MEASURED

The Future of Media Mix Modeling

How incrementality testing is redefining MMM for a new generation of marketers.

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Introduction: Solving the Measurement Puzzle

Marketers around the world will spend more than $1 trillion on paid media this year — deployed with the singular objective of driving important business outcomes. But do marketers know how much of that spend is actually delivering on their desired goal?

The answer is not what it should be. The ability to measure the true business impact of every marketing dollar across the entire media portfolio is essential for today's data-driven marketers. These insights not only allow marketers to prove the value of their ad spend, but also to understand how different marketing programs interact with one another.

Without this capability, it's impossible to confidently reallocate less effective ad dollars to higher ROI channels and construct a more efficient, revenue-driving marketing funnel.

Most measurement solutions founded in the past 15 years built their offerings in the pre-privacy era based on a user-level attribution methodology. But since the fallout of click-based attribution systems in recent years, Media Mix Modeling (MMM) has seen a notable resurgence.

While MMM is a powerful method for measuring media performance, it has significant limitations. MMM is correlation based, not causal. It's expensive, it relies heavily on historical data, it provides only a relatively big-picture view — and MMM isn't fast enough or granular enough for daily optimization across today's extremely complex channel ecosystem.

DID YOU KNOW

61.4%

of marketers aim to enhance their measurement strategies with improved and expedited Media Mix Modeling, according to July 2024 survey by eMarketer and Snap.

As such, MMM is not a complete or reliable portfolio optimization solution. Instead, today's leading marketers are taking a more progressive, modernized approach to MMM by combining the powerful attributes of MMM with incrementality testing for significantly more accurate, timely, and actionable insights into their marketing performance.

By triangulating MMM with incrementality tests for causality and platform attribution reporting for granularity, marketers have a more advanced way of ensuring that their brand is capturing the full impact of their entire media mix based on causal ground truth experimentation.

This Guide demonstrates how calibrating MMM with incrementality testing and platform data not only solves the modern measurement conundrum, it empowers forward-thinking marketers to drive substantially better business performance, improve sales, and achieve marketing measurement success.

First, let's understand how we got here.

A Brief Look Back at "Old School" Media Mix Modeling

Media Mix Modeling (MMM) has been a cornerstone of marketing measurement for more than 40 years, helping marketers evaluate the performance of their campaigns across various channels.

A long-trusted tool for marketers seeking to understand the effectiveness of their marketing efforts, MMM has evolved to remain relevant despite the rapid changes in media formats, advertising channels, and consumer behaviors.

At its core, MMM is a data-driven analytical process used to evaluate the performance of marketing campaigns. It helps marketers uncover insights into how different media channels contribute to business objectives, such as sales, brand awareness, or website traffic.

By analyzing historical data, MMM can identify patterns and trends, offering valuable insights into which marketing activities are most effective in driving desired outcomes.

INTERESTING FACT

Media Mix Modeling has been used in some form or another by marketers since the 1950s. Major consumer packaged goods (CPG) companies such as Procter & Gamble and Unilever were pioneers in using statistical methods to understand the effectiveness of their TV advertising spend. With the advent of computer systems in the 1980s, MMM became a more widely adopted practice.

MMM's strength lies explicitly in its ability to provide a holistic view of marketing performance by integrating various data points across multiple channels. This flexibility is also its greatest achilles heel, as these models rely on a large amount of human input and adjustment, which is subject to confirmation bias.

Despite its enduring history, MMM relies heavily on a correlation-based approach, making it difficult to differentiate between mere correlation and actual causation. This limitation can lead to inaccurate conclusions about which marketing activities truly drive sales.

DID YOU KNOW

Only 39%

of marketers feel they are able to prove the quantitative impact of their marketing efforts, underscoring the need for a more accurate and actionable measurement technique (Gartner, 2023).

Key Terms You Should Know

Understanding the terminology and key concepts discussed in this Guide is essential to grasping the nuances of MMM and incrementality testing. These are a few critical terms and definitions you should know:

Media Mix Modeling (MMM): A statistical regression-based analysis technique used to evaluate the impact various marketing activities have on business outcomes such as sales or brand awareness. MMM analyzes historical data across different media channels to determine how each contributes to overall performance.

Incrementality Testing: A methodology that isolates and measures the true impact of a specific marketing activity by comparing the outcomes of exposed groups (those who saw the marketing) with control groups (those who did not). This helps distinguish the actual effect of marketing from what would have occurred naturally.

Correlation vs. Causation: Correlation refers to a statistical relationship between two variables, where changes in one variable are associated with changes in another. However, correlation does not imply causation, meaning one variable does not necessarily cause the other to change. Causation, on the other hand, directly links one variable's change as the reason for another's change, which is the desired outcome in accurate marketing measurement.

Priors: Using priors is a modeling technique where, in the case of MMM, industry-established marketing insights can be included in the model as "prior" knowledge. Prior is a technical term that refers to what and how additional information can be input into a model. The usage of priors in MMM is typically based on how plausible experts think an outcome is, relative to a model where this input is not provided.

72% of marketers say their **inability to connect marketing activities to results** is one of their **biggest challenges**, highlighting the importance of understanding the difference between correlation and causation (Forrester).

Why We Care: Measured's Commitment to Quality Data

Our commitment to marketers is to continuously refine and advance traditional methods where appropriate, evaluate every step of the measurement process, and ensure that they have the tools and insights necessary to make informed, data-driven decisions that drive results.

We believe that accurate and actionable data is the foundation of effective marketing. Since 2017, Measured has designed, deployed, and analyzed over 25,000 incrementality tests for hundreds of brands across hundreds of marketing channels. This deep understanding of media incrementality has enabled us to witness first-hand what marketers can achieve for their brands when they have access to accurate, timely, validated media measurement they can trust.

"Garbage in, garbage out." In order to extract quality performance outputs that can be turned into actionable insights, any modeling activity must begin with quality inputs. By fully managing over 300+ integrations, taxonomizing the data on a daily basis, we ensure that we are training our brand's mix models on complete and accurate data.

Across the Measured portfolio, brands that ran eight geo tests per year saw an average marketing **ROI improvement of 32%.**

Measured's proprietary measurement technology — the **Measured Incrementality Model** — brings these concepts into practice by offering a comprehensive solution that integrates the best aspects of MMM with ongoing incrementality testing.

This model runs weekly MMM updates that are unique to each brand and conversion type and calibrates it with real-world test results on an ongoing basis. This model is then used to generate incremental adjustment factors for every channel, tactic, and campaign in a brand's portfolio. By doing so, it adjusts each ad platform's reported KPIs, such as ROAS, to reflect true incremental performance, providing actionable recommendations for reallocating media budgets to maximize ROI.

DID YOU KNOW

67%

of senior marketing executives say that improved data quality would increase the effectiveness of their marketing campaigns (Experian).

How Media Mix Modeling Works

Traditional MMM typically follows a structured four-step process, which includes:

Data Collection: The foundation of MMM is the collection of extensive historical data. This data spans various marketing activities and external factors, such as economic indicators, competitor actions, and seasonal trends. By compiling a comprehensive dataset, marketers can ensure that the model accurately reflects the diverse influences on business outcomes.

Model Building: With the data in hand, the next step is to construct a mathematical model that represents the relationships between marketing efforts and sales outcomes. Techniques like multiple linear regression are commonly used to determine how different marketing channels contribute to overall performance. The model is built to account for the interplay between various channels and external factors, providing a nuanced view of how different elements interact to drive business results.

Insight Generation: Once the model is built, it is used to generate insights into the effectiveness of different marketing activities. By examining the relationships identified in the model, marketers can understand which channels and tactics are driving sales, brand awareness, or other key metrics. These insights are critical for making informed decisions about future marketing strategies and budget allocations.

Optimization: The final step in the MMM process is to use the insights generated to optimize the marketing mix. Marketers can explore “what if” scenarios to test different strategies and predict their potential impact on business outcomes. By allowing an optimization model to produce an optimal mix, you can compare various user-driven media mixes to mathematically optimal mixes based on response functions and adjustment factors determined throughout the MMM process.

Through this structured approach, MMM provides a systematic way to understand and optimize the relationship between marketing efforts and business outcomes, making it an invaluable tool for marketers.

Challenges of Traditional Media Mix Modeling

While MMM has proven to be a powerful tool, it is not without its challenges, particularly in the context of today's complex and rapidly evolving marketing landscape. Understanding these limitations is crucial for marketers who want to fully leverage MMM's capabilities.

Correlation-Based Approach: One of the most significant challenges of traditional MMM is its reliance on correlation-based data. While correlation can indicate relationships between variables, it does not establish causation. In the context of marketing, this means that traditional MMM might identify a relationship between a particular marketing activity and an increase in sales, but it cannot definitively prove that the activity caused the sales increase. This limitation can result in misleading conclusions, where marketers might attribute success to the wrong channels or tactics.

High Cost: Implementing traditional MMM can be prohibitively expensive, especially for large enterprises. The process often requires extensive historical data collection and integration, which can be both time-consuming, costly, and not necessarily repeatable with the fidelity required for accurate modeling. For enterprise-sized brands, the costs can easily exceed $1 million, making it a significant investment that may not always yield proportionate returns.

Only 30% of marketers trust MMM to accurately determine key business drivers, according to a July 2024 survey by eMarketer and Snap.

Inaccurate Models: Without the incorporation of incrementality testing, traditional MMM models are often built on assumptions rather than grounded in real-world data. These models may be calibrated by data scientists who lack a deep understanding of marketing or business operations, leading to potential inaccuracies. Furthermore, traditional MMM models often rely on priors from other models, creating a cycle of assumptions that don't always reflect the true impact of marketing activities.

Long Time to Deploy: Building a traditional MMM from scratch is a time-intensive process, often taking over six months before actionable insights are available. This long lead time can be a significant drawback in fast-paced industries where market conditions and consumer behaviors can shift rapidly. The delay in generating insights means that marketers might miss opportunities to make timely adjustments to their strategies.

Lack of Granularity: Traditional MMM tends to focus on high-level insights, often analyzing performance at the channel level rather than at the campaign level. This lack of granularity makes it difficult to distinguish the performance of closely related campaigns within the same channel, reducing the model's usefulness for making detailed strategic decisions. For marketers who need to understand the impact of individual campaigns, this can be a significant limitation.

In summary, while traditional MMM offers valuable insights, these challenges highlight the need for a more modern approach that can address these limitations and provide more accurate, actionable insights for today's marketers.

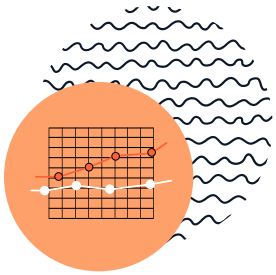
DID YOU KNOW

56%

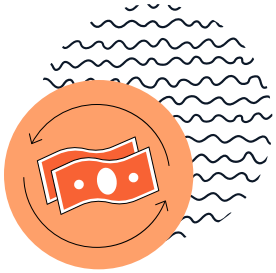
of marketers report that they struggle with measuring the ROI of their marketing campaigns due to the limitations of traditional measurement approaches (Harvard Business Review).

Modernizing Media Mix Modeling With Incrementality Testing

The limitations of traditional MMM can be addressed by integrating incrementality testing and leveraging platform attribution data, transforming MMM into a more powerful, comprehensive measurement solution. This modernized approach overcomes traditional challenges in the following ways:



Establishing Causality: By using incrementality test results as inputs — Bayesian priors -— marketers get a mix model anchored in the causal relationship between media and sales rather than correlation, which assumes media exposure prior to a sale was the true driver. This gives marketers performance insights that reflect the true impact of marketing activities, enabling more effective, confident budget allocation changes.



Cost Efficiency: By leveraging existing testing input data, marketers can streamline the modeling process and quickly begin generating actionable insights. Incorporating incrementality to control for the media-driven impact on sales prevents you from having to include many non-media variables and data sources that can be manual, costly, and that drive delays. Incrementality tests allow you to control those factors in a meaningful way.

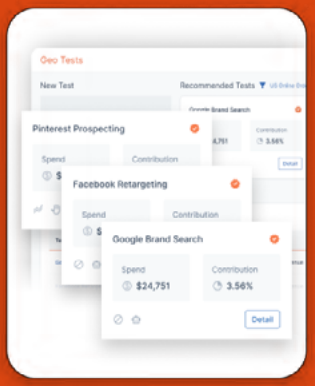
Improved Accuracy Across All Channels: Using incrementality test results to calibrate the MMM (where the results are inserted as Bayesian priors) ensures that the model reflects real-world business performance based on the causal relationship between media and sales. The benefits of this process, however, are not limited to the tested channels. The portfolio of untested media will also be more accurately measured, as the remaining media contribution to sales will be more accurately allocated. This increases the reliability of the insights and allows for more precise optimization of marketing strategies, avoiding the pitfalls of reliance on unvalidated assumptions.

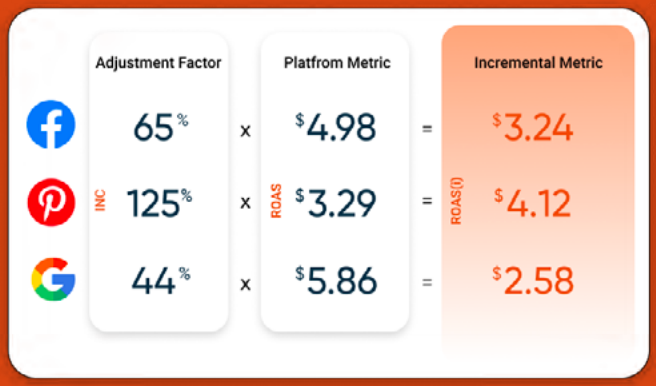
Timeliness and Granularity: Overlaying MMM data with platform-reported attribution data allows for more frequent updates — potentially daily. This enables marketers to make timely adjustments to campaigns based on the most current data, improving responsiveness to market changes. Additionally, this approach provides detailed insights at the campaign level, allowing for more targeted and effective optimization of marketing efforts.

How Measured Triangulates Media Mix Modeling

The **Measured Incrementality Model** brings the concepts outlined in this Guide into action by integrating MMM with ongoing incrementality testing and platform attribution data. This unique approach allows marketers to accurately measure and optimize their media spend across all channels with precision, speed, and granularity.

The **Measured Incrementality Model** provides a comprehensive solution that integrates the best aspects of MMM with ongoing incrementality testing. This model runs weekly MMM updates that are unique to each brand and conversion type and calibrates it with real-world test results on an ongoing basis. This model is then used to generate incremental adjustment factors for every channel, tactic, and campaign in a brand's portfolio. By doing so, it adjusts each ad platform's reported KPIs, such as ROAS, to reflect true incremental performance, providing actionable recommendations for reallocating media budgets to maximize ROI.





Weekly Media Mix Modeling
A media mix model unique to your brand measures all channels weekly

Incrementality Calibration
Your brand's incrementality test results calibrate the mix model's accuracy

Adjustment Factors
Adjustment factors (%) are generated for every channel, tactic, and campaign

Triangulated Measurement
Incrementality values are generated for every KPI

How the Measured Incrementality Model Works

Weekly Media Mix Modeling: Measured's model runs a unique MMM for every brand, for each of their conversion types, and updates the model weekly. This ensures that the MMM is always driven by the most recent data available, capturing the latest shifts in media performance and consumer behavior. Additionally, by running the model each week, Measured is able to account for media adjustments such as added, removed, or remapped channels or conversion types that would otherwise not be possible with a traditional MMM that may only refresh quarterly. This advanced model also factors in adstocks, seasonality, response functions, promotions and pricing of the brand, and macro-economic effects.

Calibration with Incrementality Test Results: The MMM is calibrated using each brand's incrementality test results. The Measured Platform automatically inserts geo-test results as Bayesian priors in each weekly model run. These result-priors are weighted based on a combination of test confidence and recency, allowing for a balanced triangulation of media incrementality in terms of observed sales data and test result data. By grounding the MMM in real-world, causal data, the **Measured Incrementality Model** overcomes the limitations of traditional correlation-based approaches and provides more accurate insights into the true impact of marketing activities.

Generation of Adjustment Factors and Response Functions: For every channel, tactic, and campaign, the model generates incremental adjustment factors, expressed as percentages. These factors adjust the reported KPIs from each ad platform, aligning them with the true incrementality of the marketing activity. This step ensures that the reported performance metrics reflect the actual contribution to business outcomes. In addition, response functions are created for every media tactic in every conversion type. These response functions, in combination with the adjustment factors, allow for portfolio optimization of spend across all tactics.

Daily Measurement for Optimization: The resulting outputs from Measured's model are used to calculate actionable recommendations for reallocating media budgets. By understanding which channels and campaigns drive the highest incremental return, marketers can strategically adjust their media spend to maximize ROI.

Benefits of the Measured Incrementality Model:

Always-On Model Improvement: The model continuously improves with every incrementality test and weekly MMM update, taking into account any changes or additions to tactics, channels, or conversion types, ensuring that insights remain accurate and relevant.

Omnichannel Coverage: The model accounts for diminishing returns and can forecast full portfolio performance, including conversion events from platforms such as Amazon, Walmart, and retail outlets.

Causal Measurement: By leveraging incrementality tests, the Measured Incrementality Model ensures your measurement is grounded in observed impact rather than correlative assumptions.

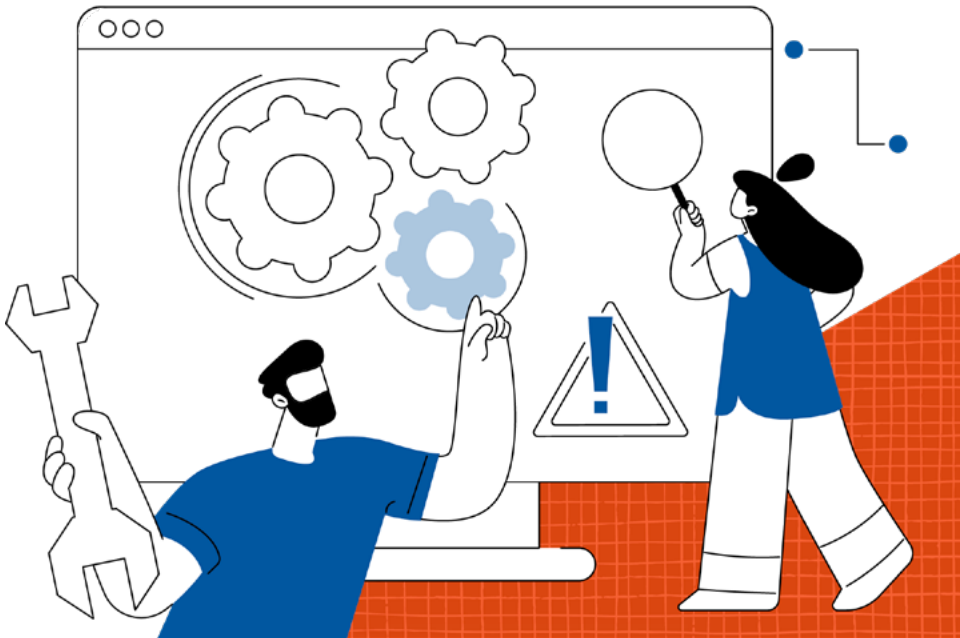
Third Party Interoperable: Measured interoperates with a variety of MMM systems, empowering brands to use Measured's testing technology to calibrate their own models, whether built in-house or via a third party.

DID YOU KNOW

Companies that use advanced analytics, including MMM, are

33%

more likely to outperform their peers in terms of revenue growth and profitability (McKinsey, 2023).

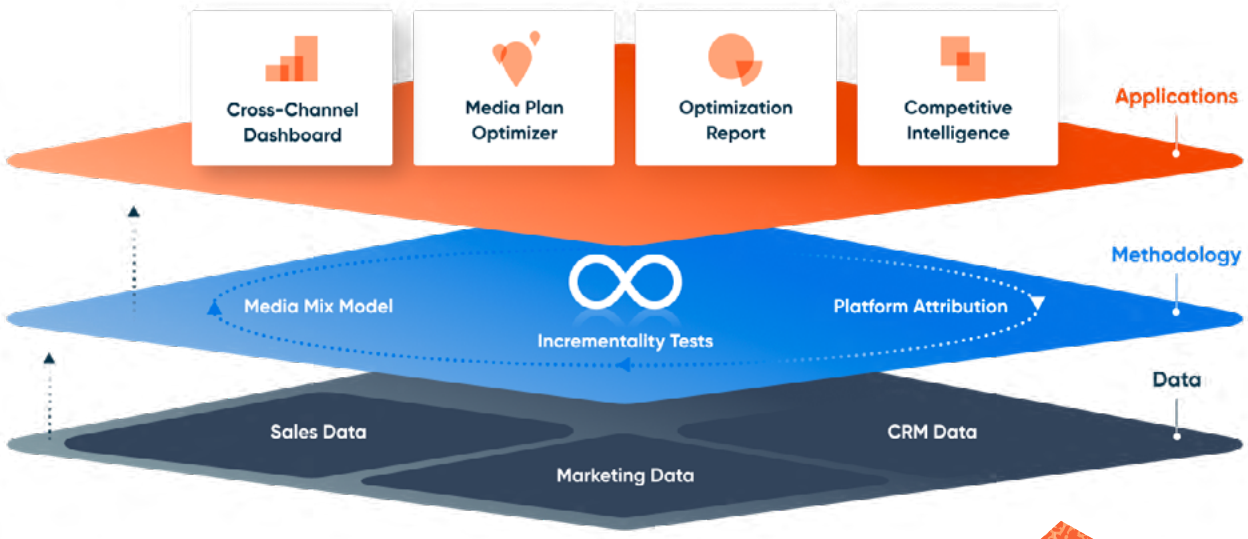


Beyond Measurement: Transforming Data into Action

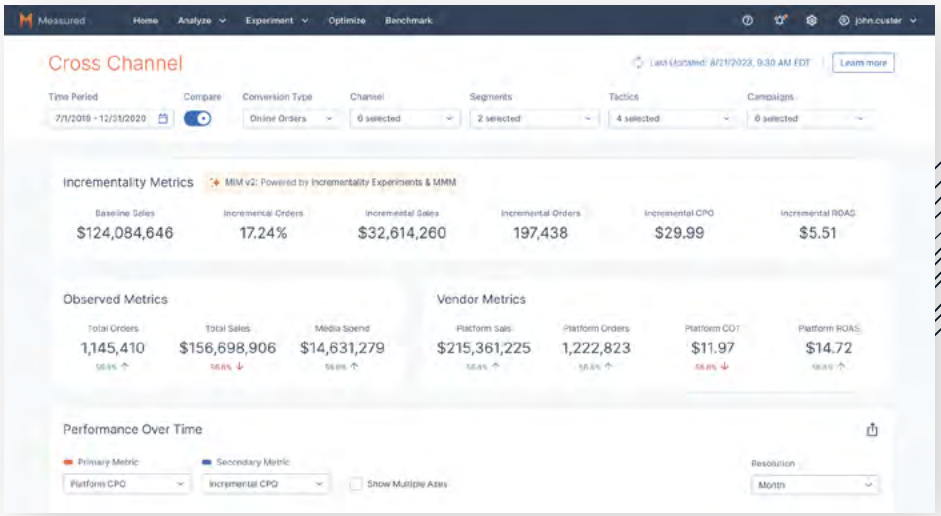
In the rapidly evolving world of marketing, the challenge isn't just measuring performance — it's interpreting the ever-growing volume of complex data and taking decisive action. Marketers often find themselves swamped with metrics, and while measurement is an essential first step, it is what follows that drives true value.

This is where Measured stands apart, not only in gathering insightful data but also in enabling actionable optimization.

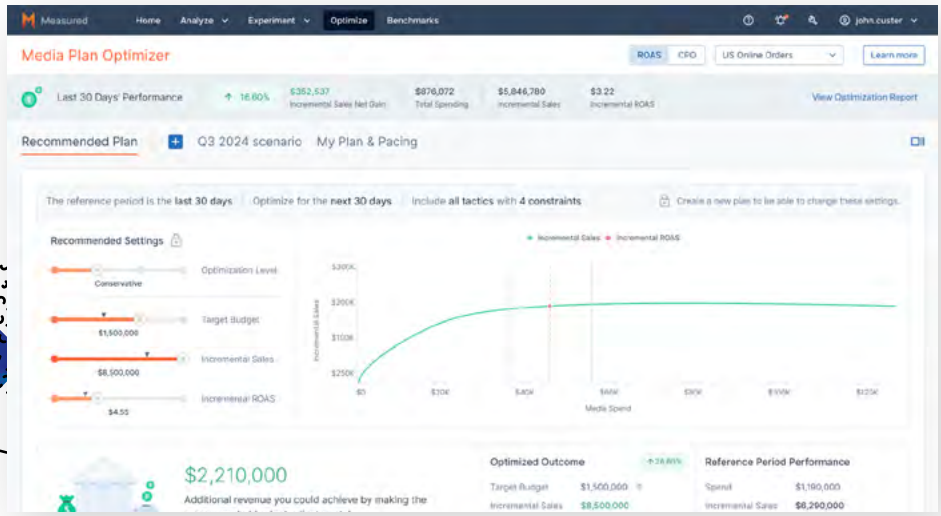
Measured's innovative approach transforms data into value through a seamless integration with three key capabilities:



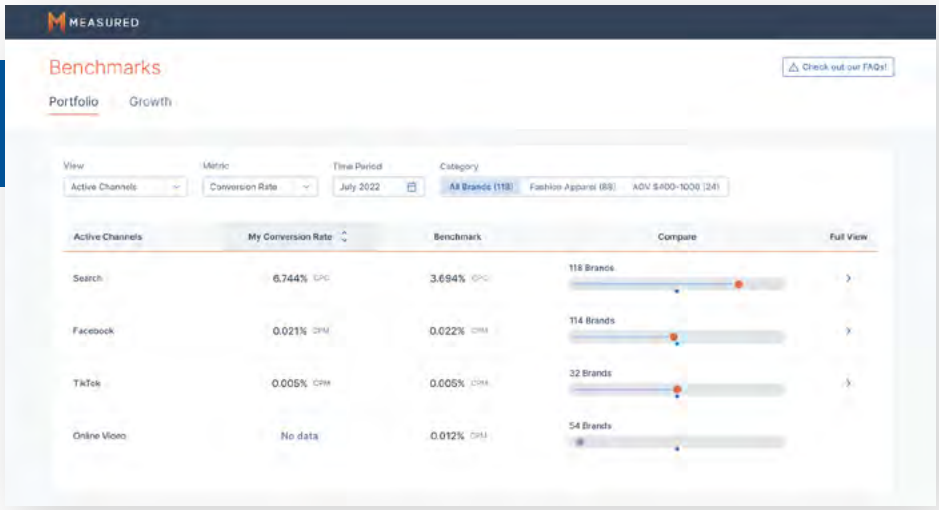
Cross-Channel Dashboard: This offers a holistic view of all media channels, delivering transparency into marketing performance at every level. Marketers can use the dashboard to quickly assess the effectiveness of each channel, tactic, and campaign. The dashboard's visual summaries and detailed reports help pinpoint areas for improvement and spotlight which channels are performing best.



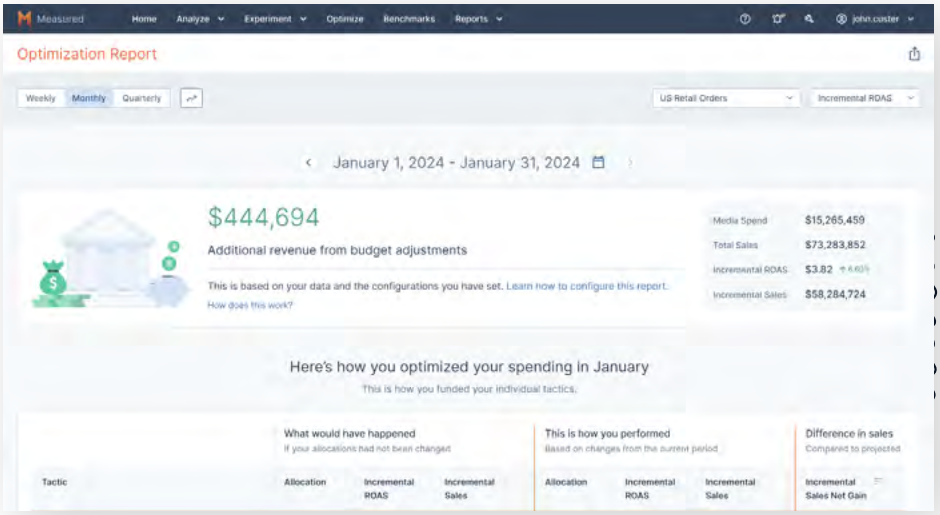
Media Plan Optimizer: Once performance is assessed, Measured's Media Plan Optimizer takes the insights a step further by providing granular recommendations. Using the calibrated model outputs, this tool identifies specific opportunities for reallocating budgets across channels to enhance media efficiency and maximize ROI. It helps marketers optimize their spend in real-time, ensuring that every dollar is strategically invested.



Competitive Intelligence: Industry benchmarks play a critical role in helping marketers understand their position within the market. The Competitive Intelligence application contextualizes performance by comparing it against industry standards, historical results, and peer benchmarks. This allows marketers to see how they stack up against competitors and find areas where they can push for further improvement.



Optimization Report: This essential report makes it easier for marketers to prove the value of their media investment decisions and demonstrate the business impact of those changes to key stakeholders such as CMOs, CFOs and Board Directors, helping build cross-functional alignment. Unlike other Measured reporting applications that track static media performance KPIs over time, like incremental ROAS or CPO, the Optimization Report uniquely helps marketers understand the true incremental revenue driven specifically by actions they've taken, holding Measured to ultimate accountability for the performance of our recommendations.



Summary

By integrating the applications listed above, the Measured Platform not only measures marketing performance but actively helps marketers move from data to action. We empower brands to optimize their media mix, experiment with new strategies, and make data-driven decisions to reach their business goals more effectively.

The insights provided by these capabilities turn raw data into a clear roadmap for success — guiding marketers on how to improve performance, explore new growth opportunities, and maximize the return on every marketing dollar spent.

Measured is the pioneer and leader of incrementality-based measurement and optimization and our world-class team of measurement experts have more than 100 collective years of experience working with MMM.

We show up for you as a dedicated partner, fully invested in your success, offering tailored solutions, and continuous support and guidance to uncover hidden opportunities that maximize your ROI.

Discover how a modernized approach to MMM can elevate your marketing measurement success, visit Measured.com/demo.