost importance to us; we look up to ISO to take the lead in this area by formulating industry norms and guidelines."

ALGORITHMS

This September, the Dutch delegation presented a concept algorithm standard. Their case included software pitfalls, definitions and applications for the responsible use of algorithms in insights. "As learning models and algorithms become more prevalent, it's even more crucial to identify how your company's data is utilized within a platform, as well as potential points of leakage," said Chris Foley, director, data operations at MedSurvey, currently in the process of certifying to ISO 20252. "It's encouraging to know that vetted experts are looking into algorithm-specific guidelines to help businesses understand how their information is used, stored and secured, as well as if it is worth the inherent risk of using that platform or service."

CONTINUITY

The WG will ensure the continued relevance of the requirements within the standard's mandatory framework and six annexes, including Annex D (digital observation). "We leverage ISO 20252's adaptability to protect our resources and product from unforeseen changes in the current climate, everything from the invention of survey farms to a worldwide pandemic," said Olivia Trujillo, ISO quality manager at Full Circle Research, which has been certified to ISO since 2014. "Conformity to the standard elevates our strategic decision-making. We move forward with a built-in layer of confidence in the consistency of our company's products and services – no matter what the industry throws at us next."

THINKING ABOUT CERTIFICATION?

ISO 20252:2019 enables a level of industry due diligence that is measured, monitored and independently audited for compliance. The many benefits of certifying to the standard can be further explored at cirq.org and cirq.org/qualityforall.

Certification Institute for Research Quality (CIRQ) is the only certification body accredited by ANSI National Accreditation Board to offer audit and certification services for ISO 20252:2019. "It's crucial to approach technological shifts with caution and responsibility," said Travis Santa, VP at Touchstone Research and CIRQ board president. "CIRQ is well positioned to help new and current certification clients navigate the updates that will ultimately improve the services they provide."

Learn how the global market research standard can benefit your organization specifically. Contact Juliana Wood, CIRQ managing director at juliana.wood@cirq.org or 202-370-6318 today.

2018 TC Meeting

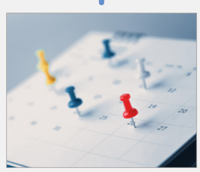
2012 - The second edition of ISO 20252 publishes. It expands core business requirements for HR, complaints and subcontractor management; it also aligns with the access panel requirements in ISO 26362.

CIRQ ISO 20252 CERTIFIED RESEARCH STANDARD

2024 - Review of ISO 20252 commences. The process is expected to take 18 months.

2011 - Australia, Canada, Netherlands, Spain, U.K. and U.S. form an International Certification Forum to develop a global specification protocol for organizations certifying to ISO 20252 and ISO 26362. This guidance supports consistency in the auditing and certification functions.

2019 - ISO 20252 is restructured, incorporating ISO 26362 (access panels) and ISO 19731 (digital analytics). It includes a core clause applicable to all service providers regardless of methodologies provided, as well as six annexes, each covering requirements related to one of the globally recognized research methodologies. Technical content is also revised to reflect new or modified research practices and information security requirements drawn from ISO 27001. At the end of 2019, ISO 26362 is retired.



QUIRK'S OUTLOOK 2024

ARTIFICIAL INTELLIGENCE

How AI (aha intelligence™) delivers faster, better market research insights

AI-powered analytics and reporting technology

RAY FISCHER
CEO, aha insights technology

AI is now everywhere in the world of market research and, well, the world in general. Like most new technologies, it has huge benefits, incredible optimism and some accompanying concerns.

Manage unstructured data

First, AI is the single most impactful innovation to affect the daunting task of analyzing large amounts of unstructured qualitative research data. As we all know, the biggest drawback to doing online market research is the unpredictable volume of open-ended data that is generated. I've referred to it previously as an avalanche and I honestly don't think that's too much of an exaggeration.

The promise of artificial intelligence is tantalizing but it is still in its infancy and requires a skilled human to manage the process. This human element cannot be overstated.

The aha intelligence™ (ai) generative analytics and reporting tool we've developed eliminates that data avalanche trepidation and – in essence – turns it into a significant advantage for users. Here's how:

We believe the biggest benefit of aha intelligence (ai) is inspiring more transformational analysis and reporting in a greatly reduced amount of time. Some of the specific tools we've built-in give you the capability to:

1. quickly summarize large qualitative data sets (we're talking minutes here)
2. instantly apply sentiment analysis to the response sets
3. automatically tag thematic responses to support your findings
4. connect unseen or more subtle data points, leading to breakthrough insights
5. provide supporting quotes and clips to validate your key themes
6. and most importantly, our latest enhancement analyzes your entire study based on your objectives

Design better studies

In addition, we've been able to use aha intelligence to tap into the natural intelligence of the aha platform itself to give clients the advantage of what we've learned about planning and executing strategic studies over the last decade. So, we can take your study objectives and quickly recommend a set of activities that you or we may not have thought about. Your study design, in general, and your specific activities will become more strategic and creative at the same time. A more enjoyable experience for respondents while delivering greater insights to researchers.

Dramatically reduce analysis time

One of the biggest benefits of AI and our aha intelligence is the ability to reduce the time it takes to analyze the data and turn it into a report.

Our ai helps you…

- quickly summarize entire study-level data
- deliver results based on your study objectives
- provide supporting quotes to validate ai insights

- suggest thematic tags and quantify them
- illuminate segment and demographic differences
- suggest thematic video clips and reels where applicable

Write more incisive reports

aha intelligence provides inspiration for writing a better report. It vastly increases your accuracy by suggesting connections that you may not have picked up in your analysis. Our tool provides a more thorough coverage of all the data, identifying opportunities, pain points, considerations and suggestions that may not have been discovered in analog/human data analysis. And it allows you to efficiently dig deeper into curiosities and theories that you want to explore more abstractly.

The power of a historical library

Another big future benefit is building a library of studies on our platform, allowing you to tap archived data from historical market research initiatives to understand macro trends, segment and demographic-level longitudinal insights, as well as understanding changes in brand perceptions and product usage behaviors over time. For instance, we have a client with more than 500 studies within the same product category on our platform; imagine the ai query possibilities that would enable you to take your analysis to a completely new level with minimal human guidance! This undertaking by a human would be next to impossible from a time and cost standpoint.

And of course...data privacy

In conversations with clients, there are a few concerns: one is privacy and data. With aha intelligence (ai), all the proprietary data stays private, from the (ai) processing to our servers that it runs on. Your data is secure. It doesn't mix with public large language model repositories. It's your data; it will get better over time by training itself on your historical data. And because of the intuitive approach that's already built into the platform, you don't lose the human stories that bring your insights to life. It just becomes easier to find and tell the stories that give you a strategic advantage...and get you more expeditiously to your aha moments.

Another concern we often hear is the fear that AI will replace market researchers or insights analysts. That is certainly not the case; the fact is that the human touch is more important now than ever. AI will not replace market researchers but it will make market researchers smarter, more thorough and more efficient.

If you would like to learn more about our insights technology platform and its AI capabilities, reach out to us at 313-312-0014. We'd be happy to show you what we can do for you.

ahaonlineresearch.com
1-313-312-0014

QUIRK'S OUTLOOK 2024

GENERATIVE AI

Glimpse

Welcome to the second stage of generative AI adoption

Or, how insights professionals can seize their gen AI opportunity

ADAM BAI
Chief Strategy Officer, Glimpse

NEIL DIXIT
CEO, Glimpse

If you're interested in the trajectory of generative AI adoption and what it means for your organization, this article is for you! It shares data from a longitudinal study we're conducting with our client and partner, HubSpot, and introduces a new research-backed adoption maturity model and ends with career tips any insights professional can apply.

Meet Glimpse

Glimpse is a global, AI-powered and self-service research platform, focused on language and emotion, analyzed in real-time and over time, for marketers, researchers and creators.

- Our advanced AI crafts content and decodes language, illuminating audiences.
- We offer representative data, intelligent guardrails, fine-tuning and added context.
- Our clients use generative AI in our platform to craft insights, tailor messaging, create nuanced personas and even have ongoing conversations with those personas!
- They also use generative AI to help them create surveys, output key messaging (based on the responses of audience segments), blog posts, top positive/negative stories and far more.

We recently published an article in Harvard Business Review about using the power of generative AI to achieve greater customer understanding at-scale. The piece shared some lessons we've learned about applying generative AI-based approaches to the business challenges of clients like HubSpot and Wells Fargo.

The article argued, along with another recent piece in Adweek, that the most compelling application of generative AI right now isn't content creation; rather, it's the ability to achieve audience understanding based on high-quality and representative data – data that would have been too difficult or time consuming to collect and analyze in the past.

The most exciting application of generative AI right now is an unprecedented opportunity for insights professionals, and they should be leading the charge!

Gen AI adoption and business impact

The future of generative AI within marketing and market research functions is still very much up for grabs. The first wave of adoption has been overwhelmingly individual, ad hoc and designed for efficiency.

The real impact of generative AI will come with the second wave and will require an approach that is team-based, strategic and designed to enhance capabilities and processes.

In Adam's recent presentation at the CRC in Chicago: "Customer-Centricity in the Age of Generative AI: Essential Lessons for Every Organization" (along with HubSpot's Research and Thought Leader lead, Amy Maret), he shared preliminary data from a longitudinal study about gen AI adoption experiences by 1,800 (per wave) marketing and sales managers across the U.S., U.K., France, Germany, Brazil and Japan.

We also introduced a gen AI maturity model to outline adoption stages and began investigating the corresponding benefits that organizations can expect to reap.

Here's the outline:

"Which of these statements best describes your team or function's adoption of generative AI right now?"

1. *We haven't started talking about it at all.*
2. *We've talked about gen AI at work but haven't tried any AI tools yet.*
3. *There's been some individual usage but not in team contexts.*
4. *We're conducting officially sponsored experiments within teams to find the best applications.*
5. *We're embedding commercially available tools or platforms in some processes.*
6. *We're leveraging our own business data as an input to tailor outputs to our needs.*
7. *We're training our own models or fine-tuning LLMs.*

Here's what we found:

- Organizations at early stages of adoption are seeing some efficiency gains but organizations at later stages of adoption are actually seeing significant gains in self-reported customer-centricity and marketing ROI.


How GenAI Can Help Companies Go Beyond Social Listening

by Neil Dixit and Adam Bai

Harvard Business Review

- The ability to leverage proprietary data, including first-party data, is what really matters.
- Organizations at the middle stages of adoption maturity are experimenting with dynamic content creation but all that dynamic content hasn't yet led to more effective campaigns.
- There are huge differences by country, with Brazil in the lead (relative to the U.S., France, Germany and Japan) and Japan coming up behind when it comes to adoption.

If you'd like to see the data in the Glimpse dashboard, reach out to adam@glimpsehere.com.

In the study, the correlation between maturity stages and business performance was stunning. As organizations advance through the stages, revenue and business outcomes see a boost, largely correlated with enhanced consumer understanding. As always, customer understanding is the key that unlocks the other benefits of new technologies.

Six adoption tips for insights professionals

The gen AI movement is far more of an opportunity than a threat for insights professionals, especially if they focus relentlessly on (actionable) customer insights:

1. Adoption is more about mind-set and team processes than tech. Planned experimentation is everything when it comes to discovering business challenges that can be solved with the application of generative AI-based approaches.
2. Early stages of gen AI adoption are unlikely to yield real business benefits. Focus on customer understanding as the key to unlocking the value of other applications of generative AI. For instance, dynamic content is irrelevant unless it's guided by new approaches to segmentation – enabled (as at Glimpse) by new sources of unstructured data.
3. Your proprietary data is a new goldmine if analyzed effectively.
4. Garbage in; garbage out. Become the inputs and outputs quality guru.
5. Keep the focus on customer and market understanding. Much of the early investment in generative AI will focus on sales data, but market research data matters. Get a seat at the table to create the holistic vision which allows your organization to prospect for insights across diverse data sources.
6. Intervene early and often in organizational planning. Help drive your organization's maturity curve. (If you're an agency, support your clients here!)

Glimpse is here to help you achieve enhanced customer understanding with the innovative application of our industry-leading approach to generative AI. However, these tips apply regardless of platform or data source.

To discuss this article or to discover how Glimpse can help your organization, reach out to Adam@glimpsehere.com.

Glimpsehere.com

CONGRATULATIONS 2023

Global Marketing Research Project

BBC News: World Service

Groundbreaking Research Project

2CV

Qualitative Research Impact

C Space and Global Hotel Alliance

B2B Research Project

Opinium and Kraft Heinz

Technology Impact

Measure Protocol

Best New Product/Service Innovation

Emporia Research

Best Place to Work

Full Circle Research

Client/Supplier Collaboration

Microsoft and Vital Findings

Health Care/Pharmaceutical Research Project

Applied Marketing Science and Boston Children's Hospital

Outstanding Young Researcher

Sofia Polo, *Fluent Research*

Nonprofit/Social Enterprise Research Project

BAMM New York

Courageous Leader

Monica Wood, *Herbalife*

AWARD WINNERS

Lifetime Achievement

Steve Schlesinger, *Sago*

Best Client-Side Team

Wilton Brands

Marketing Research Supplier of the Year (2022 revenue below $10 million)

Alter Agents

Marketing Research Supplier of the Year (2022 revenue at or above $10 million)

Basis Research Group

Researcher of the Year (end-client)

Erika TenEyck, National Association of Electrical Distributors

Researcher of the Year (supplier)

Owen Hanks, *Measure Protocol*

MREF Everyday Hero

Stephanie Vincent, *Harmon Research*

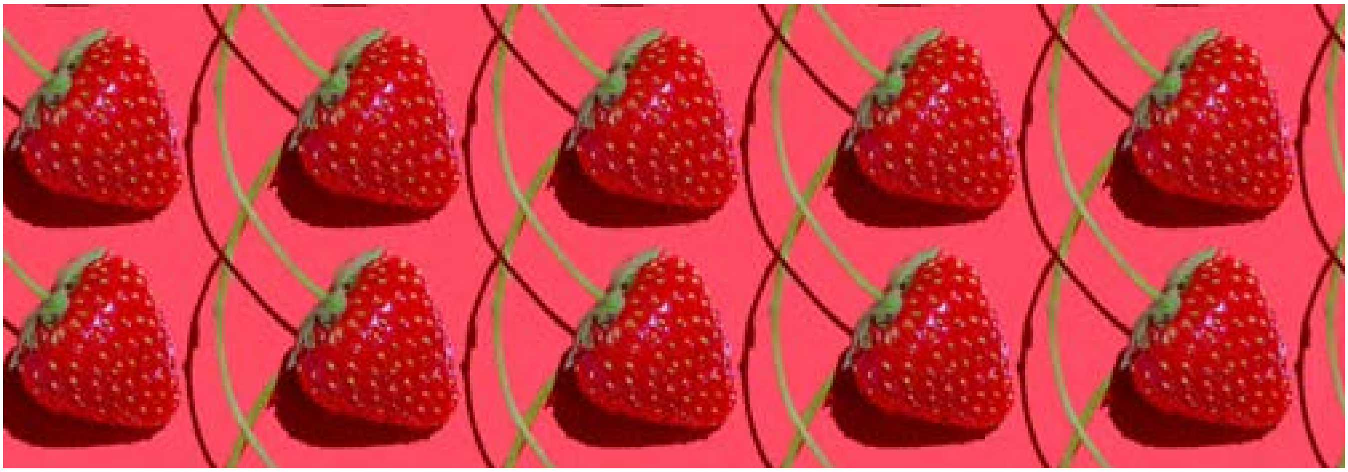
MREF Philanthropic Company of the Year

Shapiro+Raj

IN FOCUS

••• a digest of survey findings and new insights for researchers

// Survey Monitor



••• restaurant research

Eat and repeat

Restaurant communications keep customers coming back for more

During a time when consumers are more price-conscious and discerning than ever in their dining selections, marketing campaigns have a positive impact on driving repeat orders. Consumers want to hear from restaurants, and when they do, restaurants win. Fifty-five percent of consumers who receive marketing messages (e-mails, mailers and text messages) from restaurants will dine at or order from that restaurant within the next month, according to restaurant software and solutions provider HungerRush.

HungerRush data shows that 93% of customers visit fast-casual restaurants at least once a month, with 32% dining out four to six times a month. Consumers cite lower price points as the top motivator for selecting a quick-service restaurant. Tapping into coupons and marketing messages is a classic technique used by many to bring in new and existing customers and restaurant operators should be pleased to know these efforts are well received. Most consumers surveyed indicated a positive sentiment toward receiving marketing messages from restaurants, with only 29% saying they actively ignore or opt out of marketing communications. Moreover, 32% said they receive up to five marketing messages per week directly from restaurants, demonstrating an interest in consistently hearing from multiple businesses.

Overwhelmingly, consumers are more likely to act within one week of receiving a marketing message, whether that be a coupon, a promotion or menu/seasonal updates. In fact, 62% of consumers said they are 50% to 100% more likely to visit a restaurant within one week after receiving a promotional offering.

Knowing what types of messages stick with a customer is instrumental in properly executing a successful marketing campaign. Eighty-two percent of consumers cite weekly or monthly menu updates as their top reason to stay in the loop with a restaurant – outside of deals and promotions – followed by new store openings at 43%. Lower-priority topics cited were business updates and community involvement news. Highlighting content that excites consumers' taste buds and gives them incentives to repeat an order online or revisit a restaurant is key.

Across every age group surveyed, e-mail marketing was the preferred method of contact, with 63% saving e-mail messages, followed by mailers (61%) and text messages (55%). E-mail marketing messages are the most popular across all age demographics, with Baby Boomers (60%), Gen X (67%), Millennials (64%) and Gen Z (60%) all saying they save e-mail coupons more than physical mailers and text messages. As many as 61% of respondents said they use coupons and promotions as often as possible.

The HungerRush survey was conducted by Dynata in August 2023 with 1,000 U.S. consumers.

••• technology research

Overwhelmed but still wanting more

Consumers both drained and delighted by digital devices and experiences

The average number of digital devices in households has dropped by four in the past two years, from 25 to 21, but that doesn't mean consumers have less interest in them. Business consulting and services company Deloitte found that 48% of surveyed consumers purchased new connected devices for their household in the past year. Among respondents, 63% expect their spending on acquiring devices to stay the same over the next 12 months, with 9% planning to increase and 7% expecting to decrease spending.

Forty-nine percent of consumers have delayed device purchases due to economic conditions and 33% feel they can't afford to buy the tech devices their household needs (up from 25% in 2022). Consumers continue to grapple with managing their digital lives, with 41% saying they dislike managing their devices and 28% saying they feel overwhelmed by the number of devices and subscriptions they need to manage.

There has been an increase in consumer actions taken to protect data privacy and security, reflecting consumers' heightened awareness and proactive stance towards digital safety. Smart home devices are indispensable to many and have become part of their daily lives – often being used to help increase home security.

Among consumers surveyed, 34% were victims of at least one kind of security breach in the past year and 16% experienced two or more. Gen Z was more than twice as likely as Baby Boomers to have their social media account hacked (17% vs. 8%) and three times more likely than Baby Boomers to fall for an online scam (16% vs. 5%). Seventy-nine percent of consumers say they have taken at least one step to address their data privacy and security concerns.

There has been increased satisfaction with virtual health care services, signaling growing acceptance and understanding of digital access to health care. Forty-two percent of respondents had at least one virtual medical appointment in the past year and nine in 10 were very/somewhat satisfied with their virtual medical appointments.

The past year has also seen significant changes in consumer attitudes and behaviors towards fitness devices. Sixty-four percent of both smartwatch/fitness tracker and smartphone owners report these devices improve their health. Sixty-nine percent of smartwatch/fitness tracker users say the device improves their fitness and 58% of smartphone owners feel the same about their phones.

A significant portion of respondents expressed interest in continuing a blend of remote and in-person learning, showcasing an appreciation for the flexibility that virtual classrooms offer. For education, remote learning is gaining fans. Fifty-two percent of those who learned remotely over the past year would like to learn completely/mostly remotely in the future.

When it comes to hybrid work, respondents would like it to stay. Many people prefer a blend of remote and in-office work and report high levels of satisfaction with this arrangement. As employees adapt to hybrid work, the need for businesses to refresh and improve tech solutions becomes more apparent. Fifty-six percent of employed adults worked in a fully remote or hybrid way at their primary job over the past year (22% said they worked fully at home and 34% split their time between in-office and at-home). Many remote and hybrid workers feel that working from home has improved their relationships and emotional well-being. Among respondents, 45% said working from home caused family relationships to improve and 40% said it improved their emotional well-being.

Consumers continue to call for innovative apps and experiences that take full advantage of 5G technology capabilities. More than half of the respondents with 5G smartphones (53%) said they're looking for these apps and 26% expressed disappointment in the lack of such innovative apps and services. Overall, 62% of consumers with smartphones say they have 5G, up from 50% in 2022. 5G smartphone users say they do more of some things, compared to before they had 5G, with one in five using their phone more to pay for items in a store and to act as a hotspot.

The study found that there will be growth in immersive 3D experiences and growing interest and awareness in generative AI among consumers, especially in the younger generations. More than six in 10 Gen Zs and more than half of Millennials are interested in learning by viewing or interacting with 3D objects or representations; traveling to places of interest virtually; meeting with friends and family in 3D spaces; attending 3D virtual entertainment events; and shopping in 3D stores. Seventeen percent said they have experimented with generative AI or used it for projects/tasks. Of these, 72% used it for personal purposes, 21% for school/education and 20% for their job/professional purposes and 72% plan to keep using it.

The Deloitte Center for Technology, Media & Telecommunications conducted this survey with 2,018 U.S. consumers in Q2 2023.

••• shopper insights

Nearer, my store, to thee

Proximity, personalization are key shopping factors

Gen Z, Millennials, Gen X and Baby Boomers all have distinctly different brand expectations, shopping preferences and patterns and outlooks for the future. Online shopping is widely adopted across generations but data platform Near Intelligence found that younger generations are leading the way in omnichannel shopping.

Eighty percent of respondents across generations are shopping online and Gen Z (63%) and Millennials (64%) are twice as likely as Baby Boomers (33%) to use omnichannel approaches, where shoppers use more than one channel in their purchase journey. Fifty-two percent of respondents overall have adopted omnichannel behaviors.

When it comes to in-store shopping, Gen Z and Millennials are seeking deeper engagement and personalized experiences from brands and shopping centers. Eighty-eight percent of Gen Z and Millennials want to engage with their favorite shopping center compared to 53% of Baby Boomers. Fifty-four percent of Gen Z and Millennials shop more from brands that have an app vs. 21% of Baby Boomers. Eighty-four percent of Gen Z is also more encouraged to shop in stores with personalized in-store recommendations based on previous shopping history compared to 59% of Gen X and Baby Boomers.

A shopping center's proximity to a respondent's home has emerged as a critical factor, especially among younger generations. Over half of respondents (57%) consider proximity to home as a top priority while 16% consider proximity to work as a factor. Sixty-four percent of working-aged respondents (18-65) are commuting to an office at least one day a week. This is higher for younger generations (72% of Gen Z and 70% of Millennials). Fifty-seven percent of office commuters say remote and hybrid work makes it easier to shop during the work week.

Younger consumers (52% of Gen Z and 48% of Millennials) planned to spend more on shopping in the second half of 2023 and throughout the holidays compared to just 29% of Gen X and 21% of Baby Boomers. However, Millennials and Gen X shoppers are the most impacted by the economy. Forty-two percent of Millennials and 43% of Gen X say the economy is affecting their spending plans versus 33% of Gen Z and 34% of Baby Boomers.

Near Intelligence surveyed 2,048 global consumers across generations in the U.S., U.K. and Australia from July 7-19, 2023.

••• pet care research

Pet expenditures continue to climb

Owners seek bargains, high-quality products

When it comes to pet ownership, consumers love their pets like a child, even going so far as to create social media accounts for them. And that dedication shows no signs of abating, with marketing solutions provider Vericast reporting that pet owners plan to increase spend on food, treats, supplements and hygiene products as well as gifts.

Consumers overwhelmingly feel that pets are family, with over three-quarters (76%) of pet owners viewing their pet as their child. Millennials felt most this way at 82%, followed by Gen X (75%), Gen Z (70%) and Baby Boomers (67%). About 80% of pet owners commemorate pet birthdays and holidays with a special gift or treat. Forty-one percent of respondents refer to their pet as a support/service animal to gain special privileges of some kind. Over 62% of respondents consider quality time with pets equally (47%) as important as time with a partner or even more important (15%) as time with a partner. Almost one-third (32%) of pet owners indicate having a dedicated social media account for their pet.

About 62% of pet owners surveyed say that they're spending more to keep their pets busy. Of those that work fully remote, 74% plan to spend more on toys and activities to occupy pets during the day. Consumers will spend more on pets, especially when it comes to their health but they'd like to save money where possible. About 37% of consumers surveyed looked for discounts for pet spending in 2023 and 28% used loyalty programs. About 78% of survey respondents were more willing to spend more on pet food and treats in 2023 than in 2022, indicating an interest in higher-quality products. Over a third of consumers (38%) were willing to spend more on health products like vitamins and supplements in 2023 and 38% of respondents also said they would spend more on pet hygiene products.

Pet owners are shopping where they're most likely to find discounts – pet specialty big-box stores and retailers. Almost one-third (32%) of people shop for their pets at big brand specialty stores. The next most common spot for pet purchases were other big-box shops, with 30% of consumers shopping at them. Twenty percent of consumers preferred e-commerce shopping for pets while only 13% of consumers said they are willing to shop at local, boutique pet stores.

Vericast's consumer survey was conducted with over 700 pet owners.

••• financial services research

More perks, please

Global views on digital vs. traditional banking

Despite major technological advancements in digital banking, insight company UserTesting found that 27% of people globally still "strictly" use traditional banks, ditching digital-only completely – including 28% of Baby Boomers and 26% of Millennials. In comparison, only 12% overall globally said they'd rather use a digital bank with no physical presence. Digital banking has its advantages, yet four in five digital bank users wish they also offered some of the same perks as traditional banks.

A higher percentage of Americans find digital wallets more trustworthy than their banking counterparts from Australia and the U.K. Sixty-seven percent of American respondents trust digital wallets and mobile banking apps and they are most popular among the younger generations (76% of Gen Z and 86% of Millennials) and least popular among Baby Boomers (48%). Fifty-four percent of respondents from the U.K. say they trust digital wallets and mobile banking apps and they are most popular across a variety of generations including Gen X (64%) and Baby Boomers (60%) and least popular among the Silent Generation (47%). Among Australians, 45% trust digital wallets and mobile banking apps and have a greater popularity among the younger generations (53% of Gen Z and 52% of Millennials) and are least popular among Baby Boomers (36%).

Similarly, a higher percentage of Americans trust digital banks over traditional banks compared to their counterparts in the U.K. and Australia. Thirty-three percent of Americans trust traditional banks more than digital banks, 28% trust both equally and 29% trust digital banks more than physical banks. Thirty-five percent of Australians respondents trust traditional banks more than digital banks, 42% trust both equally and only 4% trust digital banks more. In the U.K., 28% of respondents trust traditional banks more, while 52% trust both equally and only 7% trust digital banks more than traditional banks.

Only 6% of Americans, 11% of Australians and 6% of Brits claim to not trust banks at all.

Four in five (79%) American digital bank users would like some of the perks traditional banks have and 43% want the ability to talk to humans for customer support. This is especially true for Gen Z (60%) and the Silent Generation (49%). Forty-three percent of respondents prefer the waived fees that customers get at their traditional banks ATM. Seventy-three percent of Australian digital bank users wish their banks offered some of the perks traditional banks have and 31% would like to speak to humans for customer support. This holds true for the Silent Generation (47%) and Gen Z (34%). Additionally, 26% of respondents like the waived ATM fees that traditional bank customers get. Seven out of 10 (71%) digital bank users in the United Kingdom also want traditional banking perks. Twenty-seven percent want the ability to talk to humans for customer support, which is most important among the Silent Generation (43%) and Millennials (30%). Twenty-three percent of Brits feel that traditional banks offer better perks and rewards for their cards compared to those from digital banks.

While most respondents prefer to conduct their banking business with traditional banks, a minority of respondents speak with banking tellers on a regular basis. Fifty-one percent of Americans, 44% of Australians and 43% of Brits claim to prefer to speak with tellers face-to-face. While most respondents prefer banking with the option for human interaction, 55% of Americans have not actually spoken with a bank teller face-to-face in the past two weeks, compared to 88% of respondents from Australia and 81% of respondents from the United Kingdom.

This survey was commissioned by UserTesting and conducted by OnePoll with 1,800 people in the U.S., 1,000 people in the U.K. and 1,000 people in Australia. The survey was fielded from March 3-April 12, 2023.

Clients truly appreciate the value in pure in-context research to understand the 'why'. Researchers definitely love the closer rapport and ability to observe or pick up on nuances they don't get over a video call. The insights delivered are 'more alive' and build even more compelling findings to our clients.
Jon Ward, VP of Sales at EMEA

While online tools are impactful in achieving many Qualitative research objectives, there is just nothing like having the face-to face interaction with our consumers and clients – something that online just cannot replicate. The interaction between Moderator and Respondent becomes more immersive and natural – body language is key when tapping into the System 1 which is integral in a lot of the work we do. Finally, the back room and client engagement is just as important – bringing key stakeholders together to workshop live during research is unmatched and super effective.
Paul Markovic, Director of Behaviorally

I have enjoyed helping clients return to in-person research. You can see the excitement as they leave, re-energized with a very enthusiastic "We'll be back!" I think this is something we are all experiencing in our lives as we also return to more social gatherings, making more interpersonal connections face to face. I have been very grateful for technology through the pandemic, but what once seemed like a suitable substitute now pales in comparison to the real thing.
Megan Pollard, President of Fieldwork Network

The rich and robust nature of in person research is the best avenue for much of the qualitative work to be conducted. We are fortunate to see this back to its full potential with questions answered, ideas generated and collaboration amongst so many. As the conversations flow, we are gaining the much needed information to move ideas, products and plans forward.
Debby Schlesinger

#facetofacemrx

Research mirrors society: something gets lost when our only form of communication is on a computer screen or telephone. Of course there are the three senses...taste, touch and smell...that cannot be replicated online. But there's also the fact that humans are social creatures, and make decisions based upon social influences. People behave differently when you meet them in-person versus how they respond on a FaceBook neighborhood group post, do they not? Research is no different.

Smart companies know new products and ideas cannot be tested solely online: they need to be exposed "in the real world", with people interacting together. Much can be learned from what people do and react, versus solely about what they say...just like the real world, researchers are remembering the value of in-person research, and the incredible learning.
Brett Watkins, CEO of L&E Research

••• special advertising section

9 TOP PHYSICIAN RESEARCH COMPANIES

Marketing research companies that specialize in physician research can offer the most effective and efficient methods for your research. They have access to an array of techniques including focus groups, mock trials and journey mapping.

Experts who specialize in this field understand the challenges of working in the industry and work to remain compliant with information privacy regulations. If your research aims to understand the relationship between physicians and patients or any physician pain points, these companies can help.

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Founded 1989 | 40 employees
John Mitchell, President and Managing Principal

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Monisha Hatfield, Senior Vice President
Bonnie Janzen, Executive Vice President

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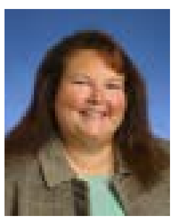
Founded 2014
Helen Karchner, CEO/Co-Founder



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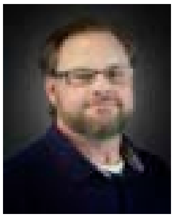

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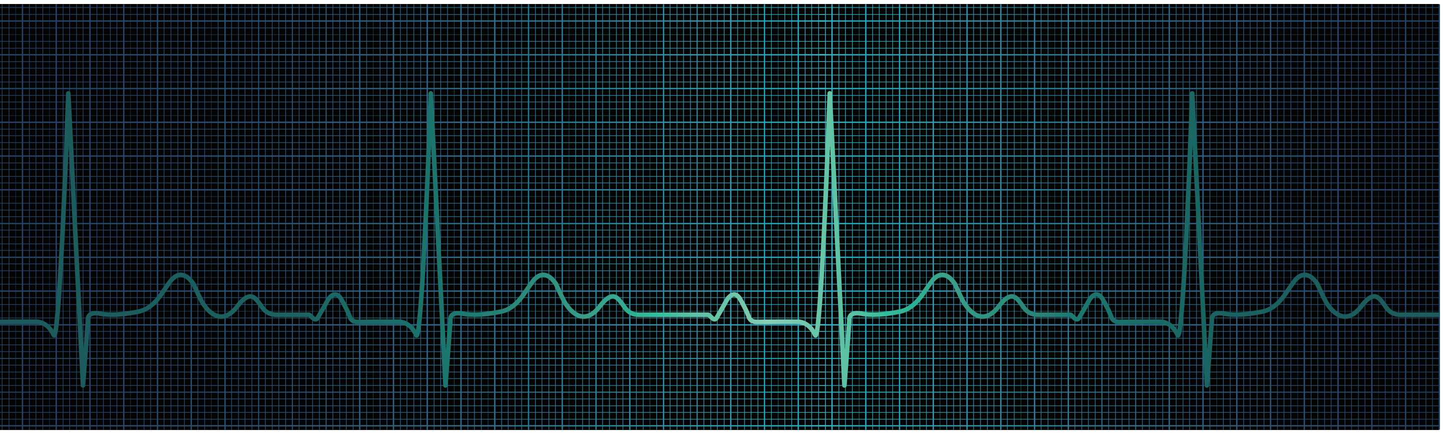

THE Q REPORT
CORPORATE RESEARCHER REPORT

Findings from the Q Report, an independent study, written for and developed with the help of client-side marketing research and insights professionals

A welcome source

Outsourcing seen as a valued, versatile option for corporate marketing research teams

| By Joseph Rydholm

abstract

From freeing up internal bandwidth to allowing them to do what they do best, Q Report respondents say outsourcing serves a range of logistical, budgetary and methodological needs.

In the late 1990s and early 2000s, outsourcing in marketing research often focused on taking advantage of India's newly burgeoning tech industry – a primary benefit of which was "they work while you sleep," meaning that labor-intensive jobs like questionnaire development and text analysis and coding could be sent across the world overnight and received back the next morning to keep projects on-schedule and, at least in theory, on-budget.

Over time, outsourcing has morphed to have a less geographical feel and is instead more task- and capability-focused. Asked in our most recent Q Report survey to choose from a list of reasons why they outsource today, respondents put speed (16%) and cost (7%) low on their list, instead picking "providing an expertise that isn't available in-house" and "lack of internal staff" each at matching 31% choice levels.

We last queried Q Report respondents about outsourcing in 2015 and responses eight years later to a question about the most-often outsourced functions were identical: recruitment, data collection, data analysis and project management.

To get a sense of the current levels of outsourcing, we asked what percentage of research projects are conducted in-house vs. outsourced and respondents said just over half (52%) of projects are fully in-house, with about a third (32%) fully outsourced and 15% partially outsourced.

We asked for additional comments/insights on why they outsource and for many, the size of the project is one of the main drivers:

> *We only outsource larger, strategic projects (e.g., brand health tracking, segmentation, DCM, creative testing, customer panel development/execution) and we also have support for programming and data collection.*
>
> *We outsource projects that we don't have the tools/capacity to do in house, such as customer journey (advanced quant analysis and focus groups), financial modelling.*

[We outsource] our big customer quant surveys and the majority of our qual projects with external customers.

And in addition to those who outsource part of a project…

This depends by department; some departments fully outsource; my department mostly does things in-house – we mostly buy sample and do everything ourselves.

We outsource recruitment for survey respondents, survey programming and data collection via a survey platform but we write the surveys ourselves. We also outsource recruitment for qualitative respondents and programming/setup of the online qualitative platform but we write the discussion guides and design the activities ourselves.

…others outsource the whole thing:

We outsource entire projects that we don't have the manpower to do. For example we just outsourced a segmentation project using "jobs to be done." The project took a year.

It depends. We have an offshore team we use for data analysis and reporting. We typically work with internal partners to set up the research objectives, then work with market research agencies to determine the methodology and field.

If we have the respondent information (e-mail address, etc.), we conduct the research ourselves. We enlist the help of research vendors when we don't have the respondent information or we are looking for guidance on proper research methods.

Many respondents mentioned using outsourcing as a way to avoid the appearance of bias and to grant some authority to the results in the eyes of internal audiences.

We only outsource when we need third-party credibility on research results. Usability feedback and generative research is all handled internally.

We do a brand health study twice a year. Its purpose is to validate the data we collect internally and give us insight into non-customers in our markets. As such, it's important we have a third party lead this effort to prove there is no bias from us.

Sometimes we believe it is better to have a third party conduct the research so that there is some reassurance that the research is unbiased.

To maintain proper blinding and compliance with confidentiality and prevent any appearance of "research as selling."

For improved validity – we are not collecting customer comments/data. The outside researcher removes the question of potential tampering.

Recruiting is also a popular task to outsource, given its time-intensive nature and the constant vigilance required to maintain respondent databases.

Having someone else manage recruitment is just easier and less of a headache, especially for qual research and scheduling.

We outsource some of our data collection for hard-to-find audiences and for larger projects with more sophisticated analysis requirements.

We outsource recruiting but manage it (through User Interviews/Respondent.io) and have a couple of key tracking studies that we fully outsource, though on the latter we are moving them in-house to make them more responsive to our needs.

We mostly outsource the recruitment for focus groups and IDIs, as we do not have the database or resources to deal with most recruiting efforts to the level we desire. Sometimes, we will have mall intercept research done out of state, where I will fly out and show how interviews are to be conducted and then we outsource the large quantity of programmed interviews in the out-of-state location.

We use panel companies to recruit and the platform we use also provides survey programming support. I am closely involved, however, in both of these processes.

[We outsource for] data privacy for patients and we don't want to have to maintain our own panels or pay them for responses. I've

done that as well as programming my own surveys and doing all the analysis and it's a nightmare to manage all at the same time.

Not a good idea to maintain our own panel.

It's mostly about finding respondents that we have less access to ourselves.

We outsource almost solely to reach niche B2B audiences that are tough or impossible to recruit. We do this mainly through expert networks.

For several respondents, outsourcing serves as another extension of the partner-like nature of their relationships with their vendors.

We collaborate on design and underlying objectives w/our suppliers and once we have the proposal and get internal buy in, the supplier takes the project.

We have a small contract with a dedicated team and sometimes they help with programming surveys or advanced analytics. I would say we are still firmly DIY and the DIY portion will likely grow in my opinion over the next year.

We use third-party full-service vendors to conduct much or the research we do but virtually always in partnership with an internal project manager/researcher who directs the work from beginning to end.

It also just makes sense from a budget perspective.

We may have the professional expertise but not the tools. I'm not investing in a full conjoint tool if I only do one a year.

Don't have the large fieldwork systems in-house. And do not want to have [them]!

In-house data collection and recruiting respondents require fixed team and the cost of hiring the field forces. Rather not take those on.

For others, outsourcing is a welcome option to have at the ready.

More efficient for our group to stay nimble and across the business. It's a better model for us to oversee and direct the research we need vs. getting into the weeds with executing it.

Given the (smaller) volume of research projects, it is not efficient to develop all qual/quant capabilities in-house (e.g., we would have to staff and acquire enterprise-level tools to convert all surveys in-house).

We would rarely fully outsource but it's nice to spin up a team for one dedicated project, on a per-project basis.

Wanted an outside source to do the brand tracker. And they developed a segmentation plan that was beyond in-house expertise.

[The firms we outsource to] seem to be able to adhere to a timeline. We tend to struggle without killing work/life balance.

[With outsourcing], we focus on being "insight leaders" internally, rather than researchers.

Hired a report writer; it's really time consuming and I'm not good with design.

Two responses in particular deserve a hearty thanks for their honesty. (What is it with the C-suite execs?)

New C-suite exec and high-level management seem to believe that spending massive amounts of money to pay prestigious vendors to do work that is already capable of being done in-house is somehow more efficient/better.

Primarily when we outsource research, it is for participant recruitment and moderation for qualitative research. More recently, we have C-suite execs who are enamored with bringing in big-box vendors and outsourcing large projects (both qual and quant) to them from start to finish – sometimes with us at the table as a consultant, sometimes not.

This response pretty much sums up the current state of outsourcing.

It depends on the project. When we conduct research through our online panel, it is housed, fielded and data is summarized by the panel company. We do some research ourselves online that we do every aspect of. We conduct some of our research studies by mail and for those, we outsource the printing and mailing aspects. We typically request data tabs from our vendors, as well as SPSS files, and we analyze the data ourselves when wanted or when needed. Other studies we use such as JD Power and Forrester are completely outsourced – we just pay for the results.

METHODOLOGY

The Q Report work life and salary and compensation study of end-client/corporate researchers is based on data gathered from an invite-only online survey sent to pre-qualified marketing research subscribers of Quirk's. The survey was fielded from May 24 to July 10, 2023. In total we received 1,969 usable qualified responses of which 707 were from end-client researchers and used for this end-client report. An interval (margin of error) of 2.17 at the 95% confidence level was achieved for the entire study. (Not all respondents answered all questions.)

Decoding Gen Z: Bridging the generation gap in qualitative research

| By Gary Rudman

abstract

For successful qual with Gen Z, check your preconceptions at the door and meet the respondents where they are.

When discussing research with Gen Z, I frequently encounter clients reminiscing about their own teenage experiences. I find it necessary to clarify that while certain aspects of adolescence remain constant – the physical changes, the emotional turmoil, the quest for self-identity – everything else is different. Gen Z's upbringing, shaped by digital technology and a profoundly changed world, have led to distinctive perspectives and ways of navigating life that has set them worlds apart from Gen X and Boomers.

This article will outline five ways that Gen Z is different and five factors that researchers have to consider when conducting qualitative research among this critical marketing target.

FIVE DIFFERENCES

FOMA (fear of [even] mild awkwardness): We often describe technology as both the cause and solution to many of Gen Z's problems. While it benefits them in numerous ways, it has also affected their social interactions. For instance, Gen Z exhibits a pronounced fear of awkwardness and embarrassment, amplified by reduced in-person social contact. Growing up in a highly connected digital world subjects them to constant scrutiny and comparison on social media, fostering a fear of awkward moments and public humiliation. Cancel culture exacerbates their risk aversion, prioritizing self-preservation. Additionally, extensive digital communication reduces face-to-face interactions, leaving Gen Z feeling less prepared for real-life social situations. The comfort of screens promotes a polished online persona, discouraging spontaneous in-person interactions and reinforcing their fear of awkwardness.

Awareness arbiters: Gen Z has emerged as a prominent arbiter of social consciousness, wielding their influence on various social and cultural fronts. With an acute awareness of social justice issues and a passion for inclusivity, this generation has been unapologetic in boldly educating adults, parents and teachers about appropriate language and behavior. Gen Z's activism has sparked vital conversations about pronoun usage, cultural appropriations, mental health and other sensitive topics that were once overlooked or dismissed.

Next-gen nuances: Gen Z exhibits distinct and evolving priorities. These digital natives have distinct goals, viewpoints and life experiences that often diverge from the traditional life stage aspirations of Gen X or Boomers. Data shows, for instance, that many Gen Z are less inclined to prioritize obtaining a driver's license or buying a home and more inclined to have concern about the environment and racial justice.

Cultural shifters: Gen Z have a distinct viewpoint when it comes to respect of people and established traditions. They see themselves as equals and peers to their elders, parents and teachers. They feel comfortable and are even brazen about inserting their opinions into the conversation. In addition, this generation is more inclined to embrace innovation, challenge conventional wisdom and pioneer new paths to address contemporary issues and challenges. This cultural shift is a reflection the changes in society rather than a calculated decision. A major factor is that their upbringing has been marked by unrestricted access to a wealth of information and diverse viewpoints readily accessible online. This exposure has cultivated a greater willingness to question established norms and conventions.

Course correctors: Gen Z possesses a distinct perspective on the world and how they navigate through it. They have developed an effective strategy to swiftly change course when dissatisfied with their current direction. Some critics argue that Gen Z lacks grit and tends to seek quick solutions, potentially undermining their commitment to long-term goals. However, it's essential to acknowledge that their behavior is shaped by the environment they grew up in. Their actions may not necessarily indicate a lack of determination but rather mirror their adaptation to a digitally driven, fast-paced world. Gen Z's capacity to explore multiple options and quickly pivot showcases their adaptability and resilience. They excel in handling change and seizing opportunities, a valuable skill in today's rapidly evolving landscape.

FIVE FACTORS

They're different: It is essential for researchers to recognize that Gen Z has entirely different customs, approaches, goals, expectations, priorities and beliefs – all of which cause them to constantly reevaluate established norms and conventions. This can have great impact on how Gen Z reacts to discussion, communication, stimulus and even a moderator's tone in research. Prepare to be surprised by their reactions to and feelings about the topic at hand.

Practical illustration: Despite my three decades of experience, I approach research with an open mind, devoid of preconceived notions, and consistently advocate for my clients to invest in research rather than making assumptions.

Practical illustration: When conducting research with this population, regard them as if you were exploring a foreign culture. Allow them to offer insights into their unique perspectives and behaviors and refrain from assuming shared viewpoints.

They're safe-spacers: Gen Z are all about engaging with the community in a safe space. It is also important to recognize that Gen Z is extremely sensitive to awkwardness. Researchers should approach discussions with empathy and a genuine desire to understand Gen Z's perspectives. Avoid judgment, validate their concerns and create an environment where they feel comfortable, safe and heard in a two-way conversation.

Practical illustration: Before I begin the research, I will bring respondents out of the research environment, whether it's a physical hallway or an online breakout room. Along with reconfirming screening questions, I pose a thought-provoking question such as "What is something that is really pissing you off?" This not only jump-starts conversation and establishes rapport but also fosters common ground, as their responses often revolve around shared experiences such as school, parents, teachers and jobs, creating opportunities for bonding among participants.

Practical illustration: I like to present myself as a blend of a favorite teacher and a peer, striking a balance between maintaining some structure and creating a comfortable and amicable atmosphere.

They have strong opinions: Researchers must do their homework to get a clear sense of the Gen Z headspace, especially concerning social justice, inclusivity, mental health and appropriate language. This is not to suggest that they aren't forgiving of mistakes, but they appreciate when an authentic and sustained effort is made to work within their generational guidelines for social correctness.

Practical illustration: I initiate the research process by asking respondents to share their preferred pronouns during introductions. I ensure they understand that I may occasionally make mistakes, emphasizing my receptiveness to corrections and asking for their understanding in advance. This practice fosters an inclusive environment that promotes a sense of safety and acceptance.

They're all about change: Gen Z is highly focused on change and lacks tolerance for limited options. They don't respond positively to ideas that cannot be altered, personalized or customized in some manner.

Practical illustration: In research, marketers might have more success allowing Gen Z respondents to build their own concept from a variety of features rather than exposing them to preexisting, set-in-stone concepts.

They want it short and to the point: Gen Z is ready to move on to the next thing. They have neither patience nor interest in wading through copy that is tl;dr (too long; didn't read) in research or being repeatedly asked the same questions. Discussions and copy must be kept short and to the point.

Practical illustration: We constantly tell our advertising partners that they should reach Gen Z with five words and a big picture, because that's all Gen Z has the patience for. Given this, I frequently revisit all discussion guides and copy to weed out the extraneous fluff to make the discussion and stimulus concept as tight as possible.

Creating a secure environment

Conducting effective qualitative market research with Gen Z necessitates creating a secure environment where their distinct perspectives, strong opinions and affinity for change can shine. Meeting their preference for brevity while respecting their unique viewpoints is essential for insightful outcomes.

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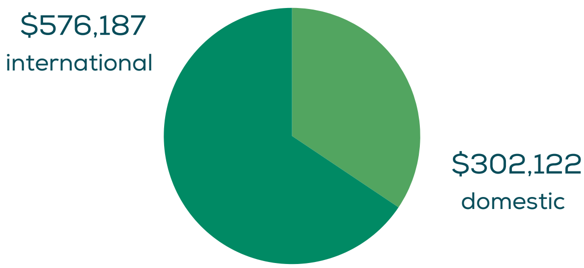
TOGETHER, WE MADE AN IMPACT

MREF
Marketing Research Education Foundation

In 2023, the Marketing Research Education Foundation (MREF) collaborated with the insights industry to give $164,700 to promote educational opportunities and child welfare across the world.

lifetime impact

$878,309
lifetime giving since 2015



30
organizations granted aid

our mission

The mission of the Marketing Research Education Foundation (MREF) is to unify, inspire and activate the marketing research community to focus its collective resources to educate children and youth worldwide. Visit **www.mrgivesback.org** to learn more and get involved.

our history

2015
The Marketing Research Education Foundation begins its mission to unify, inspire and activate the marketing research community.

2016
Education and job training grants go to Operation Spark, Success Centers of San Francisco, The Children of Hope Haiti, Opportunities for a Better Tomorrow and Bricolage Academy.

2017
The Joseph School receives a grant of $13,680, marking the start of the MREF's ongoing support. Researchers visit the school during an MREF-sponsored vision trip to Haiti.

2018
The MREF continues its support of The Joseph School and Opportunities for a Better Tomorrow, with grants of $35,430 and $5,000, respectively.

2019
Opportunities for a Better Tomorrow, Literature For All of Us and The Maywood Fine Arts Association receive one-time educational grants.

where we gave

$10,000
to Alight to provide humanitarian aid in Turkey and Syria.

$650
to Maui YMCA to provide community relief to those affected by wildfires.

$38,500
to Kids in Need Foundation (KINF) to provide essential school supplies to students in need.

$3,500
to Caring for Miami to provide school supplies to Title 1 schools in Miami.

$5,000
to Marty's Orchid House, a therapeutic day center for kids.

$5,000
to Baal Dan, a charity supporting the basic needs and welfare of impoverished children in developing countries.

$55,000
to Orphans' Aid Society to provide small needs-based grants to foster children in Ukraine.

$15,000
to Hogar Montiel to support at-risk girls in Costa Rica.

$10,000
to Start Lighthouse to promote children's literacy.

$22,050
to The Joseph School in Cabaret, Haiti.

2020

MREF grants $60,000 to Support Feeding America and Food Banks Canada during the COVID-19 crisis. Backpack Challenge's inaugural year brings in nearly $58,000.

2021

The inaugural Race Around the World for Education is the MR industry's largest-ever fundraiser, with more than 1,100 participants and 35 sponsors raising $100,000+.

2022

The 2022 Race Around the World for Education raises $134,000 for Ukrainian refugee children. MREF donates $45,000 to provide backpacks to youth in the U.S. and Canada. $15,300 goes to Baal Dan to provide famine aid in Ethiopia and Somalia.

2023

The third annual Race Around the World for Education raises $90,000 for organizations elevating children's education. The MREF works with KINF to provide $38,500 in school supplies for kids across the U.S. The industry gives additional $10,650 to support children in crisis.

Efficient deployment of multiple deep learning applications on a single GPU Zotac

By Nikki Aldeborgh, Omer Ahmad, Isidro De Loera Jr. and Yuefeng Zhang

abstract

Surges in deep learning and edge computing have created demand for more complex applications. A key piece to producing such performant systems is computing-device efficiency. Here, data scientists from McDonald's propose a solution that enables simultaneous execution of up to four instances of a DL-based application while maintaining high performance and low latency on a single GPU Zotac.

In recent years a proliferation of internet-of-things devices, and an increased demand for real-time processing of data streams, has sparked interest in edge computing. Edge computing enables faster inference times than sending data to the cloud for analysis. Additionally, deep learning (DL) has made huge strides in domains such as vision, audio and text, making it an attractive candidate for data analysis and processing.

The problem arises, however, when trying to deploy computationally expensive DL applications in resource-constrained edge environments, particularly in a multi-tenant scenario where more than one DL model is running. For example, in autonomous driving systems it is essential to run multiple DL models such as classification, segmentation and detection. Furthermore, more than one of these applications often must be run concurrently, for example on different view angles (front, back, side) from the car. In the following sections we detail two avenues for optimizing performance in multi-tenant DL applications.

MULTI-TENANT GPU RESOURCE OPTIMIZATION

Co-locating multiple DL models on a single graphics processing unit (GPU) comes with some complexities that are not present, or are less extreme, in a single-tenant single-application scenario. Resource contention arises when multiple models are competing over the same memory and compute.

Memory constraints arise because models require a substantial amount of memory to store their weights, activations and input data. In the case where multiple models are deployed on a single GPU they all must compete for limited memory resources, which leads to slower performance and increased memory usage. Researchers have proposed various techniques to alleviate this, such as model quantization,[1] weight pruning[2] and knowledge distillation.[3]

Computational resource contention is another challenge for multi-tenant DL applications. Models can experience inter-tenant interference[4] when executing concurrently on the same backend machine, which can cause latency degradation. This becomes worse with more co-located workloads and can degrade the overall application throughput. Thus, several service-level orchestration efforts have designed mechanisms for strategic co-location of DL models.[5] A powerful tool offering many of these optimizations is Triton Inference Server, which we use for optimization of GPU resource usage.

SOFTWARE-LEVEL MODEL ORCHESTRATION

Beyond the GPU memory, computing and scheduling considerations discussed above, the application itself needs to effectively orchestrate the flow of the data to manage hardware resources while ensuring optimal performance. To address this challenge, Python, a versatile programming language, offers a robust set of tools and paradigms for optimizing resource utilization. These tools include asynchronous processing using the asyncio interface, threading and queues. Each of these components plays a crucial role in orchestrating concurrent tasks for efficient data flow.

UNLOCKING MULTI-TENANT POTENTIAL

In multi-tenant environments, where multiple DL applications contend for shared resources, these techniques are promising. Triton Inference Server's handling of resource contention, along with Python's asynchronous processing, threads and queues, allow developers to design systems that effectively utilize available hardware while maintaining application responsiveness. By distributing tasks across asynchronous tasks or threads and managing data flow with queues, a harmonious ecosystem can be cultivated, ensuring that each tenant benefits from efficient resource usage without compromising system stability.

In the subsequent sections of this article we delve into the practical implementation of these techniques within the context of multi-tenant DL applications. We present a novel solution that enables deployment of multiple multi-tenant DL applications, each with a GUI component, on a Zotac with a single GPU.

The rest of the article is organized as follows: We provide a brief background on DL applications, edge computing and Triton Inference Server. Then we discuss the sample applications we use as a case study. Next we detail the proposed solution and finish with a detailed look at the results.

Background

DEEP LEARNING

DL is a subset of machine learning that utilizes multi-layer networks to learn and represent complex patterns in data, accomplishing tasks that were previously only thought to be possible by a human. One of the main drivers of DL's growth has been the wealth of high-quality labeled data in the form of text, images and audio. Additionally, the availability of specialized hardware such as GPUs has made the training and inference speed of models fast enough for practical use. In our case study we focus on computer vision, a subset of DL that operates on imagery data. Specifically, our application performs object detection, human pose estimation and object tracking.

Figure 1: An example of object detection of humans. The green boxes represent detections output by the object detection model.

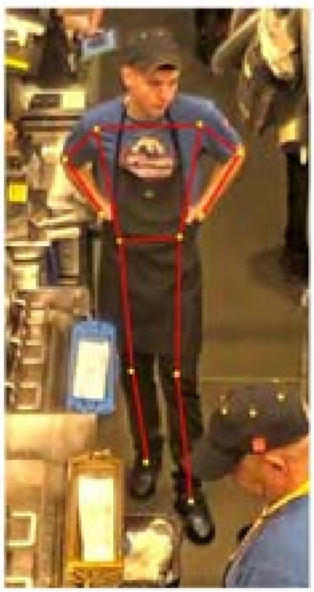


Figure 2: Sample output of a human pose estimation algorithm.

OBJECT DETECTION

Object detection is the process of identifying an object in an image and delineating it with a bounding box (Figure 1). Before DL came on the scene, object detection relied on classical machine learning techniques such as handcrafted features, but these struggled to deal with variations in lighting, pose and scale. Several DL-based approaches to object detection have since been developed and generally fall into one of two categories: region-based approaches and single-shot detectors. Region-based proposals such as Faster-RCNN[6] first propose a region that looks like an "object" and then decide what the object is, using a classification algorithm. Single-shot detectors such as YOLO[7] enable real-time object detection by combining the region proposal and classification into a single network.

Object detection is now ubiquitous, due in part to the DL approaches outlined above, the plethora of data available to train them and accelerated computing devices such as GPUs and tensor processing units. It is found in fields such as autonomous driving, medical imaging and augmented reality.

HUMAN POSE ESTIMATION

Human pose detection takes object detection a step further and delineates key anatomical keypoints from an image of a human, such as the head, hands, elbows, knees and feet. By discerning such information, human pose estimation (Figure 2) can reveal the precise posture of a human and, in the case of videos, the dynamics of their movement. There are several approaches to human pose estimation, most of which, like object detection, are based on convolutional neural networks. OpenPose[8] uses part affinity fields to delineate human pose and YOLOv7-pose[9] extends object detection to also detect keypoints.

OBJECT TRACKING

Tracking applications seek to take detected objects and match them between frames of a video. They often use Kalman filters,[10] which use an object's current state to predict a future state and then match that prediction to the detected objects in the next frame using linear matching like the Hungarian[11] or Jonker Volgenant[12] algorithm. Furthermore, re-identification algorithms like DeepSORT[13] use DL-based models to create a descriptive feature embedding of an object, which can be matched to feature embeddings in future frames. In a simpler case, a characteristic of the object being tracked may be used to track the given object, such as using shirt color to track a human. As long as the human is the only one wearing a certain color shirt, any frame where that shirt color is identified can be attributed to that specific human. This simply involves using a classifier such as ResNet[14] to classify shirt color of the detected human.

TRITON INFERENCE SERVER

Triton Inference Server is an open-source deep learning framework developed by NVIDIA that helps mitigate memory and performance issues in a multi-tenant environment. Triton has several key features that reduce resource contention and optimize inference efficiency:

1. GPU sharing and isolation: Triton supports GPU sharing, which allows multiple DL models to run simultaneously on the same GPU. This is achieved using GPU isolation mechanisms, which prevent models from interfering with one another. Triton logically separates each model's memory and compute resources, ensuring one model does not impact performance of another.
2. Dynamic batching: Triton uses dynamic batching to optimize GPU utilization. As inference requests come in, dynamic batching will group multiple requests together and process them as a batch, which is generally more efficient than running inference individually. This minimizes the overhead associated with launching GPU computations and improves the overall GPU utilization, reducing contention.
3. Ensemble support: Triton's ensemble support gives the ability to group interdependent models together in a multi-tenant application. This ensures that the ensemble models are scheduled and executed together, thus reducing risk of contention between the related models. It also allows intermediate processing steps to occur on the GPU, reducing

Figure 3: Data flow of the worker utilization application. Each frame undergoes a YOLOv7 object detection and pose estimation inference and each detected human is sent to the ResNet18 vest color classifier.

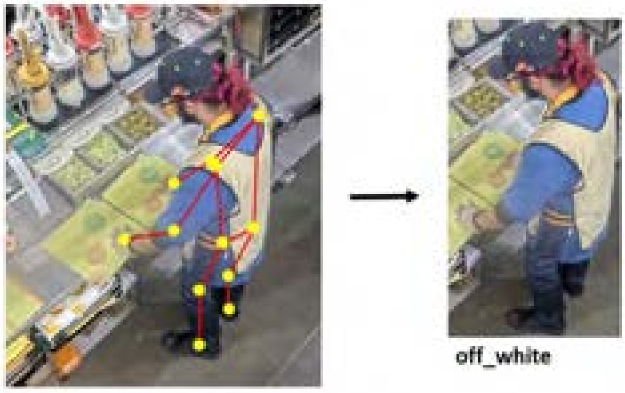


Figure 4: Application output visualization. Humans and associated poses are detected in each frame (left). Each detected human is then assigned a vest color for tracking (right).

time spent converting tensors from GPU to CPU and back again.

4. TensorRT integration: Triton Inference Server integrates with NVIDIA's TensorRT, which is an optimized deep learning inference library. TensorRT accelerates inference by leveraging the capabilities of NVIDIA GPUs and reducing the memory footprint of models through layer fusion and precision calibration.
5. Latency-based scheduling: Triton uses latency-based scheduling to manage GPU resources effectively, prioritizing the most time-critical requests and minimizing inference wait times.
6. Model instance management: Triton Inference Server efficiently manages multiple instances of the same model on a single GPU. Instead of loading the entire model into memory for each instance, it maintains a shared memory pool for common model components. This reduces the overall memory footprint, allowing more models to coexist on the GPU.
7. Memory pools and buffer sharing: Triton Inference Server uses memory pools to optimize memory allocation for inference requests. It allocates a fixed-size buffer pool for each model to avoid the overhead of memory allocation and deallocation during inference. Furthermore, it leverages buffer sharing among different instances of the same model to minimize redundant memory consumption.

By employing these strategies, Triton Inference Server ensures efficient memory and performance management when deploying multiple models on a single GPU, making it a valuable tool for deploying deep learning models in production environments.

PYTHON ASYNCHRONOUS PROCESSING

Asynchronous processing, generally powered by Python's asyncio framework, introduces a paradigm where tasks can execute concurrently without blocking the main program's execution. This is particularly advantageous when using I/O-bound operations, in which case waiting for external resources can lead to inefficiencies. Asynchronous processing couples nicely with Triton Inference Server, whose gRPC client has an asyncio-compatible extension allowing other processes to continue while waiting on an inference request. By using asynchronous programming, we can ensure that the CPU remains engaged in productive work while waiting for I/O and Triton inference tasks to complete.

PYTHON THREADS

Threads offer a means to achieve concurrency within a single process. Unlike asynchronous processing, which is more suited for I/O-bound tasks, threads are well-suited for CPU-bound operations. By leveraging threads, we can allocate separate threads to each application instance, allowing for parallel execution. This can be highly beneficial in multi-tenant deep learning applications, where tasks such as pre-processing, inferencing and user interactions can be managed simultaneously. Threading is compatible with most Python libraries, whereas few are asyncio-compatible, making the GUI development more straightforward in a threaded environment.

QUEUES: SYNCHRONIZED DATA EXCHANGE AND COMMUNICATION

Queues provide a synchronized mechanism for transferring data between different threads or asynchronous tasks. As one task completes processing, it can add the data to the queue and the next task will receive it in a first-in, first-out order. In the context of multi-tenant deep learning applications, which demand efficient task distribution and data management, queues enable seamless coordination between tasks and threads, ensuring a smooth flow of data and maintaining responsiveness.

Application

We implement a worker utilization application as a case study for our generalized multi-tenant deployment approach. This application has two DL-based components: human pose estimation to determine workstation activity status and subsequent tracking using a vest color classifier (Figure 3). There is a GUI component that visualizes the pose and assigned tracked worker ID in real time (Figure 4). This must be a highly performant application running at least five frames per second (FPS) for adequate responsiveness.

WORKSTATION ACTIVITY STATUS

Our first deep learning application involves identifying all humans in each video and their associated poses. The pose of each person with respect to their user-delineated workstations will tell us if they are actively working at a

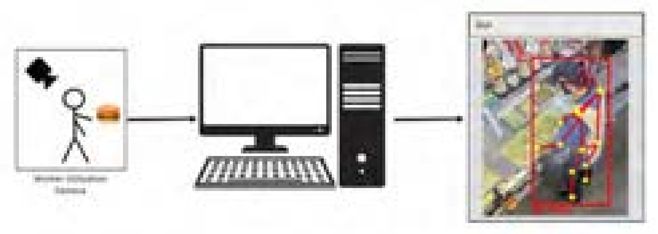


Figure 5: System architecture. Each worker utilization application requires a camera that is pointed at the active workspace of interest. The camera is connected by IP to a Zotac edge device with a GPU where inference is run. The edge device's display shows the GUI with results of the pose estimation and tracking.

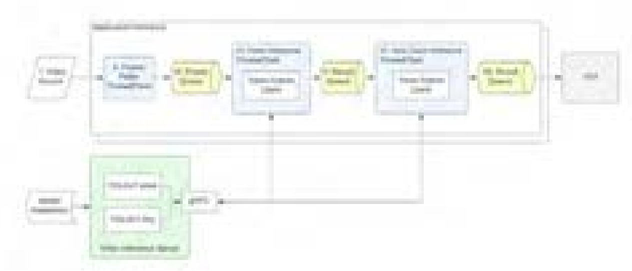


Figure 6: Architecture of the decoupled method. Each model in the application is logically separated and joined by a queue. Intermediate processing steps are run on CPU and then an inference request is made to the Triton server using gRPC for each model.

station. If their hands or elbows intersect with their assigned workstation we consider that worker active.

HUMAN TRACKING BY VEST COLOR

Beyond establishing a person's activity status at a workstation, we must ensure we are tracking the correct person for a given workstation. To do this we must assign an ID to each person detection and match it to detections in successive frames. There are multiple methods for re-identification between frames but we choose to have each worker wear a unique vest color and match detections based on the identified vest color. This only requires a small classifier as opposed to the larger and less reliable re-identification models like DeepSORT. For the vest color classification model we use ResNet18 on each detected human instance. The YOLOv7-Pose and ResNet18 classifier thus comprise a single instance of the multi-tenant DL application we seek to optimize.

Proposed solution

In this section we detail the system and software architecture of our solution.

SYSTEM ARCHITECTURE

Our system (Figure 5) uses a Zotac with a Quadro P5000 GPU edge device connected to an IP camera angled at the people to track. The IP camera must be positioned properly as to see all humans of interest. The edge device receives all frames, runs the software and has a display output for the GUI.

SOFTWARE ARCHITECTURE

In the pursuit of efficient and accurate multi-tenant DL solutions, our experiments explore various software configurations to harness the power of decoupled methods, ensemble strategies and different concurrency approaches. This section provides an overview of the software architecture underpinning our experimentation.

DECOUPLED METHOD

In the decoupled approach (Figure 6), each DL model is treated as a separate entity, operating independently and concurrently. The software architecture follows a modular design, where individual models are encapsulated within either Triton Inference Server or a PyTorch model runner thread. Input and output queues establish connections between each, ensuring seamless data flow. Models are offloaded from GPU to CPU after each step and perform all pre-/post-processing on CPU. This process can slow down the entire pipeline but it has the advantage of models upstream in the pipeline running inference on the next frame without waiting for more downstream tasks to complete.

ENSEMBLE METHOD

The ensemble method (Figure 7) capitalizes on the power of model aggregation through Triton Inference Server. In this configuration, the ensemble of models is deployed onto the server, enabling centralized management. However, to optimize resource utilization, the pre-processing and post-processing steps remain localized on the GPU. This way only one inference task is run in the pipeline and tasks are run in serial for each application instance, unlike the decoupled approach.

CONCURRENCY APPROACHES

To further enhance performance, both the decoupled and ensemble architectures are configured with different concurrency approaches: threads and asynchronous tasks.

In the thread-based configuration, each model, or model ensemble, is run on a separate thread. This allows different models and application instances to run concurrently but due to Python's

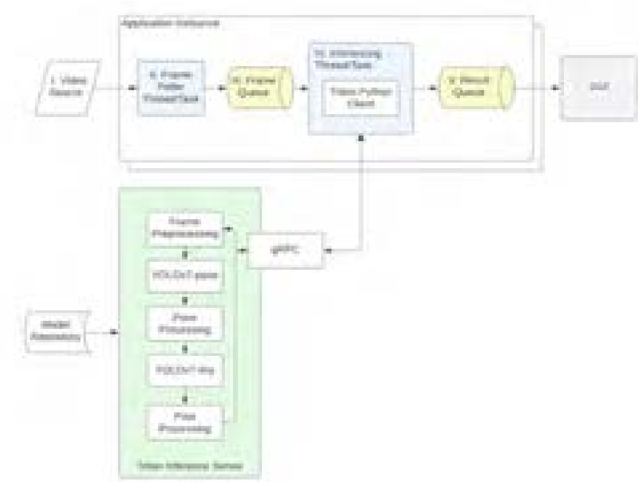


Figure 7: Architecture of the ensemble method. Both models are run on Triton with a single gRPC inference request. Intermediate processing also happens on Triton and is localized to the GPU. The entire application is coupled and runs synchronously within a single instance.

	Number of Application Instances			
	1	2	3	4
PyTorch Decoupled Threads (PT)	14.907±0.0481	7.654±0.0686	5.252±0.0188	3.927±0.0443
Triton Decoupled Threads (TDT)	13.602±0.375	10.530±0.558	8.074±0.0968	5.987±0.107
Triton Ensemble Threads (TET)	10.332±0.0506	9.508±0.120	8.568±0.137	6.537±0.0154
Triton Decoupled Async (TDA)	14.280±0.0882	12.556±0.256	8.372±0.370	6.104±0.0583
Triton Ensemble Async (TEA)	11.878±0.0386	10.575±0.0930	9.051±0.0497	6.773±0.0580

Table 1: Results of experimentation in various runtime environments reported in frames per second (FPS).

rations to identify the most effective strategies. To gauge performance we use the metric of application frames per second (FPS). Our test environment involved running one to four instances of our multi-tenant worker utilization application, each trial extending for a consistent interval of 100 seconds. Numerical results are presented in Table 1. This section details our findings over the following runtime configurations.

Global Interpreter Lock (GIL), the Python interpreter will not run more than one thread in parallel, which could slow down the execution time.

Asynchronous processing, utilizing the power of asyncio, is employed to handle I/O-bound tasks efficiently and is not subject to the GIL. It also provides an event loop, which tracks the readiness state of different I/O events, thus avoiding switching costs of multithreading. The downside is that it is more complex to implement, particularly when it comes to designing the GUI.

Results

To optimize efficiency of our multi-tenant DL applications, we conduct a comprehensive series of experiments, exploring a number of runtime configu-

BASE CASE: PYTORCH MODEL WITH THREADED MODEL RUNNERS

We initiate our exploration by establishing a baseline performance metric using a PyTorch model without Triton for inferencing. This base configuration intentionally omits any proposed optimizations, allowing us to measure raw model performance. Notably, vanilla PyTorch does not have ensemble support or asyncio compatibility and is therefore only run using a decoupled, thread-based approach. It proves superior when only running a single application due to lack of operational overhead introduced with Triton. However, its performance deteriorates significantly as multiple instances are concurrently operated.

TRITON DECOUPLED EXPERIMENTS

A distinct pattern emerges as we run Triton-based decoupled experiments. With two or fewer application instances running, the decoupled approach showcases its prowess, outperforming the ensemble configuration. The temporal gap between the upstream model (pose estimation) and downstream model (vest color classification) is responsible for bolstering performance, enabling the upstream model to begin processing the next frame while the downstream model is still processing the current frame. As a result, the decoupled approach, although slightly less effective than the PyTorch baseline with only one application running, gained momentum rapidly as the number of application instances increased. Particularly noteworthy is the Triton async decoupled approach, boasting a remarkable 64.044% performance enhancement compared to the baseline when two applications were run simultaneously.

TRITON ENSEMBLE EXPERIMENTS

Transitioning to the ensemble architecture, we observed a shift in performance dynamics. The combined deployment of Triton Inference Server and ensemble architecture emerges as the optimal solution when more than two applications are running. As the number of worker utilization applications surpasses two instances, the models exhibited signs of saturation. The decoupled architecture's advantage of temporally separating model processing

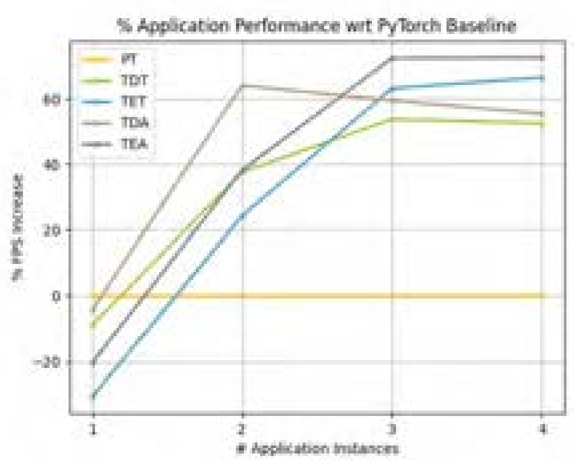


Figure 8: Relative FPS performance of all runtime configurations with respect to the PyTorch baseline.

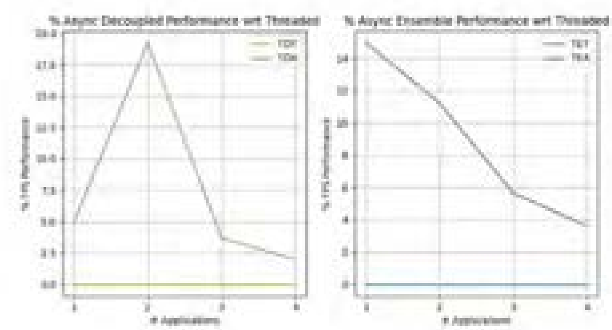


Figure 9: Relative improvement of asynchronous model processing with respect to threading in the decoupled architecture (left) and ensemble architecture (right). Notice that relative performance when using asyncio is consistently better than threading.

diminishes. Instead, retaining the intermediate processing steps on the GPU became the distinguishing factor. Here, the asynchronous application manifested a notable 72.473% performance boost compared to the baseline when all four applications operate concurrently.

CONCURRENCY APPROACHES

Finally, we seek to compare the effectiveness of concurrency approaches: threads and asynchronous processing using asyncio. Our findings conclusively demonstrate the supremacy of asynchronous processing, showcasing a consistent performance advantage across experiments. Notably, all asynchronous setups surpassed their threaded counterparts, with performance improvements ranging from 2% to an impressive 20%. These results underscore the innate efficiency and responsiveness embedded within asynchronous processing paradigms.

In this section we explored the multifaceted landscape of our multi-tenant multi-application DL experiments, unveiling the interplay of concurrency methods and architectural choices. The subsequent sections delve into the implications of our findings, shedding light on best practices for building high-performance multi-tenant deep learning applications.

Given valuable insights

In the dynamic realm of multi-tenant DL applications, our thorough exploration of various runtime configurations has given valuable insights into optimizing performance of such applications. We studied the interplay between decoupled and ensemble methods using Triton Inference Server and augmented these explorations into the choice of concurrency strategies. The results underscore the importance of tailoring runtime configurations to suit the unique characteristics of each application scenario.

Our investigations used PyTorch-based inferencing as a baseline for performance evaluation and was the optimal solution in a single-application environment. As more applications were run, however, Triton Inference Server emerged as a pivotal asset, enabling efficient orchestration of both the decoupled and ensemble methodologies. In a scenario where many inference requests are expected to saturate the application models, the amalgamation of Triton, the ensemble architecture and asynchronous processing is the optimal choice for runtime configuration. Retaining intermediate processing steps on the GPU is the critical determinant of performance. This approach delivers an impressive 72.437% performance boost when all four applications are running, when compared to baseline.

Finally, our exploration of concurrency approaches indicates the inherent efficiency of synchronous processing using Python's asyncio. When contrasted with thread-based executions we see consistently superior performance ranging from 2% to an exceptional 20% improvement.

The symbiotic blend of ensemble and decoupled methodologies, in tandem with utilization of appropriate concurrency methodologies unveils a strategic roadmap for constructing responsive, efficient and high-performing multi-tenant DL applications. These findings offer navigation through the complexities of deploying real-time DL applications in an ever-changing field.

Nikki Aldeborgh is senior data scientist, Omer Ahmad is data scientist, Isidro De Loera Jr. is senior computer vision data scientist manager and Yuefeng Zhang is senior data scientist within global insights and analytics at McDonald's.

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LOW
MEDIUM
HIGH
trust

'CAN I TRUST YOU?'

HOW MARKETING RESEARCHERS CAN EVALUATE AI APPLICATIONS

AI's promise and potential are well-known but its risks are not as fully understood. This article draws from a National Institute of Standards and Technology framework to offer ways that researchers can assess a vendor's AI systems and tools.

By Lisa Horwich

With all the hype around using AI for research, wise researchers may want to step back and ask: Can I trust this vendor's application? We, as research professionals, are not necessarily equipped with the knowledge to effectively evaluate these systems. We don't spend our days worrying about governance and compliance, data privacy or cybersecurity. This article outlines steps you can take to help you measure an AI application's trustworthiness to confidently assess the latest AI research tech.

The National Institute of Standards and Technology (NIST) has put together a framework that can help researchers evaluate the trustworthiness of an AI system.[1] By utilizing a framework, we can help minimize the risk and negative consequences that could arise from an application that doesn't adhere to cybersecurity or data privacy standards and best practices.

As shown in Figure 1, NIST's characteristics of trustworthy AI include the following parts: safe; secure and resilient; accountable and transparent; explainable and interpretable; privacy-enhanced; fair – with harmful bias managed. In addition, as the basis for the other trustworthy characteristics, any AI system must be valid and reliable. We will cover each of these in detail.

According to NIST, "Addressing AI trustworthiness characteristics individually will not ensure AI system trustworthiness; trade-offs are usually involved, rarely do all characteristics apply in every setting and some will be more or less important in any given situation. Ultimately, trustworthiness is a social concept that ranges across a spectrum and is only as strong as its weakest characteristics."[2]

Organizations must decide on the trade-offs that matter most to them, balancing company goals with company values. Under certain conditions, achieving privacy might be more important than overcoming bias, while other times, especially with sparse data sets, data privacy is sacrificed for validity and accuracy. These are decisions that each organization must make, using human judgment.

Let's explore each characteristic.

VALID AND RELIABLE

As the basis for the other characteristics of trustworthiness, an AI system's validity and reliability are paramount to minimizing failures that could cause potential harm. These failures can be "hallucinations," where the AI makes up answers; it could be overgeneralizations or data leaks where confidential information makes it outside of the application.

We want to look for systems that are accurate – meaning their results can be applicable beyond the training data and can minimize false positives/negatives. They are also reliable, which allows them to work under any conditions, even those that are unexpected.

SAFE

The concept of safety is less of a consideration for researchers but comes into context when thinking about autonomous systems like self-driving cars. In those situations, the AI system should have risk-management approaches like rigorous simulation, real-time monitoring and the ability for human intervention in systems that deviate from intended functionality.

Researchers should look for systems that are designed responsibly with distinctly outlined instructions on correct use as well as having all risks clearly documented.

SECURE AND RESILIENT

Cybersecurity risks and threats fall under an umbrella concept of "vulnerability management" – this is what keeps most IT leaders up at night. Many of these risks are ones that can affect any organization, not just ones that develop AI applications. These include external attacks like hacking, ransomware, distributed denial of service or phishing.

We want to ensure that any vendor who has access to our data is taking precautions to protect it – by encrypting the data both in transit (uploading/downloading across the internet) and at rest (where it's stored). We also want their websites to withstand external attacks with firewalls that are periodically tested proactively with penetration ("pen") testing. Finally, we want to know they are controlling access to the data with techniques such as multifactor authentication – like those codes your bank sends to your phone.

If an AI system can withstand these types of risks and maintain its functionality, it is said to be resilient. The system can carry out its mission even if an unknown or uncorrected security vulnerability enables an attacker to compromise the system or an external environmental condition (like the loss of electrical supply or excessive temperature) disrupts the service.

FAIR

A system that is fair is free from bias. Biases can be systemic, computational and statistical or human-cognitive. Systemic bias can be present within any portion of the AI life cycle, from the datasets used to train the foundation models all the way to the broader population that uses AI for analysis and decision-making. Computational and statistical bias tends to be present when non-representational sample is used. Finally, human-cognitive bias occurs when individuals or groups use an AI system to make a decision or fill in missing information.

Fairness tends to be less of an issue with market research because, while we as researchers want to have a representational data set, we often are not using AI to make decisions that directly affect outcomes, like applying for a job or trying to obtain a loan. Nonetheless, researchers should be cognizant of the inherent biases we might encounter with AI systems' design, implementation and operation. We must manage this bias and account for it when using AI for analysis.

FIGURE 1

Trustworthy AI System Characteristics

ACCOUNTABLE AND TRANSPARENT

For an AI system to be accountable, it needs to be transparent. This can be a significant issue with the foundation models from OpenAI and Anthropic that form the basis of many of the applications we use today (like ChatGPT or Claude). These organizations closely guard their IP by purposely obscuring the data and the compute layers that make up the model.

Meaningful transparency would provide us important information at each stage of the AI life cycle. We would then understand design decisions and the underlying training data as well as the structure of the model, how it's trained, its intended use cases plus how and when deployment, post-deployment or end-user decisions were made and by whom.

But putting this into practice is very difficult, as discussed in a recent Wall Street Journal article:

"A lot of the mystery is that we just don't know what's in our pretraining data," says Sarah Hooker, director of Cohere for AI. "That lack of knowledge comes from two factors. First, many AI companies are no longer revealing what's in their pretraining data. Also, these pretraining data sets are so big (think: all the text available on the open web) that when we ask the AIs trained on them any given question, it's difficult to know if the answer just happens to be in that ocean of data already."[3]

We must demand accountability from our application vendors who, in turn, can put pressure on the foundation model companies to be more transparent. This will allow us to have a better understanding of "what happened" in the system when analyzing output – especially when it might not make sense to us.

EXPLAINABLE AND INTERPRETABLE

Being able to explain and interpret AI output helps us understand the purposes and potential impact of an AI system. Right now, for systems that are obscure (remember many AI foundation models are proprietary to preserve their IP) data goes into a "black box" and a result comes out, often without any rationalization.

AI systems that are explainable can answer the question of "how" a decision was made within the system. They can rationalize the output by giving us the steps it took to reach the answer. My favorite example is an AI system which has an input of a bug and says it's an insect without any explanation vs. one that shows the bug and explains that it has six legs, therefore it is an insect – not an arachnid (Figure 2).

The advantage of explainable systems is they can be debugged and monitored more easily; they tend to have more thorough documentation, auditing and governance. This is especially important for highly regulated industries like health care and finance.

One thing to keep in mind is that systems don't necessarily have to be explainable during processing – we can interpret them after the fact. Ask yourself, does the analysis or output make sense? In the case of qualitative research, is the output consistent with what you heard in your interviews or focus groups. For quantitative research, does the analysis match the data collected?

PRIVACY-ENHANCED

The final characteristic of a trustworthy AI system is privacy. Data privacy is paramount in our work as researchers. We have to follow privacy rules and regulations that span multiple geographies (think GDPR, CCPA and others) or face huge fines for non-compliance.

AI systems now have the ability, through linking seemingly disparate data sets, to potentially infer an individual identity or information that was previously private. We should look for AI systems that are designed, developed and deployed using privacy values such as anonymity, confidentiality and control. In addition, these systems should implement privacy enhancing technologies like minimizing methods such as de-identification and aggregation for certain model outputs.

What we really want is something called privacy by design. These are systems with privacy considered before development starts versus a system where privacy is added after the fact. In the case of AI being added to an application, was privacy already part of the application before AI or is privacy now a concern to be solved?

And, of course, follow the stringent privacy laws such as GDPR and CCPA.

DATA COMPLIANCE STANDARDS

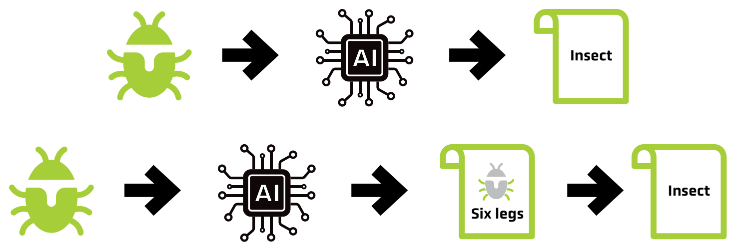
While not part of the NIST trustworthy AI system framework, knowing the different types of data compliance standards can help us assess whether an AI foundation model or application can be trusted.

The main compliance criteria we should be looking for are:

- **ISO 27001:** This standard from the International Organization for Standardization governs information assets and ensures that adequate information security managements systems are in place to safeguard data.

FIGURE 2

Explainable and interpretable



- **SOC2/SOC3:** These two System and Organizational Controls rules outline the policies and procedures organizations must follow to protect customer data. These controls are audited by the American Institute of Certified Public Accountants (AICPA) to guarantee they meet the AICPA trust services criteria.
- **HIPAA privacy rules:** For anyone conducting research in the health care arena, following the Health Insurance Portability and Accountability Act regulations is paramount to working with patient data. The creation of this national standard was designed to protect sensitive patient health information from being disclosed without the patient's consent or knowledge.

ASK THESE QUESTIONS

With this framework and overview of terms, you can develop a checklist for accessing both new tools and your current vendors. Before trusting your confidential and private data to an AI application, you should ask the vendor these questions and they should be able to answer within the standards this article outlined:

- What are you doing with my data?
- How are you adhering to data privacy laws?
- How are you protecting my data? Specifically, what cybersecurity measures are you taking to protect my data?

Any vendor should have this information readily available on their website – it's usually under terms of service and/or privacy (often in teeny tiny type at the bottom). Seek out specifics – claims of a walled garden aren't enough; ask how the data is protected inside that garden and how the data is coming into the garden. Read through the legalese to ensure they have implemented policies and procedures to safeguard your data. Also, make sure they are SOC2/SOC3-compliant and are following ISO 27001. And read the audit reports to ensure nothing egregious has been flagged. They should be published on the vendor's website. If not, ask for them.

Have your vendor explain how their application addresses each of NIST's characteristics of trustworthy AI and make sure their reasoning fits within your organization's goals and values. If you are vendor, please make this information readily available.

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••• the business of research

More than just the right thing to do

How marketing researchers are striving for diversity, equity and inclusion

| By Annabelle Phillips

abstract

Working toward being more inclusive not only makes good business sense, it also leads to better marketing research. Annabelle Phillips looks at how industry groups are taking steps to improve the scope and representation of everything from sampling to questionnaire design.

Diversity, equity and inclusion (DEI). It's a movement many people in the larger business community are talking about and thinking about. It's no different in the marketing research industry. Here we attempt to answer the following key questions: Why is DEI important for us and how is it shaping our industry? What is our industry doing about it? How can we work in a way that is more inclusive and embraces diversity?

Why is the DEI movement important and how is it shaping our industry?

I recently ran a panel event for independent research consultants and micro businesses as part of my diversity and inclusion role for the Independent Consultants Group (ICG) and I was struck by the powerful words of Georgina White, director of insight at U.K.-based health and well-being retailer Holland & Barrett and chair of the Market Research Society's senior client council: "We are the sector that represents the voice of the consumer. And if we are not inclusive in our work then we are failing. And the reality is we have been failing in the past because we weren't representing big parts of society. Our job is to represent the voice of the consumer to make sure organizations take the correct action to be more successful to deliver the right services, the right products, whatever it is."

She is right. It is our responsibility to make sure the products and services that we represent have the best insight and also our ethical responsibility is to ensure that we are allowing all groups to be heard, not just the mainstream. And the insight team is the one that can make that happen.

Steven Lacey of the Outsiders, a firm specializing in research with people outside the mainstream, believes that diverse and inclusive research brings additional cultural insight that can help us understand societal trends. "It is essential to look at the edges, as the liberal bubble is so well-

understood that only by going outside the bubble can you get a glimpse of what is happening culturally," he says.

He also points out that diversity is only growing in importance. So, while there can be a tendency to view the inclusion of different audiences as merely a tick-box exercise, doing so risks excluding huge swaths of the population who are doing the same things and reading, watching and buying the same products as everyone else. For example, 25% of the U.K. population is disabled and 18% is non-white. Do you really want to overlook all that spending power?

What is the research industry doing to address diversity and inclusion?

There is now so much activity happening around helping the industry address diversity and inclusion, both internally and in our research practices. Much of this stems from the MRS and key partners. These include:

- MRS has set up an equity, diversity and inclusion (EDI) committee that is overseeing and spearheading much of the activity.
- Multiple groups across the industry have been set up to cover different aspects of EDI, for instance, social inclusion (for working-class and those from disadvantaged backgrounds); MRS Unlimited, to raise awareness of how we treat and behave around disability; MRS Pride, a network for the LGBTQ+ community; Women in Research; and Colour of Research (CORe), which advocates for the inclusion of ethnic professionals in the industry.
- There is ongoing work to redefine representation in quantitative samples. In the U.K., the industry standard for a nationally representative U.K. adult sample has historically been based on age, gender, location and, sometimes, socioeconomic status. However this overlooks a host of minority groups, from ethnic minorities to the LGBTQIA+ community and those with a disability, who in total represent a not insubstantial portion of the population.
  Ultimately, this approach risks driving headlines, marketing campaigns and product development efforts that don't reflect the full variety of human experience. The steering group working on this has been creating guides for researchers and has published the outcomes from work conducted that underpins and evidences their thinking. I highly recommend anyone involved in the world of insight to visit https://bit.ly/41oZaay and explore the various documents and listen to the interviews that have been published.
- The organization I am a part of, the Independent Consultants Group, has developed an inclusion pledge for independent research consultants and micro businesses to agree to adhere to. The MRS senior client council is working on a client-side pledge which should be available shortly.

How can we work in ways that are more inclusive and embrace diversity?

Or, put another way, what can you do now to work differently? First, an acknowledgement: You and your organization may already be worlds ahead in this effort. For instance, in the U.K., the award-winning This Girl Can campaign has been pushing the boundaries in this area for nearly a decade in its quest to encourage more women and girls to be active, whatever their background, and to ensure that physical activities are inclusive. "In the early days we were about making sure we represented women from diverse backgrounds," says Kate Dale, director of marketing at Sport England and This Girl Can lead. "We then moved to make sure that the team itself was diverse and that we were asking the right questions. Now we are moving to a more co-creative mind-set, where we are designing the research and the questions with diverse audiences."

But for most of us, we are just starting out and there is still a long way to go and we don't always have influence over project designs, so here are some smaller steps we can take in our everyday professional lives:

LANGUAGE

Non-mainstream audiences are often referred to as hard to reach. But are they really or are they just seldom heard? "Hard to reach" suggests laziness on the part of the researcher. People from "different" backgrounds are often not hard to reach, we are just looking in the wrong places. We need to go where people are and reach out to them and their communities. We need to stop and think: Who are these people? What might they be doing? Where might they congregate? Where might our access points be?

Communities aren't hard to reach; they are just not where we usually look. And there are specialist agencies with specialist interviewers and recruiters who are tapped into those networks.

Any good discourse analysis will point out the amount of "othering" people generally do, often without realizing it. It is important to use inclusive language, language that talks about "us" not "them."

Any good discourse analysis will point out the amount of "othering" people generally do, often without realizing it. It is important to use inclusive language, language that talks about "us" not "them."

RESEARCH DESIGN

Is your research design appropriate for the group you are talking to? For instance, do you need smaller groups or friendship pairs for neurodiverse participants? Do you need to find ways to keep attention and interest during groups – or make the focus groups shorter?

And are you asking the right questions? Does your questionnaire imply "othering" or a lack of understanding? Having a diverse team or collaborating with consultants with experience working with or from different communities will help to ensure we are asking the right questions – and asking them with an understanding of a community rather than from the outside looking in.

The makeup of the research team conducting the research is also important. Do we have moderators who understand our audiences and are we using those specialists effectively? Many moderators who specialize in research with ethnic minorities or people with disabilities get frustrated as they are often brought in after the project has been designed and the guides or questionnaires finalized and thus find they are working with materials and on projects which do not fit their audience. Bring that knowledge and expertise in right at the beginning, at the design and proposal stage. One size does not always fit all.

RESEARCH EXPERIENCE

To find the golden nuggets of insight, we need to make participants' research experience comfortable and enjoyable. An awkward interview or an irritating questionnaire will never give us the results we are looking for.

To that end, there are a number of things we need to think about in our preparation. For instance, do people with a disability need any extra support such as a signer or materials with Braille? Should we put pronouns on our names in a Zoom call so others can feel comfortable doing so? Is the questionnaire, stimulus, etc., easy to follow? Have you tested it properly? Is it audience-appropriate? And most importantly, does it make sense and can people understand why they are being asked these questions?

RESEARCH ENVIRONMENT

If your research is face-to-face, have you ensured that your venue is accessible and is not going to make your participants feel uncomfortable or that they have to ask for help?

Thinking about other cultural considerations, in the old days it was standard to have focus groups held in pubs and I cringe now to think about how inappropriate and uncomfortable this might be for those who do not drink, either by choice or necessity. While we have moved a long way from that, there is more we need to do. For example:

- **Timing.** When is the research being held? Be mindful in case it is during Ramadan or Eid. And don't have a plate of biscuits in front of people.
- **Group composition.** Is it more appropriate, for example, to not have older women and men together, particularly for Asian communities?
- **Setting.** Are we asking blue-collar workers or unemployed people to sit in a stuffy hotel meeting room that's set up boardroom-style?

More reflective

As mentioned above, there is great work being done to review representation in sampling to ensure that our samples are more reflective of the world around us – and therefore yield more powerful insights. Follow the work being done there and think about the changes you could make with the research you do.

The goal is to bring everyone along with us. For some researchers, this mind-set is in their DNA but for others, it can be a big change. It is important for us to encourage others to be more inclusive and diverse in their thinking and to challenge the status quo. Speak up, form networks, follow the work being done by the MRS, ICG and other industry groups.

And talk to your internal clients about incorporating these ideas and approaches into the projects you are commissioning. Think about what doing so can bring to a project from its inception. Check with agencies and see if they have signed an inclusion pledge and are committed to diversity. And ask for their ideas and experiences, because, as This Girl Can's Kate Dale has also said, "If clients aren't pushing for change, then where else is it going to come from?"

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••• automotive research

Testing the connections

What consumers value most in battery electric vehicles and brand relationships

| By K.C. Boyce and Nikki Stern

abstract

This article explores the evolving landscape of battery electric vehicles (BEVs) and how consumer preferences are shaping the market. It delves into the impact of brand associations, consumer attitudes, technology and charging infrastructure and the implications for the future of the BEV industry.

When our team at Escalent executed its second EVForward Brand DeepDive study in 2023, the goal was to provide a broader context for how vehicle ownership fits within consumers' lives and how outside factors and preferences impact vehicle consideration.

Research studies are typically designed with a narrow focus in order to home in on attitudes to specific products or services. However, the world people live in is complex. Their personal ecosystem and the ways they view and use technology impact their purchase decisions – especially when investing in battery electric vehicles (BEVs). By widening the scope of our study to account for affinity for technology and charging brands, we aimed to develop a more accurate picture of consumer behavior.

With the entire ecosystem in mind, we approached this study with a wide lens, gathering input from a robust sample size on various topics, brands and attitudes in a quantitative setting. By building upon comparisons to our baseline research, we were able to dig deeper into how the market has changed.

Since our first EVForward Brand DeepDive study in 2021, the BEV industry has evolved significantly. At that time, legacy brands were beginning to release BEV offerings and EV specialist start-ups such as Rivian and Polestar were relatively unknown.

Today, the market has matured. Consumers are more familiar with EV specialist brands and the models offered by legacy automakers. More shoppers than ever are purchasing BEVs. With more products available, competition is higher. So are customer expectations.

To win over the next generation of BEV buyers, manufacturers will need to think beyond the in-vehicle experience and consider how a BEV fits into a consumer's life and lifestyle.

Unpacking brand relationships

More than 1,500 new car buyers participated in the 2023 EVForward Brand DeepDive study. These included BEV owners, BEV intenders – meaning, consumers who are most likely to purchase a BEV as their next car based on proprietary propensity algorithms – consumers who are open to buying a BEV and consumers who are resistant to the idea.

We were particularly interested in the contrast between mainstream and luxury car owners, two groups who tend to have different expectations for their vehicles. As such, the study included about 500 luxury car owners and just more than 1,000 mainstream car owners. We examined attitudes toward 52 automotive brands, 12 public-charging brands and 11 technology brands.

EV specialists may be carving out a presence in the market but for now, new car buyers still prefer well-established automakers. Thirty-three percent of respondents said they would purchase from a well-established brand. Only 23% preferred an EV specialist brand, with the remainder being uncertain. This points to substantial opportunity for brands that are looking to expand their customer base.

However, EV specialist brands hoping to boost sales must first increase consumer mindshare. Following this high-level question about participant attitudes toward established and emerging automakers, we examined awareness of specific brands and their BEV offerings. Among mainstream car owners, familiarity with legacy automakers such as Ford, Toyota and Chevrolet was at almost 100%. Similarly, luxury car owners conveyed near-universal familiarity with established brands such as Mercedes-Benz and BMW.

In contrast, most EV specialist brands, including Polestar, Lucid and Rivian, scored below 50% among mainstream car owners and below 60% among those in the luxury segment. Tesla was the exception. The EV pioneer scored 98% for familiarity among both luxury and mainstream car owners, placing it on par with legacy automakers.

Established brands lost some of their edge when new car buyers considered the brands' EV-specific offerings. After indicating their familiarity with automakers, participants were then asked whether they thought each brand currently offered BEVs. Here, EV specialists fared better (Figure 1). Among mainstream vehicle owners, Tesla, Lucid and Rivian ranked the highest, with only one EV specialist falling behind their legacy peers.

Luxury car owners demonstrated an even stronger awareness of BEV models offered by EV specialists (Figure 2). Ninety-five percent said they thought Tesla offered a BEV and 92%

Figure 1: Brand familiarity and awareness of brand BEV offerings – mainstream owners

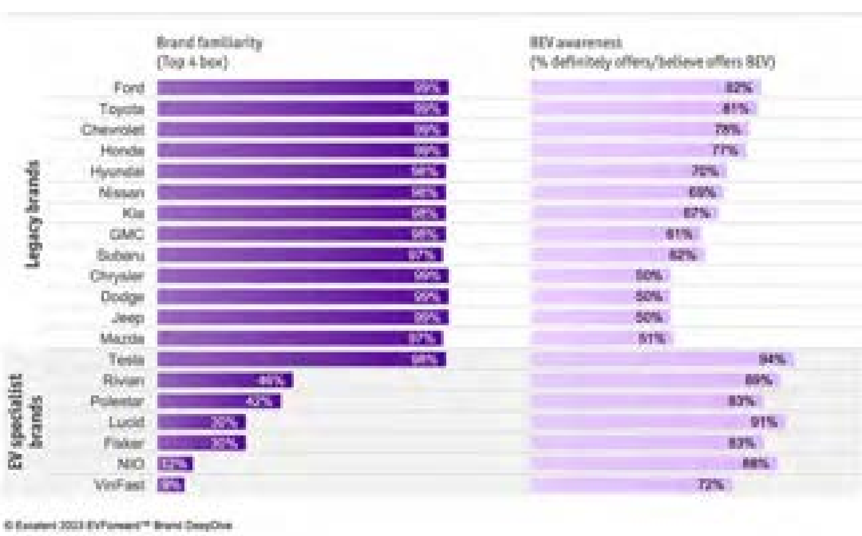
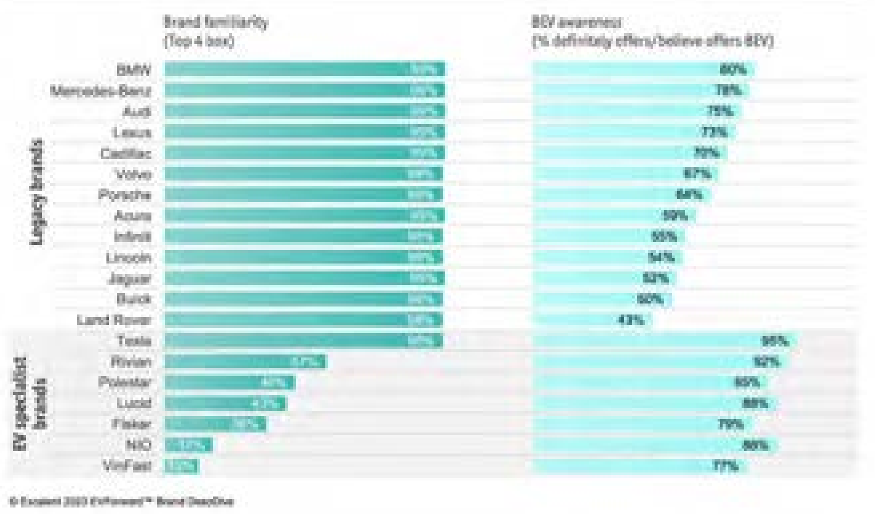


Figure 2: Brand familiarity and awareness of brand BEV offerings – luxury owners



said the same of Rivian, versus 80% for BMW, which had the highest recognition for BEV offerings among legacy brands.

Double-clicking on brand attributes

To better understand what would give one brand the edge over a competitor, we then examined which qualities consumers cared most about in a BEV and how these qualities were reflected in different brands.

For this section of the study, we first asked participants to rank the most important attributes of a BEV. Respondents were then prompted to apply the same set of attributes to specific automakers.

Mainstream and luxury vehicle owners agreed that, above all, a BEV should be dependable. When asked, 63% of mainstream vehicle owners ranked dependability as the most important attribute in a BEV, followed by "good value for money," "inexpensive to maintain," "trustworthy" and "equipped with the latest safety technologies."

Luxury vehicle owners agreed on the latest safety technologies – which they ranked third – and trustworthiness, which came in fifth. Among luxury owners, though, "well-engineered" took second place, with "innovative features and technologies" rising to fourth.

These results are important because they demonstrate how a consumer will likely evaluate their next vehicle. The automakers perceived to be leading in these attributes can expect to gain a larger market share as more drivers opt for electric models.

We then aggregated attribute scores of specific automakers to arrive at an average score for legacy brands and EV specialists. The aggregated brand attribute scores revealed gaps between perceptions of legacy and EV specialist manufacturers. For instance, when asked to select attributes that describe legacy and EV specialist brands, an average of 23% of mainstream vehicle owners described legacy brands as dependable versus just 13% for EV specialist brands. In addition, legacy automakers scored higher for value for money, low maintenance cost and trustworthiness.

On the other hand, EV specialist brands performed better on technology-related attributes. An average of 25% of mainstream vehicle owners described EV specialists as having the "latest safety technologies" against a 21% average for legacy brands (Figure 3). The difference was even more marked on "innovative features and technology," where EV specialists averaged a 36% rating versus 20% among legacy brands.

This pattern was also reflected among luxury vehicle owners. This group saw legacy brands as better in 11 of the 15 most important BEV attributes (Figure 4), including "dependable," "well-engineered," "latest safety technologies" and "trustworthiness." However, an average of 35% of luxury owners described EV specialist brands as having "innovative features and technology," while legacy brands netted just 24%.

This is a notable contrast and reveals an area where EV specialists could narrow the lead legacy automakers currently enjoy. We know that technology – and the broader ecosystem surrounding BEVs, including the charging network – is a key consumer focus. When vehicle owners think about their next BEV, they think about technology. As EV specialists continue building brand awareness, legacy brands must work hard to prove they can deliver on innovation.

Assessing the impact of brand media coverage

We also analyzed buyer sentiment toward legacy and EV specialist vehicle makers. As our initial brand dynamic findings demonstrated, Tesla boasts an enviable mindshare among consumers. It competed with legacy automakers for

Figure 3: Most important BEV attributes vs. brand aggregate attribute ratings – mainstream owners

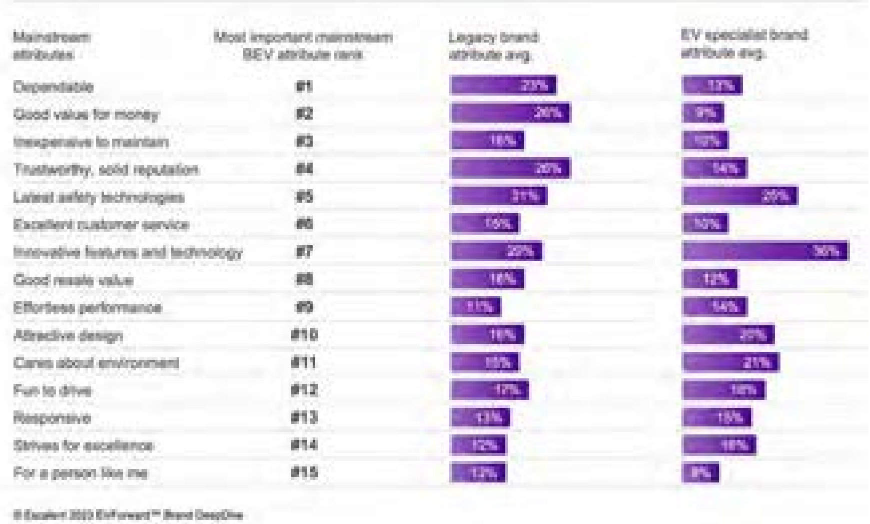


Figure 4: Most important BEV attributes vs. brand aggregate attribute ratings – luxury owners

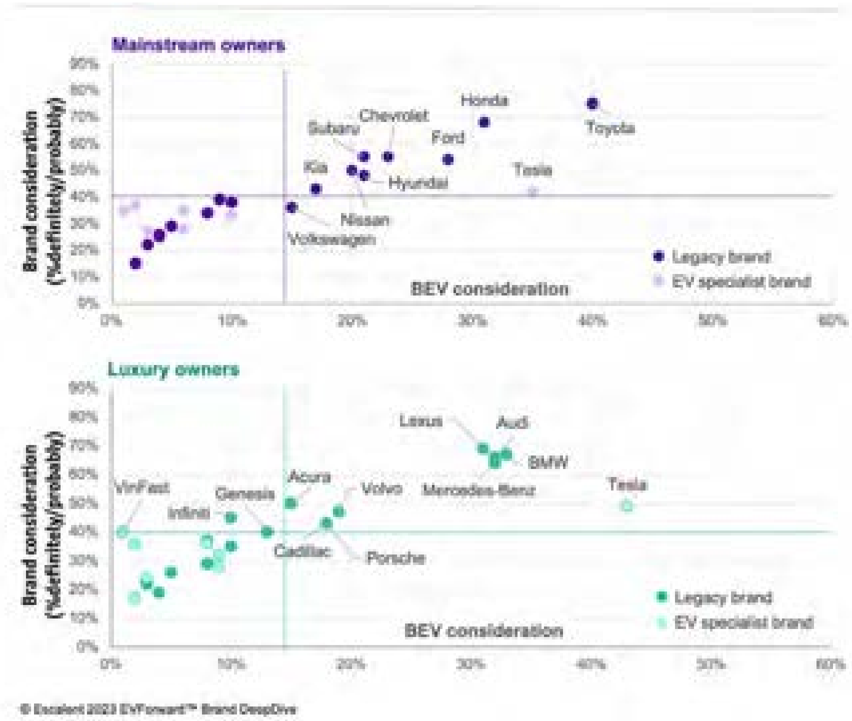
brand familiarity and outpaced every other brand for awareness of its BEV offerings.

The market disruptor also dominates the media cycle. Just more than half of survey respondents told us they had read or heard about BEVs in the past six months. Of that group, 70% of mainstream and 62% of luxury vehicle owners had seen news coverage about Tesla's BEV offerings. All other brands received less than half of Tesla's level of media recognition. Ford and Mercedes-Benz, the runners-up, netted around 30%.

That said, not all publicity is good publicity. When asked if they felt Tesla was moving in a positive or negative direction, approximately one in four new car buyers responded in the negative. The brand has received a flood of media attention in the last year and not all of it has been complimentary. Reactions from consumers suggest that, while the brand is on everybody's mind, its media exposure could be a liability among buyers.

However, for now, the automaker is maintaining its edge. When weighing a BEV purchase, Tesla was the No. 1 brand luxury car owners said they would consider buying from and number two among mainstream car owners (Figure 5).

Figure 5: BEV consideration by general brand consideration



Since debuting its first BEV 15 years ago, Tesla has quickly built a reputation as a leader in the space. Our findings show that Tesla remains a formidable competitor for both legacy brands and start-ups. BEV-conscious consumers know the brand and its offerings. Moreover, the company has consistently invested in the ecosystem surrounding its vehicles. For example, Tesla announced that it would open its network of 12,000 nationwide North American Charging Standard connectors to partnering vehicle manufacturers.

Legacy automakers – especially those in the luxury segment – may find they can capitalize on Tesla's declining brand sentiment to claim some of its market share. But to do so, they will have to produce products that meet or exceed Tesla's use of innovative technology.

Considering the broader BEV charging ecosystem

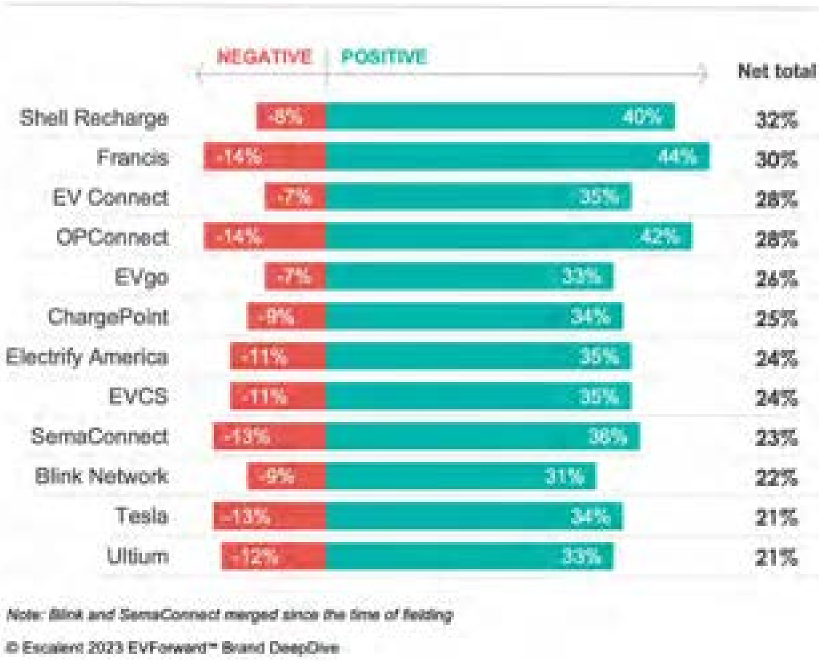
Beyond perceptions of BEV-specific brands and attributes, we wanted to explore consumer relationships with technology and charging companies. Based on our prior research, we know that access to charging is top of mind for many consumers. Many prospective BEV buyers still harbor concerns about driving range, battery life and charge point coverage. As efforts to build out a national charging network accelerate, stories of slow and unreliable charging experiences have emerged in the media.

This study unpacked how familiar consumers were with different charge point operators (CPOs) and how a CPO-automaker partnership could influence consumer consideration to purchase a BEV from a particular automaker (Figure 6).

The majority of participants had limited knowledge of public charging infrastructure. Almost 80% said they knew little or nothing about public charging networks. Unsurprisingly, as consumers moved down the BEV purchase funnel, their awareness increased. Seventy-three percent of BEV owners said they had either used a public charging network in the past or knew a lot about public charging. Likewise, 80% of BEV intenders indicated strong familiarity.

When it came to brand recognition, consumers generally demonstrated

Figure 6: OEM-public charging partnership impact on BEV purchase consideration



low levels of familiarity and exposure to public charging networks. Tesla, again, was the exception. Almost 90% of respondents indicated that they knew of the Tesla Supercharger network. In comparison, only 34% said the same of second-place ChargePoint.

Despite a lack of familiarity with the brand landscape, our research pointed to a potential win for both CPOs and vehicle manufacturers. When participants were told that an automaker they favored would partner with a CPO, their likelihood of purchasing a BEV rose. This was true regardless of the charging brand.

On average, a partnership with a CPO would increase BEV consideration by 25%. BEV intenders demonstrated an even higher net positive impact. For automakers, this suggests that collaborating with any CPO could help improve EV sales. This could also enable charging networks to engage in some much-needed reputation-building.

That said, public charging is a relatively new frontier. The technology is still emerging, and many brands are troubleshooting reliability and access issues as they go. Automakers weighing CPO collaborations must ensure the CPO can offer their drivers a seamless and dependable BEV experience. A failure to deliver on that promise could result in adverse outcomes for both brands in the partnership.

Examining the strategic potential of technology

Unlike public charging networks, technology brands such as Apple, Amazon and Microsoft are well-known to consumers. Many have already made inroads into the automotive industry. Amazon is a major backer of EV start-up Rivian. Meanwhile, Honda and Sony announced the launch of their new joint venture at the beginning of 2023.

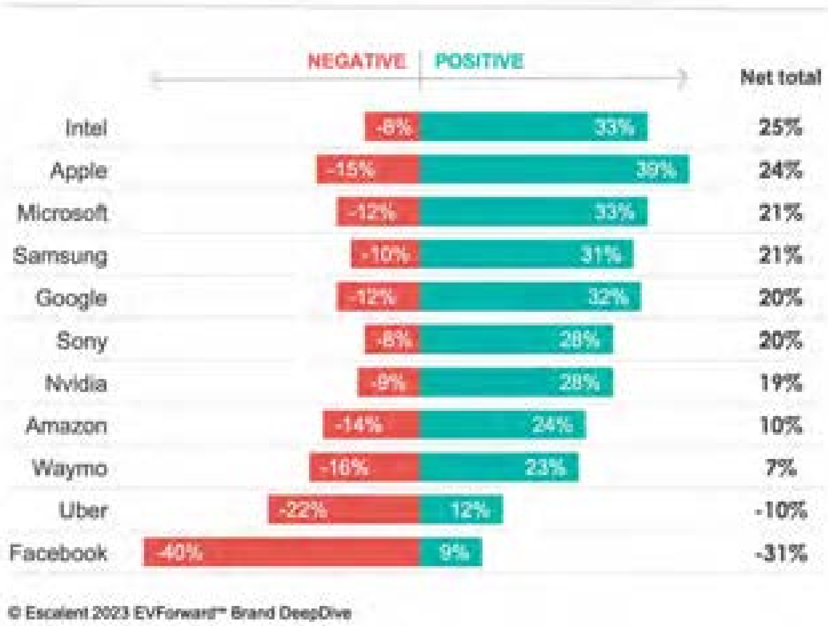
The last section of our study aimed to capture consumers' feelings about 11 leading technology brands and explore the influence of partnerships between technology providers and automakers.

Unsurprisingly, almost all the technology brands included enjoyed near-universal familiarity. In addition, most had some visibility in the automotive industry. Those directly tied to transportation, such as Uber and Waymo, scored the highest for consumer awareness about brand involvement in the automotive space. Companies such as Apple and Google, which provide in-vehicle solutions such as mapping and routing, followed closely.

Overall, technology partnerships also positively impacted BEV consideration. However, our findings suggest that these collaborations require more careful consideration than those with CPOs. Participants noted that, in the majority of cases, were an automaker to partner with a technology brand on the design, production or features of a vehicle, it would make them more likely to purchase that BEV. For instance, a collaboration with Intel would increase BEV consideration by 25%. Two companies – Uber and Facebook – bucked this trend, scoring net negatives for BEV consideration (Figure 7).

This illustrates the need to consider the broader landscape consumers oper-

Figure 7: OEM-tech partnership impact on BEV purchase consideration



ate within when conducting research. We know that vehicle buyers appreciate technology and innovation. However, examining sentiment toward specific technology brands reveals that not all potential partners are equal. Automakers considering a strategic partnership with a technology brand could well find it helps establish or bolster their brand perceptions. But they must ensure they align themselves with a brand that resonates with consumers – and adds genuine value to their product.

Mapping an evolving BEV landscape

Brands and consumers are leaning into the growing BEV market. Awareness of offerings is rising. Meanwhile, ambitious goals set by federal and state governing bodies – along with private companies – are catalyzing investment. Legacy brands may benefit from latent brand strength, but with EV specialists leading on technology, an influx of sales in the coming year could allow any proactive player to expand its market share. Conversely, automakers that fail to convince customers of their capacity for innovation are at risk of losing ground.

As such, recognizing the needs and expectations of tomorrow's vehicle buyers has never been more crucial. Part of what we set out to understand in the EVForward Brand DeepDive was what motivates consumer behavior. The more researchers can capture people's nuances and complexities, the better the results will be. By using a broad scope to survey the brand landscape specific and peripheral to BEVs, we uncovered a more comprehensive picture of what vehicle shoppers will be looking for in the future.

Consumers have affinities for certain technology brands. For automakers looking to stand apart from the competition – and, particularly, emerging brands that don't have the advantage of a halo effect – a strategic partnership with a trusted technology brand could help their offering rise above the noise.

As consumers navigate the shift to BEVs, they will also need to get comfortable with a new network of charging infrastructure. By helping to build out services around BEVs – either through a proprietary network or a partnership with an existing CPO – automakers can help make that journey smoother.

Consumers' lives are increasingly impacted and powered by technology. To capture the attention and loyalty of vehicle shoppers, brands must ensure that their BEVs fit seamlessly into the ecosystem of applications and solutions surrounding them. Delivering on that promise will require researchers and manufacturers to develop an in-depth understanding of the brands and attributes their customers value most.

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••• health care research

Beyond functionality

Research explores how MedTech can transcend physical assistance to enhance patients' mental well-being

| By Tom Donnelly, Mike Sabia and Kristy Beede

abstract

Looking at the impact of medical conditions on daily activities, the authors' research examined current MedTech usage and highlighted unmet needs, shedding light on both functional and mental health aspects of individuals striving for independence.

We all want to be autonomous but a medical condition, an incident or aging may cause us to have difficulties with mobility and/or dexterity. These challenges often limit our independence, which can lead to a reliance on others to help with daily activities of living. However, the use of medical devices and technology (MedTech) can help overcome some of these challenges. Examples include simple devices such as a cane, walker, wheelchair or a grabber tool as well as high-tech solutions like an exoskeleton. In this article, we will describe the types of help these patients need, what devices and technology are currently used and explore unmet needs for companies to address. In addition to the findings of functional needs, our research uncovered insights on mental health needs.

BACKGROUND

The inspiration for this research came from tangential findings from a packaging needs in-home ethnography study for Friedrich's ataxia (FA) patients. In that research, respondents showed resilience, tenacity and positivity. They described how devices and technology increased their independence. One FA patient described how she renovated a ranch-style house to be a handicap-accessible smart home. This included easier access to the microwave and appliances, with countertops built such that her wheelchair could roll up under them. In addition, the lights, heat and locks were accessible via an app. These insights led to new research to explore in more depth what is currently being used, why some solutions were not being used and what their unmet needs are.

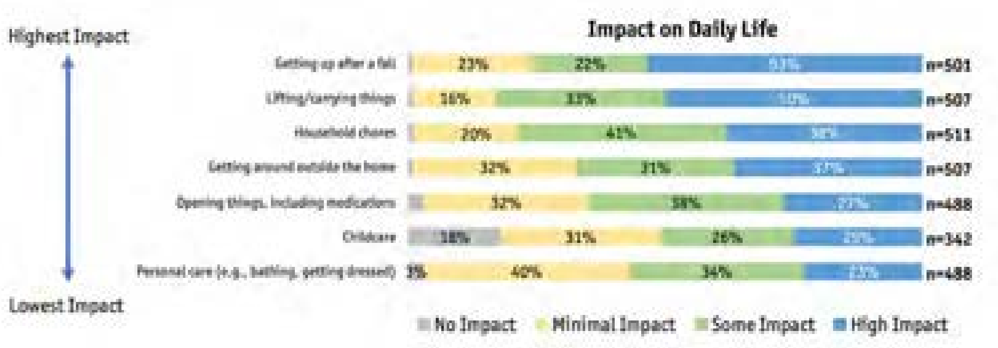
METHOD

The research evolved over several phases. The original study was conducted with 67 patients with Friedrich's ataxia and presented at the 2022 Intellus Worldwide Institute.[1] Next, the Clear Health Communications Taskforce at

Intellus partnered with a marketing research class at Seton Hall University to extend the research in the spring semester of 2023. Seton Hall has a Market Research Center[2] and offers both undergraduate and graduate marketing research classes. As part of those classes, students run a project that includes qualitative and quantitative research. They are always looking for clients that need help and these projects are a great way to get some research done while also giving back to the community by helping train the next generation of market researchers. While the research conducted with the students added new questions to explore, the sample size was small, so a new quantitative study was conducted.

The results discussed here are based on a 20-minute online survey with 637 patients with mobility and/or dexterity challenges through Rare Patient Voice including those with arthritis (203), rheumatoid arthritis (160), myasthenia gravis (124), multiple sclerosis (70), spine/brain injury (62), spinal muscular atrophy (24), fibromyalgia (24), amyotrophic lateral sclerosis (21), spina bifida (21), mitochondrial disease (15), Ehlers-Danlos syndrome (15), cerebral palsy (9) and Parkinson's disease (6). (Note: some patients had more than one condition.) A handful of follow-up telephone interviews were conducted to gather additional details.

Figure 1: Top daily activities impacting patients' ability to live independently



CHALLENGES WITH DAILY ACTIVITIES

Respondents report a profound impact on their ability to independently complete activities that most take for granted. Some of these challenges are gross-motor movements, whereas others are fine-motor movement issues. Those that have the most impact on daily living are: getting up after a fall, lifting/carrying, household chores, getting around outside, opening things, child care and personal care (Figure 1).

Patients with these challenges in daily activities rely on others to help them in these areas (Figure 2). About three-quarters of respondents receive assistance in their home, with most of those (81%) having help from someone living with them. About two-thirds get help from a partner and almost a third get help from a child. Others get help from a parent (17%), a home health aide (14%), a friend (9%), a sibling (6%) or from other family members (6%). Just over half of respondents require assistance daily and a quarter a few times a week.

MEDTECH USED AND UNMET NEEDS

In addition to getting help from others, respondents use different types of technology and devices to address their struggles. Patients in our sample report the use of digital assistants (e.g., Alexa, Siri, etc.) for common tasks such as playing music, dictating, making calls, reminders and shopping. In addition, respondents report using digital assistants in ways that increase autonomy, including turning lights on and off,

Figure 2: Frequency of assistance needed and who is providing it

adjusting the thermostat and locking/unlocking doors. Devices commonly used include wheelchairs, grab bars, ramps, roll-in showers and accessible vans. Without these devices and technology, these patients would require more assistance, feel less independent, be unable to access certain things and take longer to accomplish tasks.

There are unmet needs in helping these patients with the tasks that have the most impact on their daily life (Figure 3). More than half of these patients say that getting up after a fall has a high impact on their life and a third of them say there is no current MedTech solution. While there are lifts, both manual and electric, that are used to help move a patient from a bed into a chair, they are operated by another person. Could similar MedTech be developed that can be used by the patient alone? Similarly, lifting/carrying is a challenge for half of these patients and about a third are unaware of a solution. There are unmet needs for helping with other difficulties in daily activities, including household chores, getting around outside and help with personal care. The ability to live alone comes down to navigating these challenges. As mentioned, most respondents rely on others to assist them, either family, friends or health aides. This is an area where MedTech companies could help.

There are many devices and technologies available that patients could use but are not currently taking advantage of, such as robot vacuums, adjustable beds and smart watches. The top reasons for not using tools like these are: patients are unaware of the solution; it is too costly; it is not worth the effort; or it is too complicated to adopt. Thus, in addition to creating MedTech solutions to address the top challenges, companies need to consider the reasons for patients not adopting currently available tools.

MENTAL HEALTH ASPECTS

The use of devices and technologies evokes mainly positive emotional reactions, with some frustrations. Most of these patients find their use elicits positive emotions, such as feeling: more independent/self-sufficient; less burdensome to others; an increased sense of self-efficacy; more confident; and increased motivation/better morale.

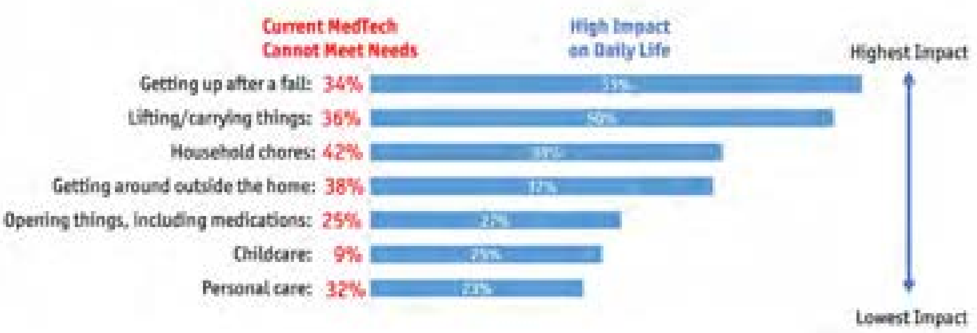
One respondent mentioned that his use of a grabbing tool makes him feel accomplished: "I don't feel like I'm at such a disadvantage. Even though I'm using a tool to get it done, I'm still getting it done."

Use of these technologies can also occasionally cause negative emotions, such as: frustration in making it work; anxiety that it won't help; feeling different from other people/drawing unwanted attention; and reminding them of their reliance on others.

The same respondent who was empowered by the grabbing tool mentioned that he felt "ashamed being 33 years old and walking around with a walker" when he looks fine. "That is a barrier you have to overcome. I've been doing this for a while and still haven't." While there are drawbacks to the use of tools, most of these patients seem willing to push past them to increase their independence.

While the functional help that devices and technology can provide these patients has been the main focus, patients' mental health should also be considered. Most (88%) respondents indicated that their disability has an impact on their mental health. In fact, about half (51%) said the impact on their mental health was as severe or more severe than the physical limitations on their quality of life. For example, one respondent said, "The mental challenges are more difficult because I can't see them coming, [whereas] the physical challenges, I've learned to adapt to overcome, and I can see those coming." In fact, 85% of these patients said that the mental health impact alone has stopped them from performing necessary activities such as adhering to treatment, going to doctor appointments and grocery shopping.

Figure 3: The tasks that have the greatest impact on the lives of these patients are areas where MedTech is not able to meet their needs



The health care community should consider the perspectives of these patients by immersing in their world through patient journey and in-home ethnography research.

Want to live independently

Patients with mobility and dexterity issues find everyday tasks challenging, which leads to lifestyle adaptations and mental health challenges. These patients want to live independently with little reliance on others and MedTech can help. The main aversion to pursuing new devices/technology is lack of awareness, costs and the effort required to adopt them. Patients have a general lack of knowledge of potential tools that can increase their autonomy. While most respondents say they are satisfied with their current devices, this study identified several unmet needs, including getting up after a fall, lifting/carrying, completing household chores, getting around outside, opening things, assistance with childcare and help with personal care. The mental health issues related to mobility and dexterity issues are common, serious and under-acknowledged.

The health care community should consider the perspectives of these patients by immersing in their world through patient journey and in-home ethnography research – which is what inspired this research. While there are solutions that will apply across most of the patients with mobility and dexterity challenges, there are distinct needs for specific conditions, as well as considerations for each specific patient. Many conditions are progressive (e.g., Parkinson's), some are chronic and relatively stable (e.g., spinal cord injury) and others are acute and tend to improve over time (e.g., hip fracture).

This research also showed that, in addition to providing solutions to their functional challenges, MedTech designers and manufacturers should consider patients' needs more holistically, beyond what a product does, and look for ways to also support patients' mental health.

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••• segmentation

Getting to know all about you

Putting the next generation of segmentation tools to work

| By Ed Lorenzini and Scott Chase

abstract

This article draws on real-world case studies to illustrate the impact of more-precise customer segmentation tools on companies' marketing strategies. It explores the use of these tools, how they differ from traditional methods and the challenges and ethical considerations they raise.

The abundance of data in the digital age is enabling a deeper understanding of consumers' behaviors, attitudes and psychographics. This wealth of information has shifted customer segmentation from the surface-level insights provided by traditional demographic methods to more precise segmentations and the implementation of personalized marketing strategies using advanced segmentation techniques such as behavioral and predictive modeling.

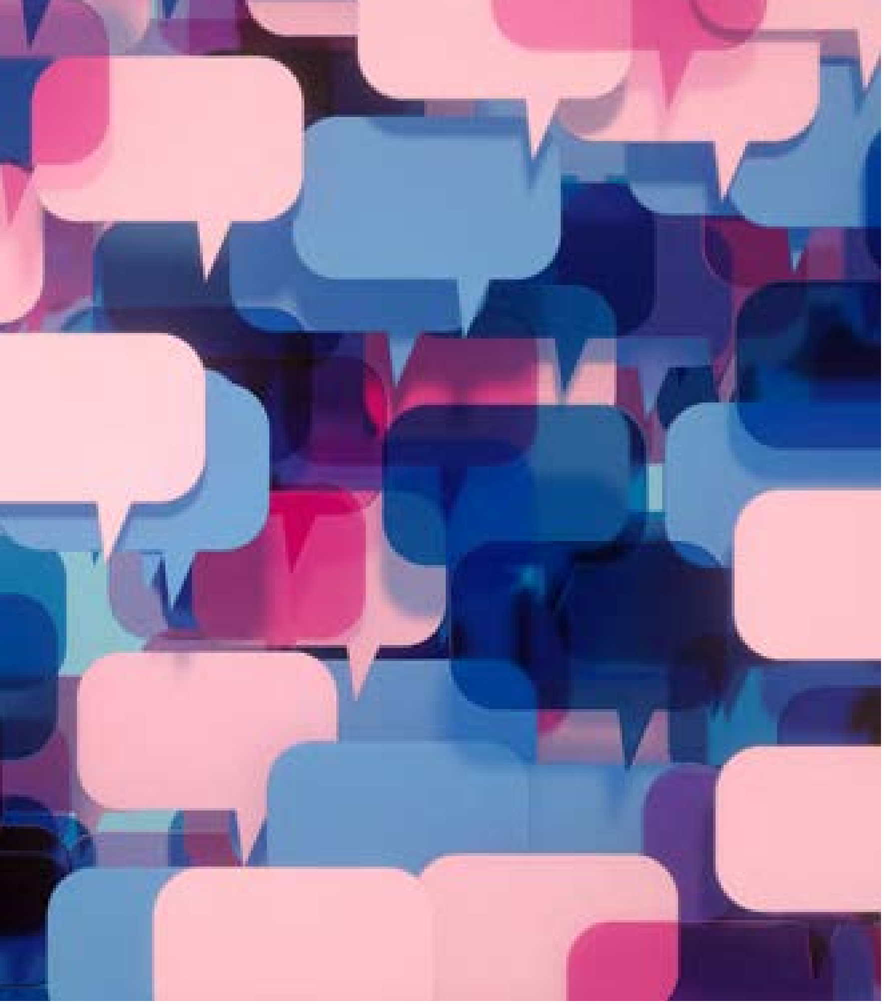
In this article we present case studies that delve into the influence of advanced customer segmentation tools on marketing and business performance. We'll discuss their use, features and potential advantages over traditional methods. We'll explore the latest trends in this field and examine ongoing debates around limitations, with the aim of stimulating discussion and offering insights for businesses and market researchers.

CASE STUDY 1: STRATEGIC EXPANSION THROUGH ADVANCED CUSTOMER SEGMENTATION – CITRON CLOTHING

Company profile: Citron Clothing, established in 1992, is a distinguished women's apparel retailer offering "wearable works of art." Its products are made available through physical boutiques, online sales and select department stores across the western United States.

Objective: Citron aimed to boost its online visibility and diversify its product range. It intended to use data-driven insights into its existing customers' retail, apparel and accessory trends to guide its expansion strategy.

Challenge: Citron faced an essential product direction decision: Should it branch into women's petite apparel or branch into fashion accessories? Comprehensive consumer insights were needed to make an informed decision.



Solution: Citron leveraged a consumer data segmentation tool to develop psychographic profiles and identify the retail behaviors of 10,000 existing online customers. This process revealed its core market demographic as upper middle-income Boomer women with interests spanning fashion, fine arts, fine dining, domestic travel and philanthropy. This demographic showed a higher inclination towards fashion jewelry, accessories, luxury items and leather goods, while petite-sized apparel had lower appeal. Using these insights, Citron strategically expanded its jewelry and accessories lines, saving time and money by deciding against investing in petite-sized apparel. Additionally, Citron used advanced customer segmentation technology to reach new customers within its target demographic. It executed a comprehensive marketing strategy involving direct e-mail marketing, social media promotion and geographic expansion.

Results: The segmentation tool identified a total potential market of 500,000 U.S. consumers for Citron's offerings. A targeted e-mail and social media campaign significantly outperformed previous new-customer contact campaigns, yielding four times the performance.

CASE STUDY 2: ENHANCING MARKETING RESPONSE THROUGH TARGETED CUSTOMER ENGAGEMENT – ANGI

Company profile: Angi, previously known as Angie's List, is an American home services platform. Founded in 1995 by Angie Hicks and William S. Oesterle, it allows users to find contractors for paid home improvement work. The value of its offering primarily lies in providing customer reviews, aiding potential customers in making informed decisions.

Objective: Angi aimed to concentrate its marketing efforts on its most valuable customers and those likely to contribute reviews. It recognized that only a small percentage of its users ever contributed a review and sought to increase this number.

Challenge: Angi's initial solution was to call 20,000 customers monthly who had previously used its service, encouraging them to write a review. However, this approach was costly and only increased reviews by about 5%. The company needed a strategy to boost the response rate to its calls.

Solution: Angi turned to a consumer data segmentation tool to analyze those who had written a review in the past. It generated a segmentation report and a unique model on the platform and, using this model, identified 20,000 high-potential reviewers and focused its monthly calls on this group instead of making random calls.

Results: Switching to targeted calling led to a significant increase in response rate – from 5% to 30%. This improvement in effectiveness was attributed entirely to the insights provided by the consumer data segmentation tool.

CASE STUDY 3: LEVERAGING BIG DATA TO DRIVE NEW CAR BUYERS TO DEALERSHIPS – TEMES CONSULTING

Company profile: Temes Consulting is a marketing firm working on behalf of new car manufacturers including Fiat Chrysler, Ford and Toyota. Its aim was to drive dealership visits for new model releases and major promotional events. To achieve this, it turned to a consumer data segmentation tool to utilize consumer sociometric and automobile registration data.

Objective: Identify prospective buyers and match them with the ideal car and offer.

Challenge: The purchase of a new automobile is one of the average consumer's largest investments. However, identifying customers who are in-market for a specific vehicle at a particular time can be a daunting task for manufacturers and dealerships.

Solution: Temes built demographic, psychographic and financial models for each make and model using the consumer data segmentation tool. It was able to construct ideal customer profiles for each car on the lot and even for competing models at other dealerships. Additionally, it combined these profiles with lease- and loan-expiry data from current car owners within driving distance of the dealership. This allowed Temes to develop highly personalized telesales, direct mail and social campaigns to reach qualified buyers with the car that matches their needs, enabling dealer sales consultants to focus on closing the deal.

Results: By integrating sociometric and psychographic data for every U.S. household with existing car ownership information for 125 million vehicles, Temes gained insight into the automobile buying habits and preferences of all Americans. These insights were leveraged into omnichannel, personalized marketing campaigns for vehicle promotions. As a result, Temes boosted buyer visits to its customers' dealerships by 317% over a one-year period.

Play their part

As with a symphony, the various components of behavioral data interpretation all need to play their part to create a harmonious whole.

- **Clustering:** Like a conductor identifying similar tones within an orchestra, clustering groups data points based on shared attributes. In customer segmentation, this technique discerns customer cohorts with parallel behaviors, needs or preferences.
- **Predictive modeling:** This technique is the crystal ball of data interpretation. Utilizing historical data, predictive modeling forecasts future behavior – an invaluable asset for crafting targeted marketing campaigns or personalizing product recommendations.
- **Machine learning:** The virtuoso in the lineup, machine learning algorithms are the maestros that learn from data, improving their performance over time. They have the knack for uncovering complex patterns and relationships that might evade traditional analysis techniques.

The mastery of data interpretation is a pivotal cog in the wheel of effectively leveraging behavioral data. By deploying techniques like clustering, predictive modeling and machine learning, businesses can unearth actionable insights to steer strategy and turbocharge growth.

The mastery of data interpretation is a pivotal cog in the wheel of effectively leveraging behavioral data. By deploying techniques like clustering, predictive modeling and machine learning, businesses can unearth actionable insights to steer strategy and turbocharge growth.

Moreover, by weaving the threads of behavioral data into both advanced segmentation and data interpretation, businesses can enrich their customer value proposition, optimize their marketing ROI and maintain a competitive edge. The power lies not only in what data you collect but how you interpret and apply it – transforming raw data into a strategic asset.

Presents challenges

While customer segmentation technology offers numerous benefits, it also presents certain challenges. The quality of insights derived heavily depends on the accuracy and completeness of the data collected. Inaccurate or incomplete data can lead to misleading results, significantly impacting business decisions. Furthermore, businesses need to adapt swiftly to changing consumer behavior, especially in the wake of events like the COVID-19 pandemic. Regular updates to models are crucial to ensure that segmentation strategies remain relevant.

Implementing advanced customer segmentation also requires substantial investments in technology and talent. This requirement may pose significant challenges for small businesses, potentially leading to a digital divide in the market.

The debate around customer segmentation technology primarily revolves around striking the right balance between personalization and privacy. Personalized marketing, facilitated by this technology, significantly enhances customer experience and engagement. However, concerns about the extent of data collection persist, with businesses grappling with setting appropriate boundaries. With consumers becoming increasingly conscious of their digital footprint, the demand for more transparency and control over personal data is on the rise.

Alongside privacy concerns, ethical considerations also come into play when AI and machine learning are used for customer segmentation. There's a growing concern that these technologies may reinforce existing biases in the data, potentially leading to unfair or discriminatory practices. Businesses, therefore, need to ensure that their algorithms are transparent, fair and inclusive.

Brace for regulatory changes

The future of market research with customer segmentation technology appears promising. Advancements suggest a move towards real-time segmentation, predictive modeling and hyper-personalization as standard practices. However, businesses must brace for regulatory changes concerning data privacy and ethics. Prioritizing transparency and consent in data collection practices and ensuring fairness and inclusivity in technology usage will be vital.

The potential benefits of embracing this technology far outweigh these challenges. By generating detailed insights into customer behavior, companies can tailor strategies that enhance business performance and customer satisfaction, equipping them with a competitive edge and propelling sustainable growth in the digital age.

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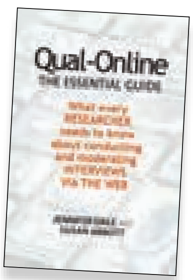

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Here are 50 fresh ideas for exercises in an easy-to-use cookbook format. Organized by category, from Ice Breakers to Idea Developers each "recipe" (exercise) is presented with a brief description, an estimation of time required, a list of materials, instructions for how to do it, and useful tips.

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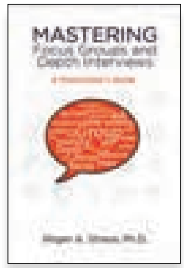
Mastering Focus Groups and Depth Interviews

A Practitioner's Guide for Moderators and Interviewers

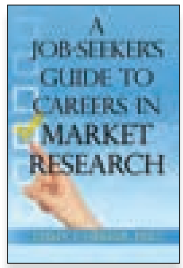
A practical handbook of insights, tips, and wisdom focusing on six applications for depth methods, focus groups and depth interviews that can be used for much more than preliminary research and ideation exercises with valuable advice for integrating qualitative and quantitative research. Recommended for professionals in market research, product development, government, sociological practice and public policy research.



(238 pages, 978-1-941688-66-3 $24.95 paper)

A Job-Seeker's Guide to Careers in Market Research

How to Decide if a Career in Market Research Is Right for You



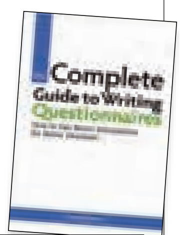
An authoritative guide to the market research industry at the beginning of the 21st century, its size and scope, what value it provides, who works in the field, who uses it and for what decisions, the market research process, common methodologies, growth prospects for the industry, and more. The book explores market research as a career choice—skills, education, and training; how to get that first job, moving upward, potential earning power, success profiles, and stepping stones to related careers.

174 pages, 6x9, 978-1-941688-31-1 $34.95 paper

The Complete Guide to Writing Questionnaires

How to Get Better Information for Better Decisions

A comprehensive framework for creating questionnaires from planning research to support decision-making, conducting qualitative research, and planning the questionnaire before you begin writing questions, with guidelines to make questions clear, answerable, easy, and unbiased for the three most common tasks researchers ask respondents, and how to properly pretest a questionnaire.



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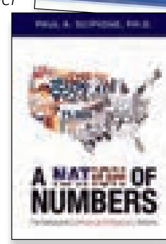
A Nation of Numbers

The Development of Marketing Research in America



Explore the factors and events that came together to make America the birthplace of marketing research. Scipione documents how far the marketing research industry has come in its first 100 years, morphing from analog to digital, with new tools in big data and advanced analytics, observation of actual consumer behavior via scanning UPC codes, and advances in the neurosciences, and speculates where the industry will be in the future.

546 pages, 7x10, 978-0-9852482-2-2 $49.95 cloth

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Eran Gilad, CEO

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Mayank Bhanushali, Founder and Managing Director

Global Survey, as our name suggests, is one of the global leaders in using digital data collection to power analytics and insights. We provide data-driven decision-making for clients who listen to and interact with the world's consumers and business professionals through Global Survey online panels, as well as mobile, digital and social media technologies. We apply the breadth of over 88 online consumer panels and communities across 70 countries to your market research studies. We're dedicated to continually fine-tuning our panel network to ensure quality and growth as your research needs change over time. Global Survey works with many of the world's leading market research agencies, media agencies and corporations.

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Dan Womack, President

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Mitch Henderson, Co-CEO

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My-Take is an insights technology company that informs faster and better decisions through a leading-edge platform and remarkable professional services team. My-Take has enjoyed rapid growth and exceptional client retention with customers ranging the full spectrum from SaaS/DIY to full-service. Our professional services team provides flexible support regardless of the plan type selected. The My-Take proprietary platform is completely integrated, AWS cloud-hosted and deploys innovative research applications and automation. The powerful platform offers applications for qualitative, quantitative, CX and UX research. My-Take has been recognized in the industry for its innovation, with many successful launches including online focus groups and AI Instant Theming. With the most advanced platform, efficient and flexible service, superior value and a continuous improvement mind-set, My-Take is the smart choice for companies looking to future-proof their communities.

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THE RESEARCH CLUB

WIRe WOMEN IN RESEARCH

LEARN FROM THE BEST IN THE BUSINESS

Centralizing insights in a decentralized global enterprise: Winning with global CX measurement

Sysco Corporation, Inc.

Will customer loyalty metrics like Net Promoter Score ever disappear? Perhaps not, but your ability to align on a success metric and build global methodology standards could be advantageous for your organization's future. Learn how Sysco, the global leader in wholesale foodservice distribution, brought together CX leaders from its global family of companies to align on a customer loyalty metric, share and learn best practices, and build a customer-centric culture in a $68B global enterprise.

This initiative went beyond mere alignment; it became a collaborative platform fostering a cross-pollination of innovative ideas. The critical components of this success story included the development of comprehensive standards for methodology and data collection. Sysco's commitment to excellence also included a meticulous change management plan, ensuring that valuable customer experience insights were effectively socialized with local and international business leaders. This holistic approach not only solidified Sysco's position at the forefront of customer-centricity but also served as a blueprint for other organizations aspiring to navigate the intricate realm of global customer experience management.

Futurish: The science and art of identifying near-future trends

Health Care Service Corporation

In this session, we will talk about how to create a systematic process to identify and monitor future trends within the context of your industry and organization and how this can prepare you to adapt to changing market dynamics and exceed customer expectations.

Mapping the buyer's mind: Crafting personas for targeted marketing success

Semrush

Beyond tacos: Understanding the diverse and dynamic Hispanic population

Ingenium Research

Closing the loop with your customer

Pixel United

Qualitative data analysis: Using Braun and Clarke thematic analysis approach

Transamerica

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- LONDON
- NEW YORK

That's my story and I'm sticking to it: How storytelling in employee research can drive a customer-focused culture

Duquesne Light Company

Giving the gift of joy to consumers and research participants, as well as to yourself

The Art and Science of Joy

Seven major problems in insights today (and some solutions)

Sekisui House

Six most important steps to user persona development

Mary Kay Inc.

Building brand trust with consumers in an uncertain world

Visa

How your brand can harness consumption occasions to attract more people, more often and more easily

Ipsos

Audio rituals: How contextually relevant audio advertising drives business results

Audacy, Inc.

The majority of U.S. adults (74%) make time for audio (radio, streaming or podcast) in their daily lives and for 40%, audio is a daily ritual in itself. These deeply immersive moments offer advertisers opportunities to engage audiences in contextually relevant ways and create impact. As a case example, Audacy's rituals-focused, contextually-planned campaign successfully shifted radio audiences to the publisher's app, increasing downloads and creating a new pool of cross-platform listeners.

NETWORKING & FUN

Line Dancing and Cocktails (DALLAS)

Join us for a night of country flair and western charm as we blend the excitement of line dancing with the indulgence of a fabulous cocktail reception. Whether you're a seasoned line dancer or a complete beginner, this event promises endless fun and laughter for all!

Karaoke Cocktail Reception (CHICAGO)

Sing your heart out, sip on delectable cocktails and create unforgettable memories with your fellow researchers.

Expo Hall Celebration

During the last hour of the event, mingle in the expo hall — grab a beer or wine and stroll through the expo hall to learn and experience all of the latest and greatest the industry has to offer.

cocktails WITH QUIRK'S

After the first day of the show is done, mingle and network in the expo hall and take in the experiences with other attendees. Free drinks and appetizers will be provided. Select exhibitors offer fun and tasty beverages at their stand.

Real Networking Technology

The Quirk's Event utilizes the technology-enabled Klik badges and app, offering easy and fast networking in a touch-free environment. Attendees in close proximity can quickly exchange information simply by both pressing and holding down the bottom of the badge. Bright LEDs will illuminate and flash, letting you know that the information has been exchanged. All your connections are stored in the app, allowing you to chat and reach out.

Additional Networking

The Research Club and Women in Research (WIRe) will also be hosting networking parties during the events. Make sure to check out the Networking pages to learn of all the opportunities to connect with friends old and new.

THE RESEARCH CLUB

WIRe WOMEN IN RESEARCH

QUIRK'S TIME CAPSULE

Facts and findings from nearly 40 years of Quirk's

Bad service? It's kind of a mystery.

For many years, January was our month to focus on mystery shopping in the magazine. We devoted the entire issue to it, adding a directory of mystery shopping providers to our usual lineup of case studies and technique articles. With this being the January/February 2024 issue, it seemed like a good time to look back at some snapshots from our mystery shopping coverage over the years.

The basic idea of mystery shopping – sending ordinary consumers trained in the process of completing a transaction or interaction in a retail or other type of location to have them capture their experience with store processes and personnel – hasn't changed. The same can't be said about the technology by which to do so.

Stephanie Smith's January 1998 article, "High-tech mystery shopping: Using audio and video shopping effectively," outlined in almost spy-novel-like detail how the microphones and video cameras can be concealed during visits to record sales employees' success at incorporating their training into their interactions with prospective customers.

"Although there are some favorite areas to conceal the device, there is no standard. Some companies use a small microphone that runs from the concealed recorder to a hidden area on the shopper or on some type of common accessory such as a pen, purse, belt or pager.

"Just as audio shopping uses micro-recorders, video shopping requires micro-cameras, transmitting equipment and concealed video recorders. The technology involved in video shopping is far more advanced and expensive than audio shopping. Therefore, it is necessary to use highly trained professional shoppers who can operate the equipment properly. This also eliminates issues of liability."

Fast-forward to Ron Welty's January 2005 article, "21st century mystery shopping." Though it was published during the period when cameras were starting to be common in cellphones, the section on the value and use of "digital photos" focuses on the mystery shopper bringing a digital camera into the store. *"Evaluations are usually not announced to the location until the evaluator arrives, at which point they introduce themselves to the store manager and inform them that they are there at their company's request to conduct a site evaluation that will include digital photos. Following a pre-established checklist of what to audit, including descriptions of specifically scripted shots that the evaluators are provided before their visit, they then conduct the audit and take several digital photos."*

Welty also explored the value of digitally recorded phone calls that capture call-center or store employee interactions with customers and drew a contrast between digital recordings and the cassette-based analog recordings that some firms were offering.

"Receiving a digitally recorded call of the conversation, accompanied by a detailed evaluation report, helps clients understand what is happening in their business faster and lets them make better decisions on how to run their business to acquire and keep more customers. Another aspect many clients find helpful is having their calls burned to CDs, by management level (division, region, etc.), for use in training sessions, reviews, etc."

Given all the slow and deliberate steps companies have historically taken to mystery-shop and the almost instantaneous nature of the audio, video and photographic feedback they can now obtain from the devices carried by every current mystery shopper, it's disheartening that customer service remains so poor in so many realms. Increasing the speed of insights has clearly not resulted in improved employee training, processes or oversight.

Scan to access all Quirk's back issues.

CALENDAR OF EVENTS

••• can't-miss activities

Insights Association will host the CEO Summit on **January 22-24**. Visit www.insightsassociation.org/Events/Event-Info/sessionaltcd/2024CEOSummit.

QRCA will host its Annual Conference on **January 22-25** in **Denver**. Visit www.qrca.org/page/annual-conference.

Customer Management Practice will host Customer Contact Week Austin on **January 23-25**. Visit www.customercontactweekwinter.com.

Informa Connect will host Media Insights and Engagement Conference on **January 23-25**. Visit informaconnect.com/media-insights/.

Marcus Evans will host Data Management & Analytics on **January 29-31**. Visit marcusevans.com/conferences/masterdatamanagement.

TTRA will host the Marketing Outlook Forum on **January 29-31**. Visit ttra.com/event/mof-2024/.

Merlien Institute will host the UX360 Research Summit on **January 30-31**. Visit www.virtual.ux360summit.com.

Market Research Society will host the virtual Semiotics & Cultural Insight Conference on **February 1**. Visit www.mrs.org.uk/event/call-for-contributions/call-for-contributions-semiotics-and-cultural-insights-in-market-research.

Quirk's Media will host Quirk's Virtual – Innovation on **February 1**. Visit www.quirks.com/events/quirks-virtual-innovation-2024.

Medallia will host Medallia Experience: Reimagine the future on **February 5-7** in **Las Vegas**. Visit www.medallia.com/experience.

Corinium Global Intelligence will host CDAO UK on **February 6-8** in **London**. Visit cdao-uk.coriniumintelligence.com.

Pharma Market Research Conference will host its Annual Conference on **February 7-8**. Visit pharmamarketresearchconference.com/.

Worldwide Business Research will host eTail Australia on **February 13-15** in **Sydney**. Visit etailaustralia.wbresearch.com.

Marcus Evans will host CMO Summit on **February 20-21**. Visit www.feb24.cmoanzsummit.com.

IQPC will host CDO Healthcare Exchange on **February 21-22**. Visit www.iqpc.com/events-cdo-healthcare-exchange.

Merlien Institute will host Qual360 EU on **February 22-23** in **Berlin**. Visit eu.qual360.com.

AMA will host the Winter Academic Conference on **February 23-25**. Visit www.quirks.com/events/ama-winter-academic-conference-2024.

WBR will host eTail Connect on **February 27-28**. Visit etailconnecteu.wbresearch.com.

Corinium Global Intelligence will host CDAO Brisbane on **February 27-29**. Visit cdao-bris.coriniumintelligence.com.

IQPC will host the CX USA Exchange on **February 27-28**. Visit www.cxnetwork.com/events-customer-experience-exchange-usa.

IQPC will host the Generative AI for Marketing Summit on **February 27-28** in London. Visit www.aidataanalytics.network/events-generative-ai-for-marketing.

ASA will host the Conference on Statistical Practice on **February 27-29**. Visit ww2.amstat.org/meetings/csp/2024.

Quirk's Media will host The Quirk's Event – Dallas on **February 28-29**. Visit thequirksevent.com/dallas-2024.

Corinium Global Intelligence will host CDAO Financial Services on **February 28-29**. Visit cdaofs.coriniumintelligence.com.

Customer Management Practice will host Customer Contact Week Australia and New Zealand on **February 28-March 1**. Visit www.customercontactweekdigital.com/events-customercontactweek-au.

we.CONECT will host Big Data Minds Europe on **March 3-5** in **Berlin**. Visit www.big-data-minds.eu.

Event details as of December 4, 2023. Please see websites for more details.

To submit information on your upcoming conference or event for possible inclusion in our print and online calendar, e-mail info@quirks.com. For a more complete list of upcoming events visit www.quirks.com/events.

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Jeta Surman
Director of Product Research – B2B, American Express

“As I have reflected on my personal values and motivators over the years, the one thing that is consistently present is the need to continue to learn and be challenged cognitively.”

How did you first become interested in UX?

Prior to transitioning into UX, I thought I wanted to be in data analytics. Although I did work as an analyst for a few years after completing university, I found myself feeling disconnected from the product experience. I would look at large datasets, and eventually that started to feel quite dehumanizing, in terms of displaying a customer as a single data point and having rows and rows of their usage but not understanding their pain points, challenges, needs and experiences. At that time, I expressed interest in transitioning to market research as a way of understanding consumer needs and expectations.

A few years later, I stumbled across the field of UX, which immediately clicked with my passion of understanding users. Up until that time in my career I had worked on understanding expectations of customers related to digital products, and it felt like a natural transition to fully move to UX. As I have reflected on my personal values and motivators over the years, the one thing that is consistently present is the need to continue to learn and be challenged cognitively. I think the UX field, and particularly UX research, is a forever fascinating and dynamic space, where no two days are the same and I’m never bored.

Do you see yourself leveraging any new methodologies or tools?

Within financial tech, we are always balancing between agility and rigor, so we get to adopt methods to make them lighter weight/hybrid as a way of achieving insights faster to meet business objectives.

What excites you about coming to work each day?

The people. I love my team, and I love interacting with our users.

Scan to read the full article at www.Quirks.com.

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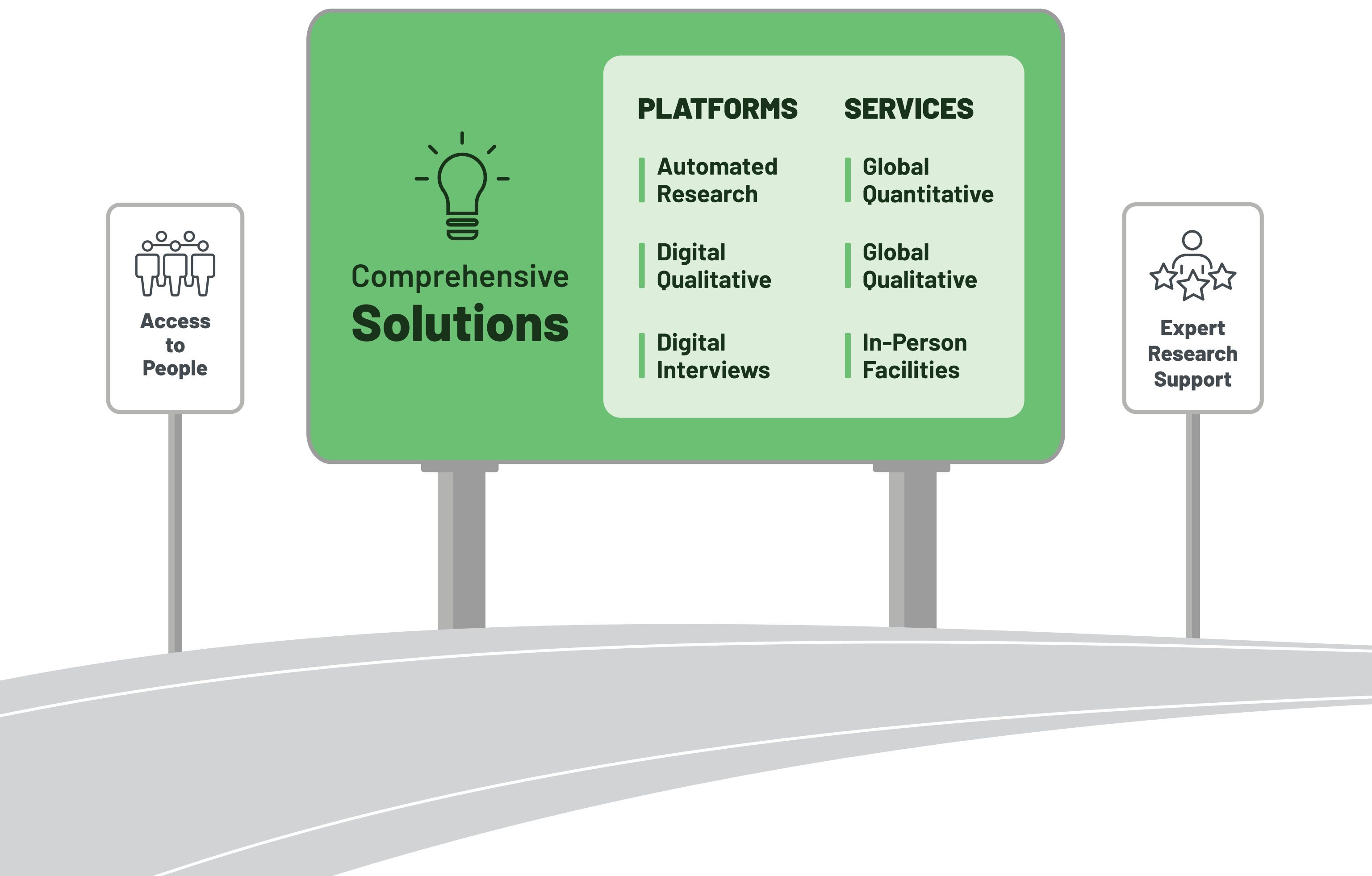
SIMPLIFY YOUR RESEARCH JOURNEY



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