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The State of Predictive Analytics in Marketing 2022

Marketers Demand More From AI

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In a Nutshell: Executive Summary

The idea of looking into the future is beguiling. That's especially true for marketing teams, who must anticipate customers' interests and behavior to achieve their goals. Yet, despite the growing availability of AI-powered technologies that bring that knowledge of the future within grasp, many marketers are still in the early days of formulating their AI strategies. They're seeking more value and results from their experimentation with AI.

Our survey of 250 U.S. marketing executives at companies with a minimum annual revenue of $100M shows that while interest in the potential of AI-based predictive analytics is quite strong, marketing teams face various challenges in fully adopting this technology. With no universal playbook available for integrating data science into marketing, various approaches have evolved, with varying success levels.

The survey findings reflect this complex situation, but they also provide inspiration for marketing teams and leaders tackling challenges with AI, regardless of where they might be on the adoption curve. Our survey results reveal that:

1. All 250 respondents wanted to gain additional AI-powered capabilities and predictive insights for their teams, but all of them also faced difficulties. Those difficulties largely revolved around data organization and quality, costs, and teams' lack of technical knowledge.
2. Marketing and data science professionals very often find it difficult to achieve alignment around business needs, marketing goals, and predictive model creation and maintenance. Marketers are often left with inappropriately constructed and out-of-date models that fail to offer reliable guidance for data-driven decision-making.
3. Though marketers have vast amounts of data available, for many, predicting customer behavior still feels like guesswork. They generally do not feel capable of using their data to adapt quickly when market conditions and customer preferences change.
4. The majority of marketing leaders desire more specific, KPI-focused insights instead of vaguely relevant findings from data that might not inform particular marketing strategies. They want their data strategy to prove its value on important metrics used to test the value of all marketing technology investments. More focused, predictive insights would support that goal.
5. Most marketing leaders surveyed do not anticipate major budget cuts for technology investments in the near future. These teams will be well positioned to adopt new data approaches that make predictive modeling much more accessible and automated, maximizing the value of the team's data.

Among our survey respondents, we found numerous marketing leaders who are optimistic and excited about seeking a competitive advantage from AI-driven predictive analytics. Still, there's much room for improvement in how marketing teams use this technology.

Successful implementation of predictive analytics in marketing brings the potential for dramatically improved business results. This survey offers insights into the shared ambitions and concerns of marketing leaders who grasp the potential to deliver an outsized impact with AI and are ready to adopt a future-driven strategy.

Methodology

The Pecan Predictive Analytics in Marketing Survey was conducted by Wakefield Research (www.wakefieldresearch.com) among 250 U.S. marketing executives with a minimum seniority of director. These executives work at B2C companies that use predictive analytics and have a minimum annual revenue of $100M. Participants responded to an email invitation and an online survey between September 13-21, 2022.

Results of any sample are subject to sampling variation. The magnitude of the variation is measurable and is affected by the number of survey respondents and the level of the percentages expressing the results. For the surveys conducted in this particular study, the chances are 95 in 100 that a survey result does not vary more than ±6.2 percentage points from the result that would be obtained if surveys had been conducted with all people matching the profile described above.

Key Finding 1: AI Ambitions and Obstacles Are Universal in Marketing

Marketers' adoption of predictive analytics continues to accelerate, but the degree to which their teams have implemented this state-of-the-art methodology varies widely and isn't always focused on the most impactful applications.

We asked our survey respondents to identify all of the uses of predictive analytics within their marketing organizations. The top two uses of predictive analytics among those we surveyed were customer-level predictions of future behavior (51%) and forecasts of customer trends (50%). Other uses followed close behind, but only 40% of those surveyed are using modeling to uncover predictive insights into their business. Surprisingly, 49% of marketers aren't using predictive analytics for any individual-level predictions about customer behavior, thus missing out on the core differentiating aspect of this state-of-the art technology. Not leveraging predictive modeling within the marketing function, and not gaining deeper understanding of individual customers' preferences and their future actions, both represent significant missed opportunities to boost customer and revenue growth.

How is your company's marketing organization using predictive analytics?

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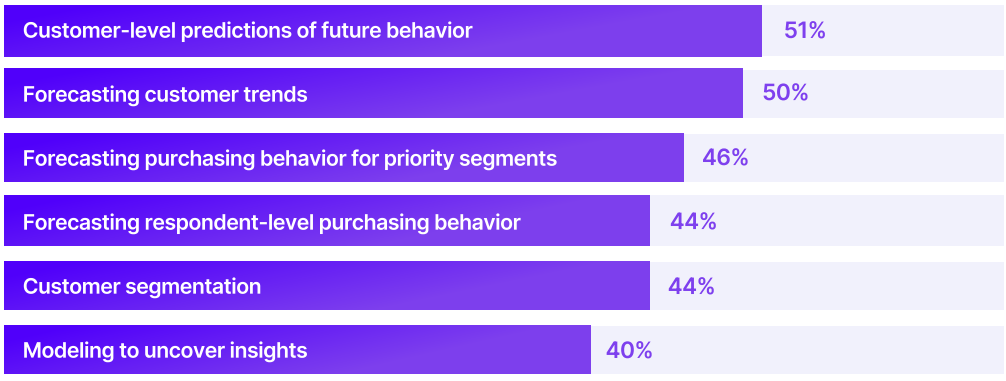
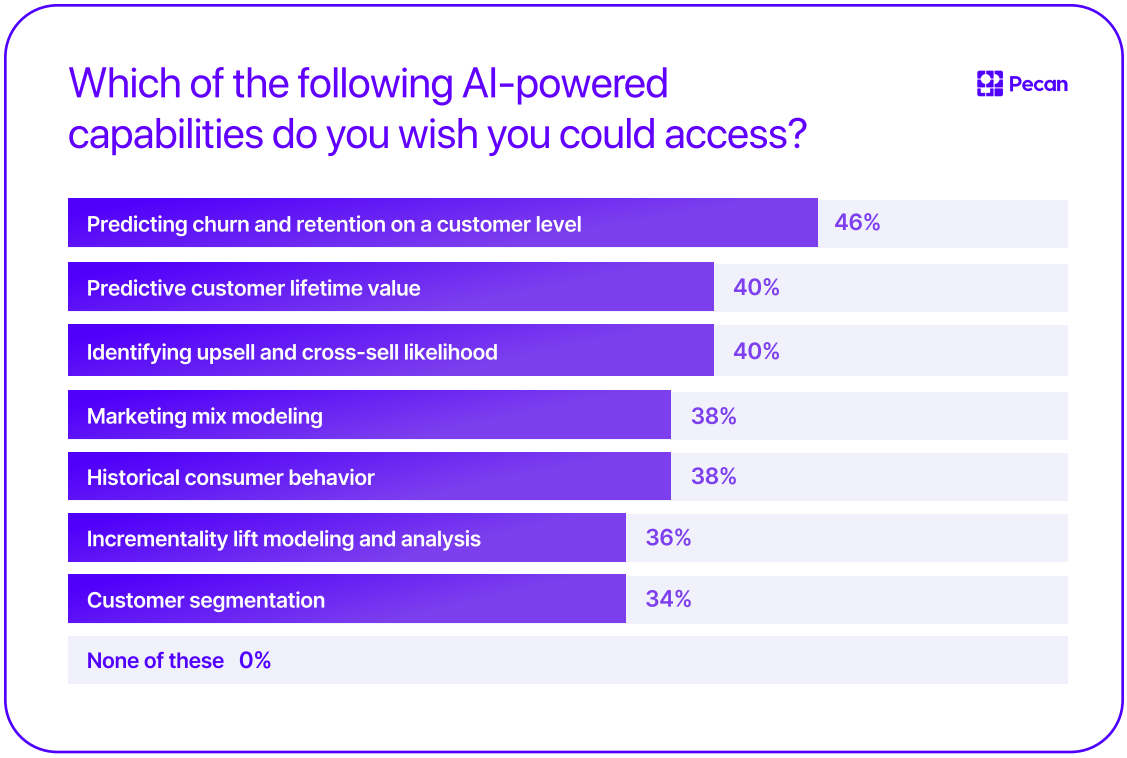
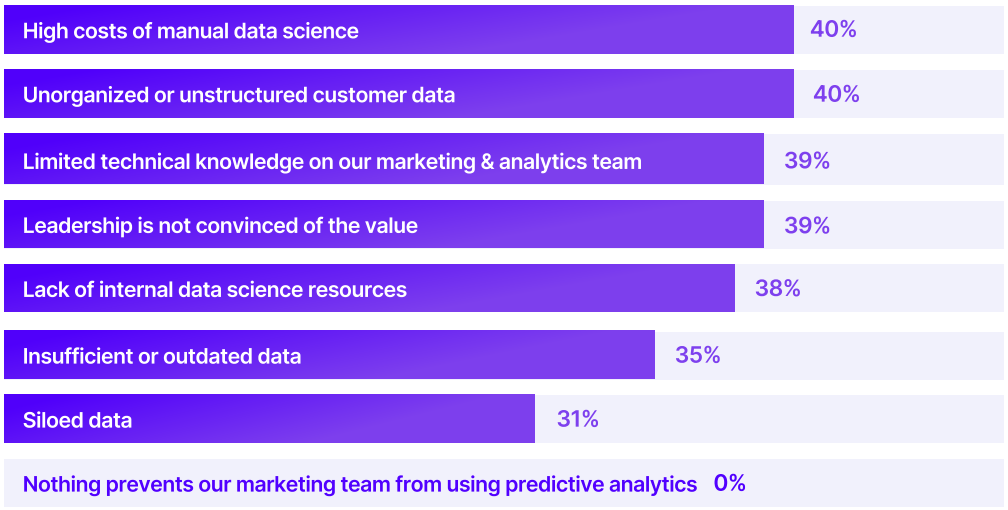


Everyone has AI ambitions. These marketing decision-makers have a vision for the AI-powered capabilities they'd like to gain. Among the most essential capabilities they'd like to have are the ability to predict churn and retention on a customer level (46%), to predict customer lifetime value (40%), and to identify upsell and cross-sell likelihood (40%). This finding highlights marketers' need to predict customer behavior at every step of the customer journey and impact the full range of business KPIs – from acquisition through monetization and retention. Not a single marketing leader who responded to the survey said they did not want additional AI-driven predictive capabilities! There's clearly a strong appetite for this innovative approach in marketing organizations.



But everyone has AI obstacles. Notably, not a single survey respondent said they had zero obstacles to achieving their AI ambitions. These marketing leaders cited two top obstacles to using predictive analytics more often: first, the high cost of doing manual data science (40%), and second, the challenges of working with unorganized or unstructured customer data (40%) or siloed data (31%). Marketing and analytics teams' internal lack of technical knowledge was also an issue for 39% of our respondents, tied with the difficulty of convincing leadership of the value of predictive analytics (39%).

Which of these, if any, are obstacles to your marketing team using predictive analytics more often?



In short: Everyone wants AI-based predictive analytics. Everyone contends with significant challenges while working to implement it fully.

Your evaluation

- What would be the most useful predictions for your team: churn and retention, customer lifetime value, upsell/cross-sell likelihood, and/or something else?
- What stands in the way of adopting predictive analytics to gain those predictive insights for your team?

Key Finding 2: Marketing and Data Science Alignment is Elusive

Most marketing organizations rely on technical resources outside of their teams to implement predictive analytics, requiring marketing and data science to be on the same page for AI projects to succeed. But our survey results suggest that this relationship isn't easy to navigate. It's hard for these teams to align on goals and resources, making timelines and results difficult to achieve.

Data projects stall when collaborations are misaligned. Survey respondents identified multiple reasons their data projects fail to make progress toward marketing goals. The causes for misalignment occur at every stage of the typical data science workflow — the initial definition of the business need and questions, the data selection and model building process, and the ongoing maintenance and upkeep of predictive models.

Which of the following, if any, cause your data projects to stop progressing?

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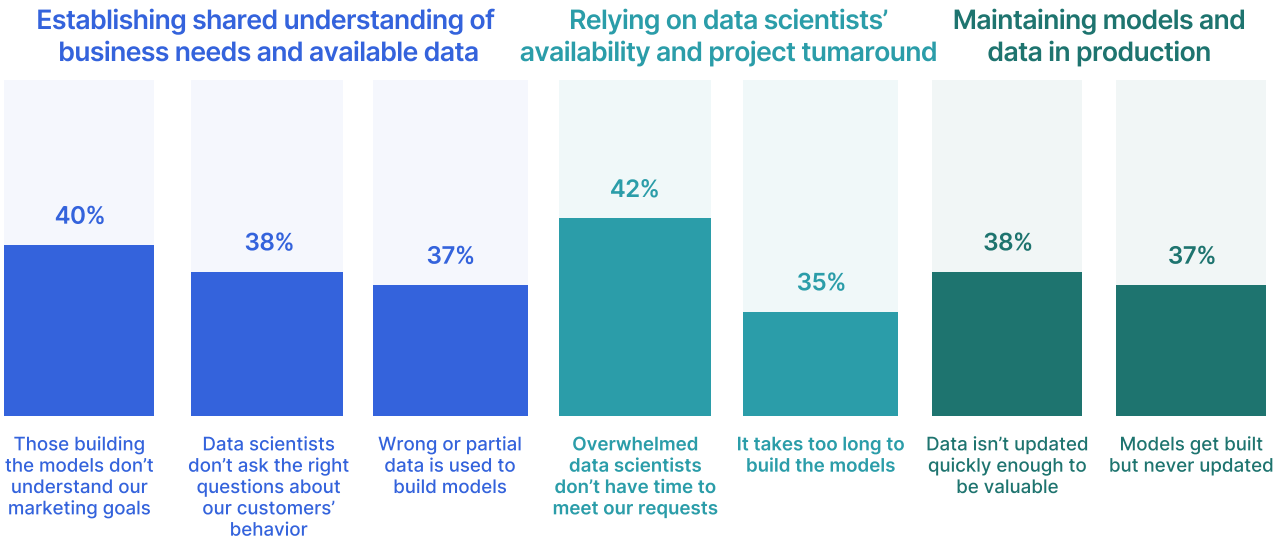


Different understandings of business needs. Every data science project begins by defining the business need and the questions to be explored. Unfortunately, 40% of our survey respondents said that the individuals who build predictive models for them didn't understand marketing goals. Additionally, 38% of these marketing leaders said that data scientists don't ask the right questions about customer behavior. Over a third (37%) of our respondents also received models built on incorrectly selected or partial data, which would result in flawed predictions. These responses imply that data science projects are often not built on a solid foundation of shared understanding of marketing needs, goals, and relevant data.

Flawed data selection and slow model building. Time is of the essence in responding to customer behavior trends and planning effective marketing campaigns. But the availability of data scientists and the turnaround time of traditional, manually created data science projects simply can't keep up with that pace. Data scientists were overwhelmed and unable to meet the requests of 42% of our respondents. For 35%, models simply took too long to build, and as noted above, may not even have used correct, complete data. In short, the models were either inadequate or likely outdated when delivered to marketing.

Neglected models are not just useless, but dangerous. To continue to be useful to marketers, predictive models must be monitored on an ongoing basis, updated regularly with fresh data, and adjusted as appropriate to maintain their accuracy. But those essential tasks don't always happen. For 38% of our respondents, data isn't updated often enough to keep models relevant and valuable. Additionally, 37% of survey participants said that models built for their teams were never updated.

Models that are never updated can't provide accurate predictions, leading to various negative consequences. They can mislead marketing decision-makers as they evaluate important strategic choices, create revenue leaks, and generate unintended costs when automated actions are orchestrated based on predictive data. Perhaps worst of all, they can cause entire teams, within and outside of marketing, to lose confidence in customer data and in the teams' ability to make data-driven decisions. That loss of trust not only impacts immediate goal achievement, but also hinders future programs and data initiatives. The tasks of updating data and models can be automated. But it seems most companies haven't figured out that automation yet, and are likely relying on manually run data science workflows.

There's no universal approach to integrating AI into marketing, yet. In our survey, we found that only 2 in 10 marketing teams were not involved in building predictive models for their marketing use cases. The remaining 8 out of 10 adopted a wide range of approaches to bringing AI expertise into their teams, including collaborating with their company's data science teams, using external vendors or consultancies, or building their own data science resources within marketing.

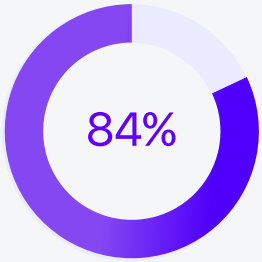
In the absence of a standard model for AI adoption, these disparate approaches may make it even more challenging to achieve alignment on business needs, expectations, timelines, and resources. The relationship between marketing and data science is proving challenging for many marketing teams to navigate successfully. The gap between marketers' needs (highlighted in Key Finding 1) and their inability to progress with data projects points to the acute need for solutions that give marketing teams more automation and autonomy to incorporate predictive analytics directly into their teams. Full ownership of predictive analytics within marketing would provide far better results than relying on external or periodically available, centralized resources that don't share the same day-to-day goals and objectives.

Your evaluation

- If you're currently using predictive analytics, are your models built upon the right data and regularly updated to provide accurate predictions?
- If you're still evaluating how to implement predictive analytics, how would you like to bring this capability into your marketing team? Would it be beneficial to have the power of automated data science within your team so that marketing's goals are prioritized?

Key Finding 3: Despite Data Efforts, Many Marketers Feel "Guesswork" Guides Decisions

The survey results reveal a common issue that may stem from the lack of alignment between marketing and data science. There appears to be a vast gap between companies' data initiatives and what their marketing leaders need to guide high-level strategy, as well as daily decisions. It's remarkable that 84% of participants agreed with this statement: "Despite all the customer data my company gathers, it is still difficult to make day-to-day data-driven decisions and take action."



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of marketing leaders agree:

"Despite all the customer data my company gathers, it is still **difficult to make day-to-day data-driven decisions and take action.**"

Guesswork persists despite data investments. Despite companies' expensive data initiatives, 8 out of 10 haven't generated results that successfully inform these marketing leaders' regular decision-making processes and guide their actions. Moreover, half of the survey respondents said their ability to predict customers' behavior is always or often "guesswork." Even though companies are swimming in petabytes of data, many marketers still feel they are making decisions and shaping strategies with gut intuition.

Lack of agility raises concern in an uncertain market. Finally, survey respondents expressed that their company could not rapidly adjust acquisition and retention programs to shifts in customer behavior. Only 28% said they could make adjustments in a week or less, while 72% would need more time than that to find a new direction. Even though data collection presumably is constant, marketers appear to struggle to put fresh data to work immediately to guide their programs.

Data's potential unrealized for many marketers

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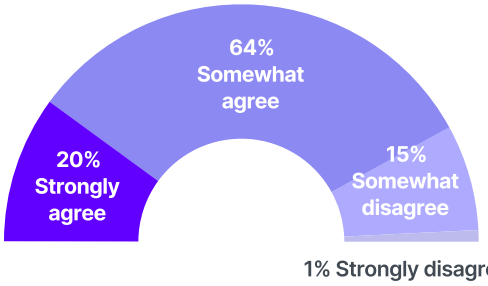
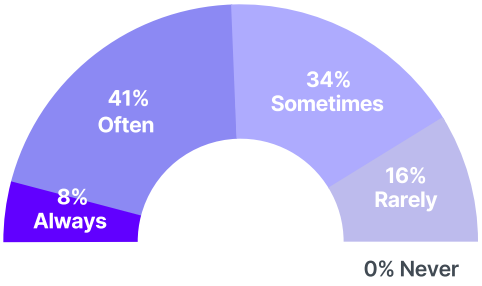
How strongly do you agree or disagree? “Despite all the customer data my company gathers, it is still difficult to make day-to-day data-driven decisions and take action."



How often do you feel like your ability to predict customers' behavior is guesswork?



In turbulent market conditions with constantly evolving customer behavior, the ability to respond rapidly with accurate predictive insights based on up-to-the-minute data is critical. Acting on the latest behavioral data promptly offers an opportunity to provide a better customer experience at any stage of the customer journey. Quick responses improve the results of acquisition programs through better targeting and boost retention by deploying churn-combating strategies when early signals of dissatisfaction are detected.

Even though data presents immense opportunities to foresee what customers are likely to do, the future is still hazy for many marketing organizations. Their leaders are steering a slow-moving ship through fog without knowing what the future holds.

Your evaluation

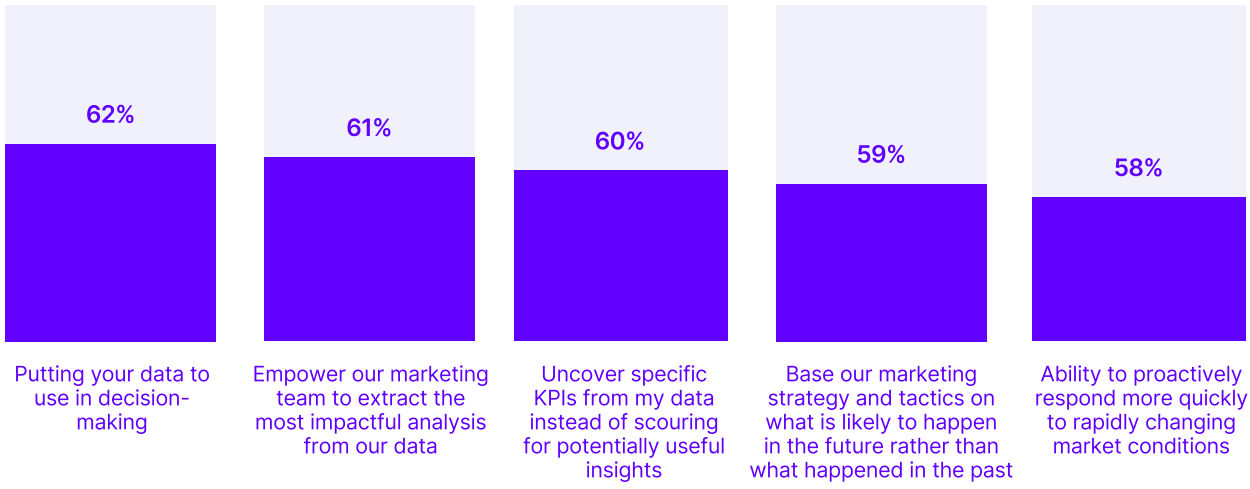
- How would you evaluate your own ability to predict customer behavior, on a spectrum from “very confident about the future” to “it’s all guesswork”? What would increase your confidence level?
- How quickly can your team adapt to emerging shifts in customer behavior, and does your data strategy support fast responses to changing conditions?

Key Finding 4: Goodbye Actionable Insights – Marketers Crave Impactful Predictions Specific to KPIs

There are certainly ways to improve marketing organizations' AI capabilities and to boost the value of AI outputs for marketing decision-makers. However, as noted in Key Finding 1, getting leaders to buy into the value of deeper AI adoption can be challenging.

Predictive insights should impact specific KPIs. We asked our survey respondents which applications of AI would be most valuable to them as marketing leaders. Perhaps unsurprisingly, many want to be able to put their data to use in decision-making (62%). They also want more targeted information. AI should empower the marketing team to "extract the most impactful analysis from our data" (61%). And importantly, not only should that information be impactful, it should also be specific to key team KPIs and readily surfaced: 60% of marketing leaders said they wanted AI to "uncover specific KPIs from my data instead of scouring for potentially useful insights." Diving down the data rabbit holes isn't helpful to today's marketing leaders. Instead, they need targeted, relevant insights quickly that they can use to move the needle on their KPIs.

Please rank the following in terms of what you think would be most valuable to you as a marketing leader.



Data investments are assessed with multiple metrics. These priorities make sense in the context of the metrics companies use to quantify the value of marketing analytics tools and resources. We asked marketers to identify the metrics used in their companies to measure the success of these investments. Many are using multiple metrics, but among the most frequently used are ROI on advertising spend (41%), churn and loyalty KPI improvement (39%), and lift in acquisition of high-value/profitable customers (36%).

All of these KPIs are vital to marketers' success. Companies need to invest in the right capabilities to achieve these goals, but today's data science collaborations seem to be falling short, with "guesswork" guiding decisions while analysts dig for useful fragments of information.

Your evaluation

- How much time does your team spend searching through data to find useful information? Are their analyses of data focused on specific KPIs and informative for decision-making?
- Considering your own metrics for the success of technology investments: Does your current data strategy perform well? Which changes would boost your investments' impact on these metrics?

Key Finding 5: Prove Marketing ROI Efficiently With New AI Approaches

All 250 of our survey respondents wanted AI capabilities within their marketing organizations, but they also all faced significant obstacles. At the same time, these marketing leaders expressed the need to be armed with the most powerful tools possible to accomplish their goals, now more than ever and especially due to difficult market conditions.

Demonstrating performance is critical to maintain budgets and investment. We asked our participants how they're currently faring as they try to demonstrate quantifiable ROI for campaign and channel performance. For 83%, this task is at least somewhat challenging. And yet, being able to show the value of these efforts is crucial to assessing marketing teams' success and convincing leadership to invest in further programs.

How challenging is it for your marketing team to show quantifiable ROI for campaign and channel performance?

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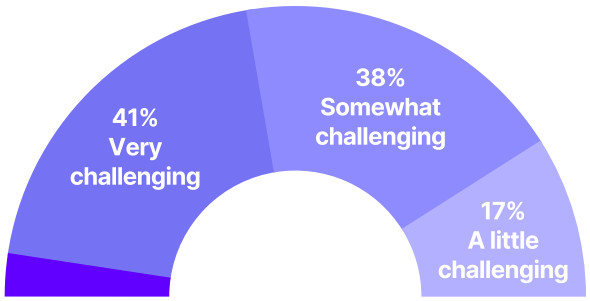
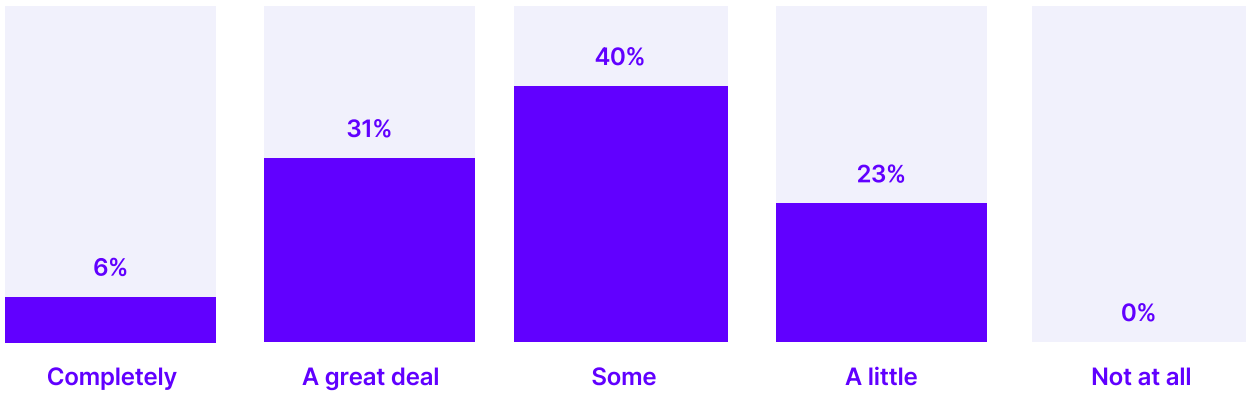


4% Extremely challenging

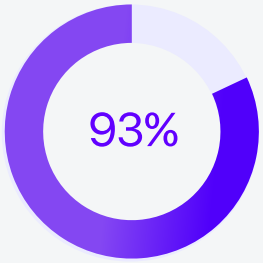
0% Not challenging at all

With that difficult task already daunting enough, an economic downturn often provokes cutbacks to marketing budgets. Fortunately, 63% of those answering our survey said they expected to see only “some” or “a little” reduction in spending on planned investments in marketing technology and data measurement as a result of the economic situation. These companies will be better equipped to innovate and to use their data effectively.

How much will your company cut back on planned investments in marketing technology and data measurement due to a potential economic downturn?



Alternative approaches to data science offer every team AI’s full potential. Potential investments for this challenging time may include alternative solutions for doing data science more efficiently and with skills already present within marketing teams. A resounding 93% of our survey respondents agreed or strongly agreed that low-/no-code predictive modeling tools are valuable for automating predictive insights, including future customer churn and lifetime value.



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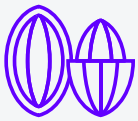
of marketing leaders agree:

Data scientists could solve more complex problems if they used low-/no-code, AI-powered predictive modeling tools for **automating predictive insights.**

Managing predictive modeling projects within marketing teams — with automated tools that can be used by those without advanced data science knowledge — could resolve many of the obstacles and challenges described by our survey respondents. While achieving full AI adoption within a marketing organization remains a significant task, alternative strategies to obtain AI capabilities may make this technology's potential accessible to all teams.



Your evaluation

- What are the most effective uses of your budget for marketing technology and data measurement — especially if you see cutbacks on the horizon?
- Could adopting automated, accessible predictive analytics offer a cost-effective boost toward attaining your marketing team's critical goals?

Additional Resources

Even in tough economic conditions, research shows that investing in new technologies and innovation ultimately benefits businesses — and sets them up for success when the economy recovers. Read more about that research and how AI can support your customer acquisition and retention strategies in our e-book, **Thrive With AI: Win and Retain Customers Even in a Recession**.

This survey revealed that marketing teams have tried many different approaches to implementing AI, with varying levels of success. With no universal playbook for using AI, you have a lot of big decisions to make. Grab our in-depth, hands-on guide, **How to Choose the Right Predictive Analytics Strategy for Your Team**, to help you work through the most important concerns with all relevant stakeholders.

The marketing leaders we surveyed agreed that they wanted their data to yield useful information specific to their marketing teams' most important KPIs. Learn more about gaining targeted, future-driven predictions in our guide to **The Top 5 KPIs to Optimize With Predictive Analytics**.

The power of data science in the hands of business teams

Pecan

Pecan helps business intelligence, operations, and revenue teams predict mission-critical outcomes. As the world's only low-code predictive analytics platform, Pecan enables companies to harness the full power of AI and predictive modeling without requiring any PII or data scientists on staff. With Pecan's secure platform, companies turn hindsight into foresight by generating highly accurate predictions for revenue-driving KPIs in just weeks. Founded in 2018, Pecan is backed by leading investors such as Insight Partners, Google Ventures, and others.

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- Upsell & conversion
- Churn & retention
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> We improved forecast accuracy in our seasonal business, and we have a deeper understanding of the variables that may influence a consumer demand signal. [By] partnering together with Pecan, we are continuing our focus on what consumers want to purchase at the right time and place.
>
> — Bertrand Klehr, VP Supply Chain Consumer Health North America, Johnson & Johnson

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