Medialyzer

Medialyzer MMM

Marketing Mix Modeling

The Measurement Paradox of Modern Marketing

Teams struggle to make strategic decisions due to conflicting metrics from multiple sources, different platforms presenting their own realities, and technical limitations. As a result, all this valuable information at our disposal fails to translate into action.

The Invisibility of Offline Media

The direct impact of campaigns run on traditional channels on business results cannot be clearly measured. The real contribution of channels such as TV, radio, and outdoor advertising to brand awareness and sales remains unclear.

The Disconnect Between Online and Offline

The impact of digital campaigns on physical store visits, phone sales, or offline conversions cannot be tracked. This makes it impossible to evaluate the true performance of omnichannel strategies.

Conflicting Metric Sources

Each digital platform uses its own measurement system. Facebook, Google, and other channels report very different results for the same campaign using different attribution models. This creates uncertainty about which data to trust.

Blind Spots in Analytics Platforms

Tools like Google Analytics, Adjust, and Appsflyer are no longer sufficient for providing a holistic view. Data collection is severely limited due to increased adblock usage, cookie management systems, changing browser policies, and privacy regulations.

Modern marketing teams have more data than ever before. However, this data is noisy and complex. As a result, these insights cannot be translated into action.
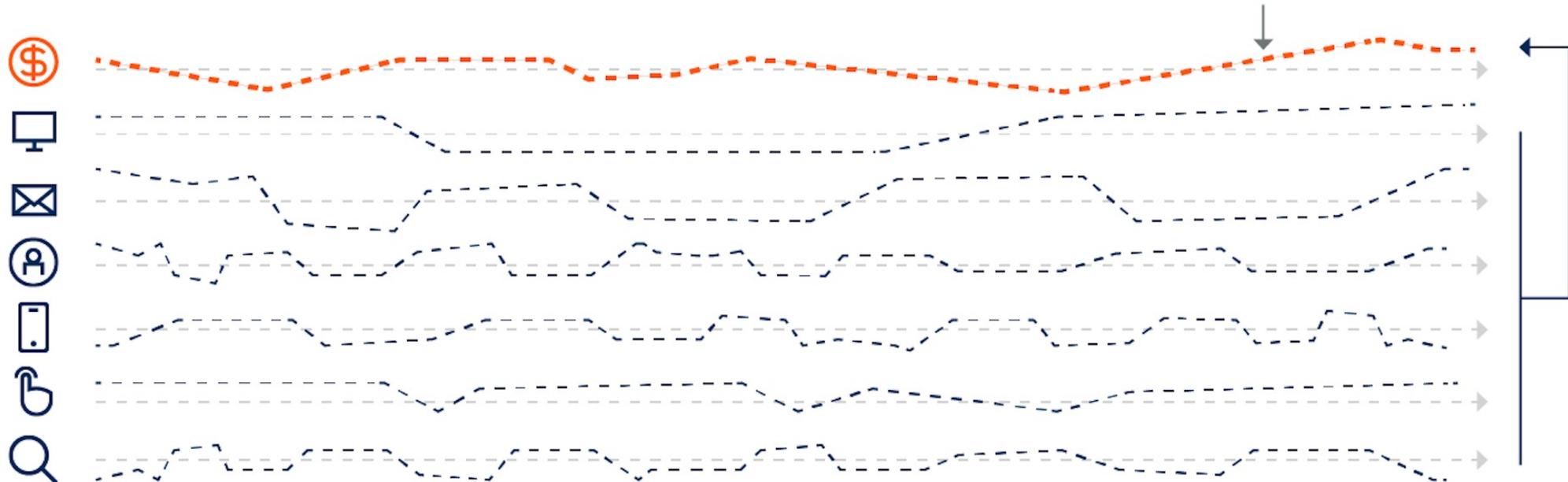
Marketing Mix Modeling

What is MMM?

MMM is a statistical modeling approach that uses scientific and data-driven methods to demonstrate the impact of marketing investments on business results.

Why is MMM Important?

It helps optimize budget allocation and increase return on investment (ROI) by showing which channel truly creates value.

Model Inputs

Control Variables

External factors that are beyond the direct control of the marketing team but can affect business results. The impact of these variables should be taken into account when monitoring campaign success.

- Seasonality
- Holidays
- Inflation
- Purchasing Power
- Promotions
- Pricing

Dependent Variables

These are the primary business outcomes that our marketing efforts aim to directly influence. These variables represent the targeted outputs across all online and offline channels.

- Sales Volume
- Number of Forms
- Website Conversions
- Store Visits

Independent Variables

These are marketing activities that we can control and believe have an impact on dependent variables. They represent our investments and the reach of our messages.

- Media Expenditures
- Ad Impressions
- Click Counts
- Email Sends

MEDIA

display · billboards · DM · print · social · directories · tv/radio · facebook · paid search · promotion

marketing mix model

MARKETING (NON-MEDIA): sponsorship · e-mail · call center

OPERATIONS: doctor days · capacity · PARR

MACROECONOMIC + ENVIRONMENTAL: tax refunds · job market · weather

MICROECONOMIC, SOCIAL + SCHOLASTIC: Google trends · holidays · competion · school calendars

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Use Case #1: Budget Allocation

Where Should We Invest the Next 1 Million ₺?

Marketing teams simulate different budgets and compare expected incremental results before spending. The model shows which channel will provide the highest return on every 1 TL.

Business Outcome

- The budget shifts to the channels with the highest returns
- Investment decisions become data-driven
- CFOs confidently approve marketing expenditures

In the traditional approach, the budget is allocated based on past performance or intuition. With MMM, every scenario is tested and the allocation that will yield the best result is determined in advance.

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Use Case #2: Diminishing Returns

When Does More Spending Stop Creating Value?

Every marketing channel has a saturation point. After a certain level, additional spending reduces marginal returns and leads to inefficiency. MMM defines these critical thresholds for each channel.

Identifies Saturation Points

Shows the point at which ROI begins to decline for each channel.

Measures Marginal Returns

Tracks how the value generated by each additional ₺ decreases.

Uncovers Opportunities

Discovers underutilized growth channels.

Prevents overinvestment and uncovers unused growth opportunities.

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Business Impact Summary

What Changes After MMM Implementation?

01

Clear Visibility of Actual Marketing Contribution

The incremental value that marketing brings to the business is measured quantitatively. You no longer have to give vague answers to the question, "How effective is marketing?"

02

Optimized Budget Allocation

The ideal investment level for each channel is determined. It becomes clear which channels are underinvested and which are overinvested.

03

Reduced Waste and Improved ROI

Inefficient expenditures are identified, and the budget is redirected to channels with higher returns. This directly positively impacts the profit margin.

04

Enhanced Interdepartmental Alignment

Marketing, finance, sales, and operations teams work with the same metrics. Interdepartmental conflicts decrease, and teams unite around common goals.

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Value at the Executive Level

Clear Answers to Leadership Questions

The question asked by CEOs and CFOs, "Is this investment paying off?", is answered with evidence of incremental value.

A Shared Perspective for Marketing and Finance

Different departments see the same results by looking at the same data. Conflicting metrics and parallel realities come to an end.

Faster and More Secure Decisions

Uncertainty decreases, and the decision-making process accelerates. Teams move forward based on evidence rather than hypotheses.
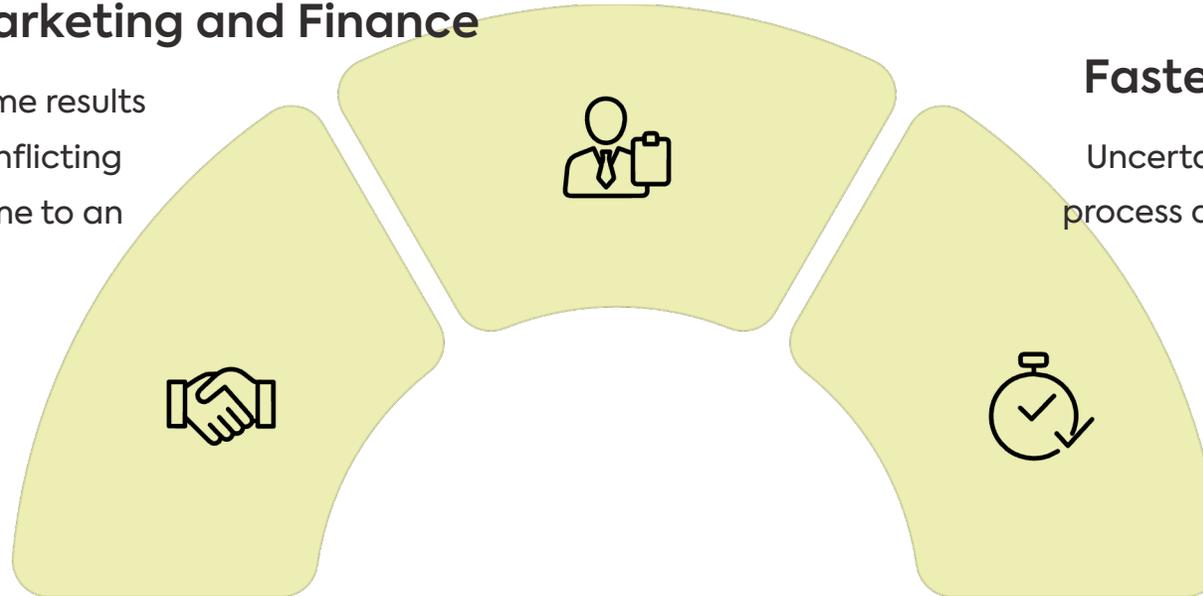
One Model. One Narrative. One Decision.

MMM creates a common language between marketing and finance. Now both sides are looking at the same reality and making strategic decisions based on the same data. This alignment reduces organizational friction and ensures efficient use of resources.

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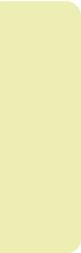
Appendices

Channel Contribution

Channel contribution

📈 Your channel contributions help you understand what drove your revenue. Channel_4 and Channel_5 drove the most overall revenue.

Contribution by baseline and marketing channels

Channel	% Revenue
BASELINE	79.3% (1B)
CHANNEL_4	5.6% (71M)
CHANNEL_5	5.2% (66M)
CHANNEL_1	4.9% (62M)
CHANNEL_2	2.3% (29M)
CHANNEL_0	1.5% (19M)
CHANNEL_3	1.1% (14M)
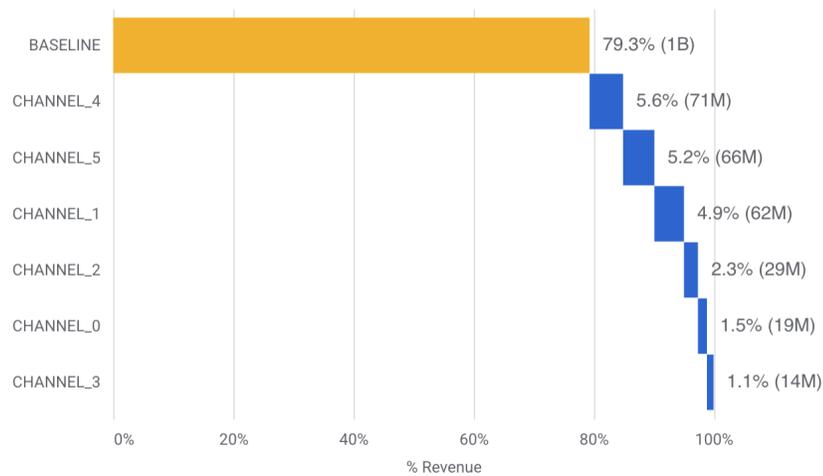
% Revenue

Note: This graphic encompasses all of your revenue drivers, but breaks down your marketing revenue by the baseline and all channels.

Spend and revenue contribution by marketing channel

Channel_0: 0.9
Channel_1: 1.7
Channel_2: 1.0
Channel_3: 1.3
Channel_4: 0.9
Channel_5: 1.5

■ % Revenue   ■ % Spend   ▬ Return on Investment
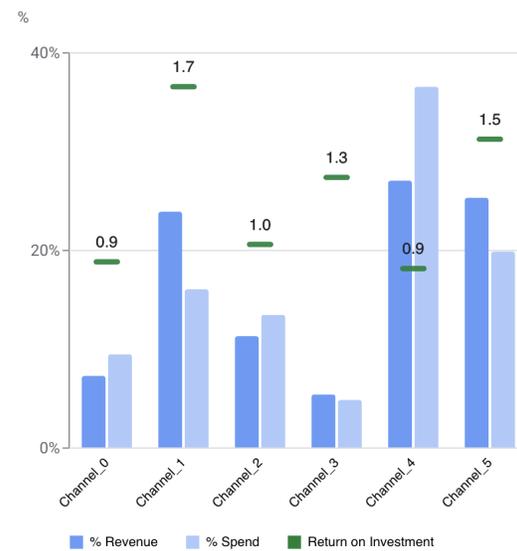
Note: Return on investment is calculated by dividing the revenue attributed to a channel by marketing costs.

Contribution by baseline and marketing channels

21%
79%

● baseline   ● All Channels
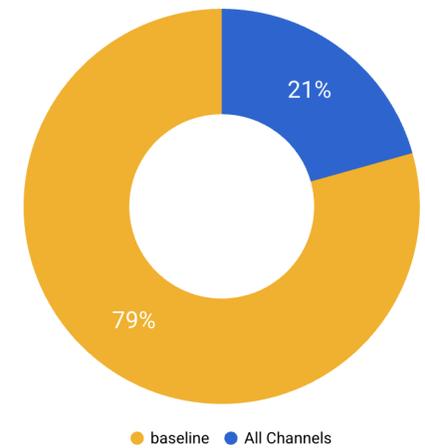
Note: This is a percentage breakdown of all your revenue.

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Return on Investment

Return on investment

Your return on investment (ROI) helps you understand how your marketing activities impacted your business objectives. Channel_1 drove the highest ROI at 1.7. For every $1 you spent on Channel_1, you saw $1.73 in revenue. Channel_1 had the highest effectiveness, which is your incremental revenue per media unit. Channel_1 had the highest marginal ROI at 0.82. Channel_1 drove the lowest CPIK at $0.01. For every KPI unit, you spent $0.01.

ROI vs. effectiveness
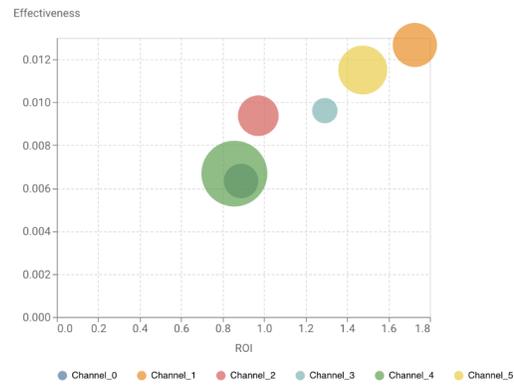
Note: Effectiveness measures the incremental revenue generated per impression. A low ROI does not necessarily imply low media effectiveness; it may result from high media cost, as positioned in the upper-left corner of the chart. Conversely, a high ROI can coexist with low media effectiveness and low media costs, as indicated in the bottom-right corner of the chart. The diagonal section of the chart suggests that the ROI is primarily influenced by media effectiveness. The size of the bubbles represents the scale of the media spend.

ROI vs. marginal ROI
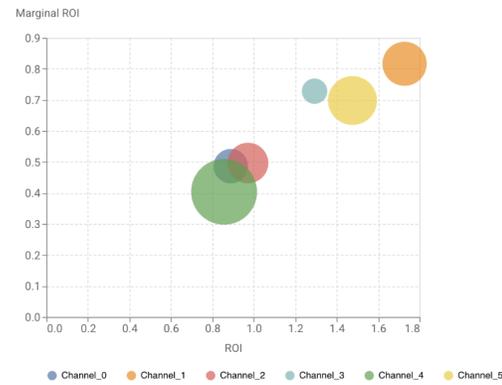
Note: Marginal ROI measures the additional return generated for every additional dollar spent. It's an indicator of efficiency of additional spend. Channels with a high ROI but a low marginal ROI are likely in the saturation phase, where the initial investments have paid off, but additional investment does not bring in as much return. Conversely, channels that have a high ROI and a high marginal ROI perform well and continue to yield high returns with additional spending. The size of the bubbles represents the scale of the media spend.

ROI by channel with 90% credible interval
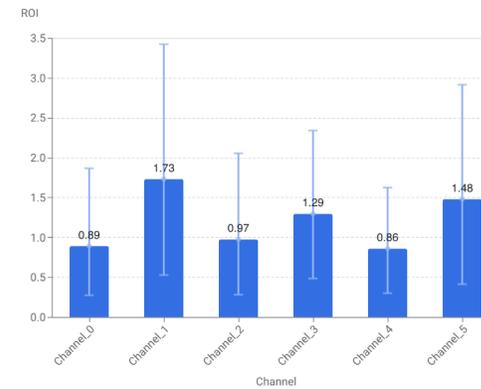

CPIK by channel with 90% credible interval
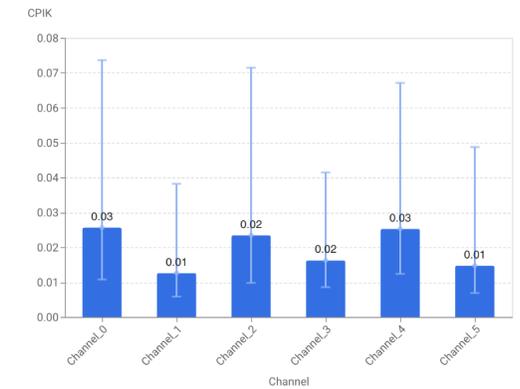
Note: CPIK (cost per incremental KPI) point estimate is determined by the posterior median, whereas ROI point estimate is determined by the posterior mean.

Response Curves

Response curves

📈 Your response curves depict the relationship between marketing spend and the resulting incremental revenue.
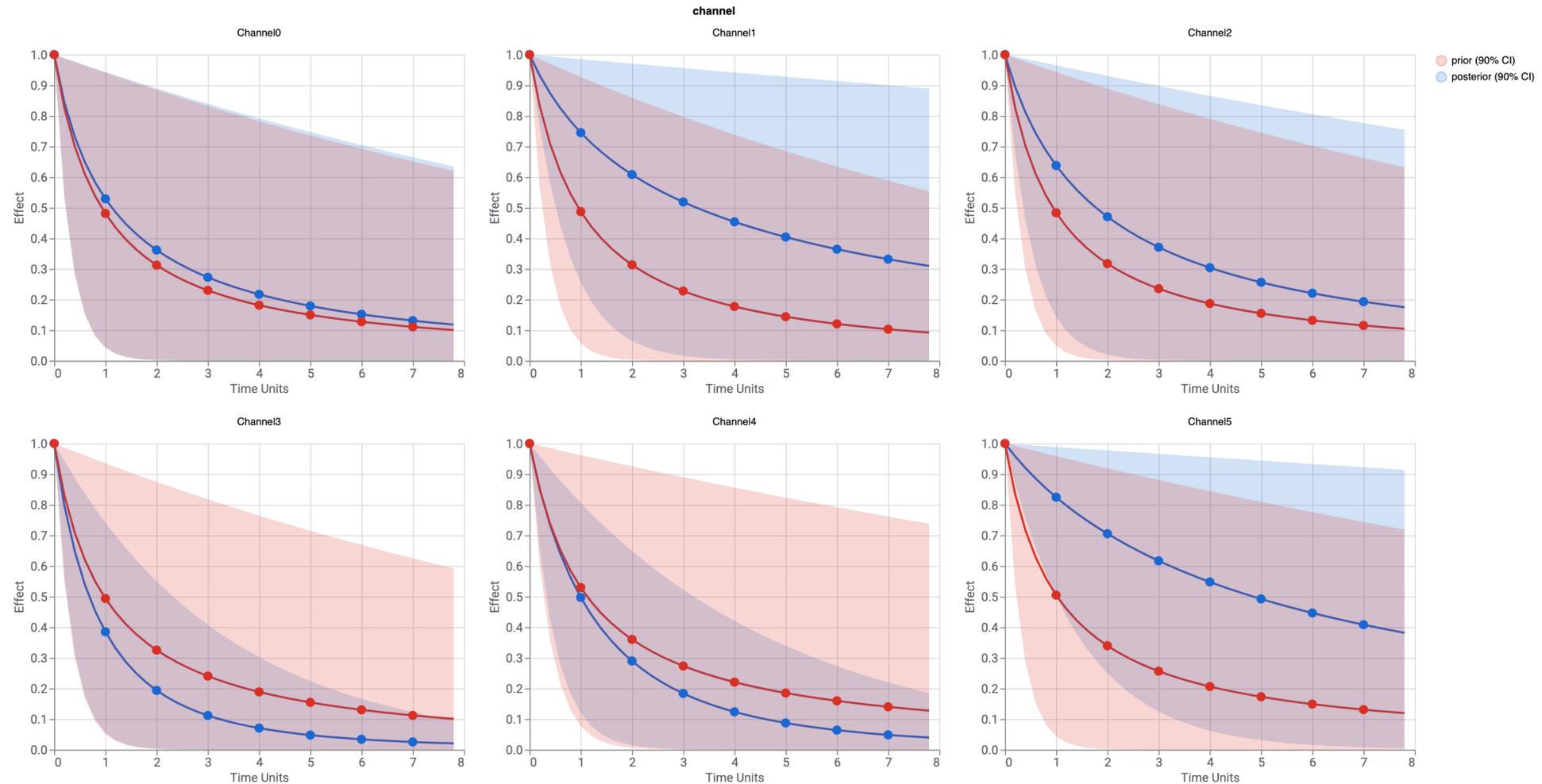
Response curves by marketing channel (top 6)
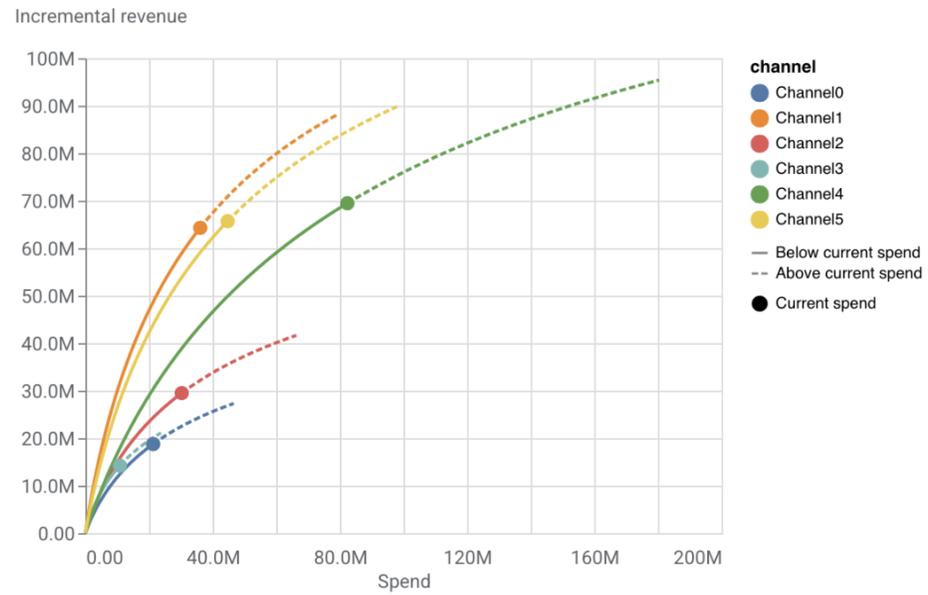
Note: The response curves are constructed based on the historical flighting pattern and present the cumulative incremental revenue from the total media spend over the selected time period.
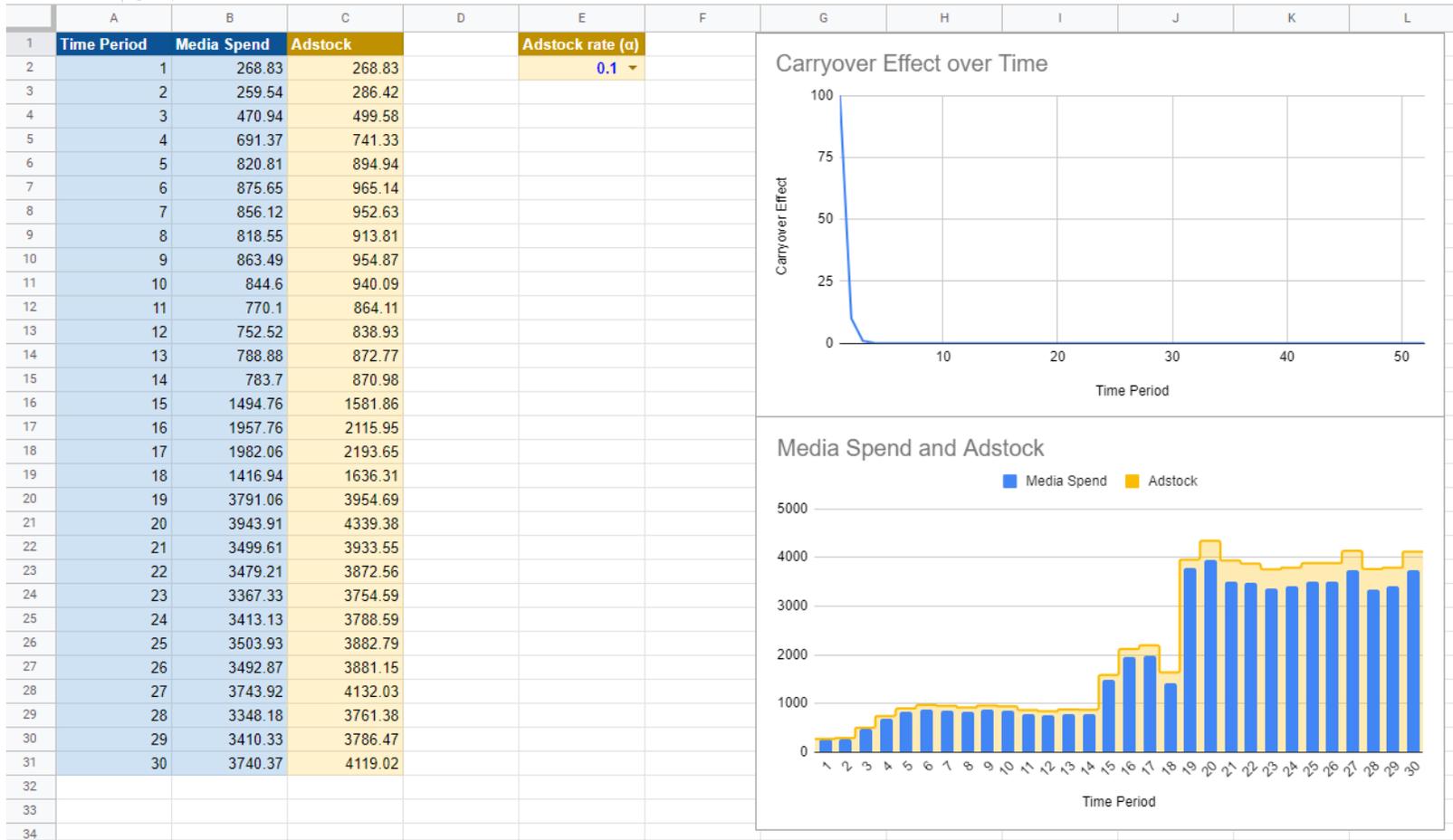
Advertising Persistence Effect (Adstock)
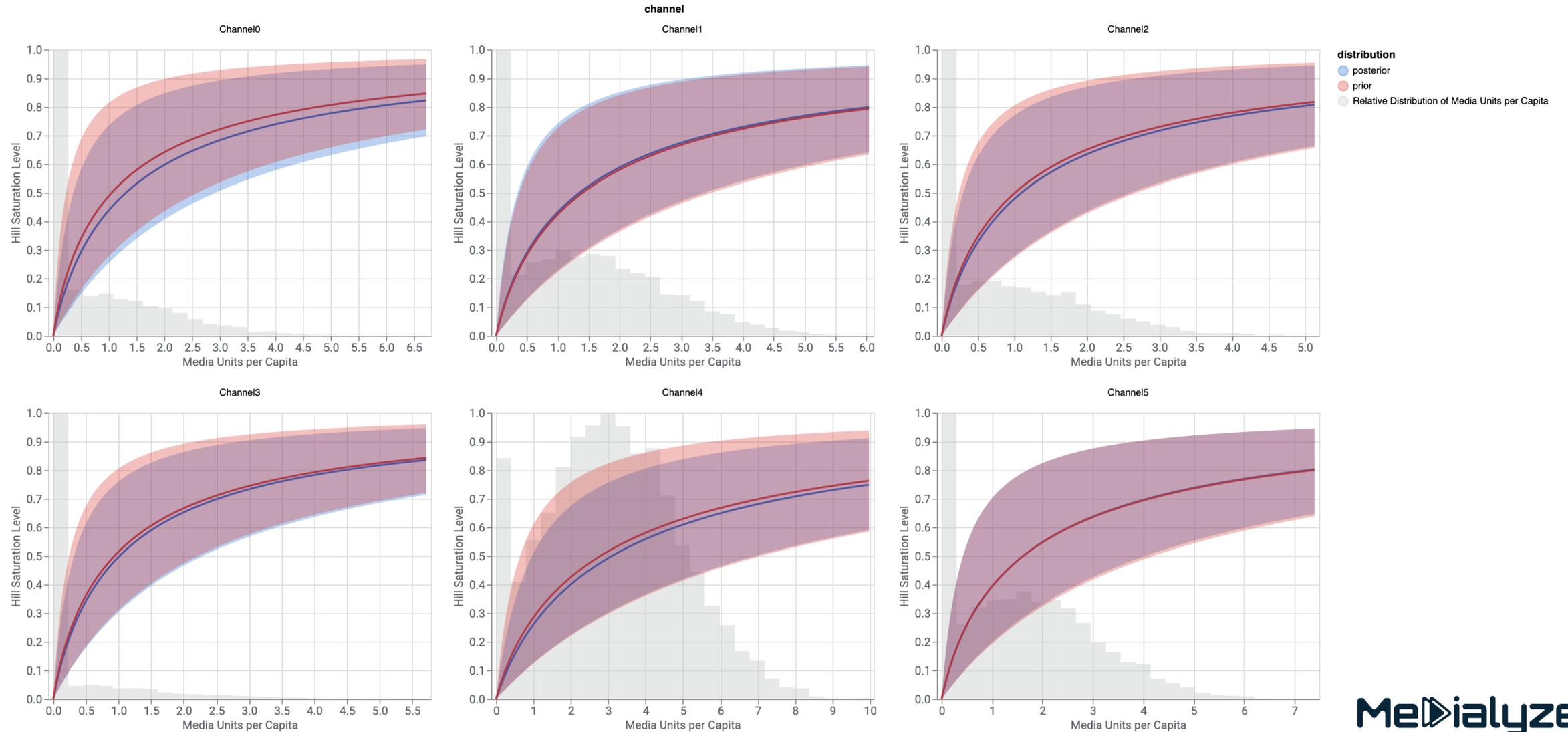

Adstock Decay of Effectiveness Over Time

Advertising Persistence Effect (Adstock)

- Adstock formula: $A_t = X_t + \text{adstock ratio} \times A_{t-1}$

- Nonlinear regression modeling

Hill Saturation Curves

Hill Saturation Curves

Optimized Budget Distribution

Channel	Non-optimized spend	Optimized spend
Channel_4	37%	27%
Channel_5	20%	26%
Channel_1	16%	21%
Channel_2	13%	12%
Channel_0	9%	8%
Channel_3	5%	6%

Optimized budget allocation

- Channel0
- Channel1
- Channel2
- Channel3
- Channel4
- Channel5
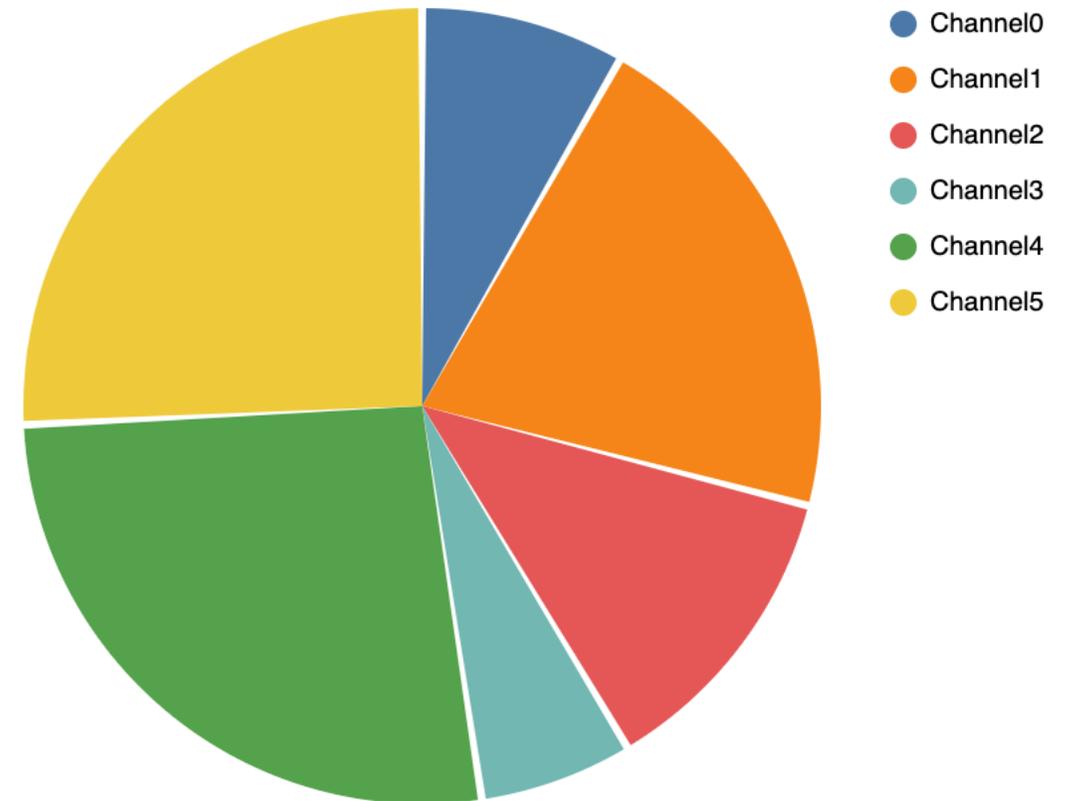
Optimized Incremental Revenue

Optimized incremental revenue across all channels

Incremental revenue
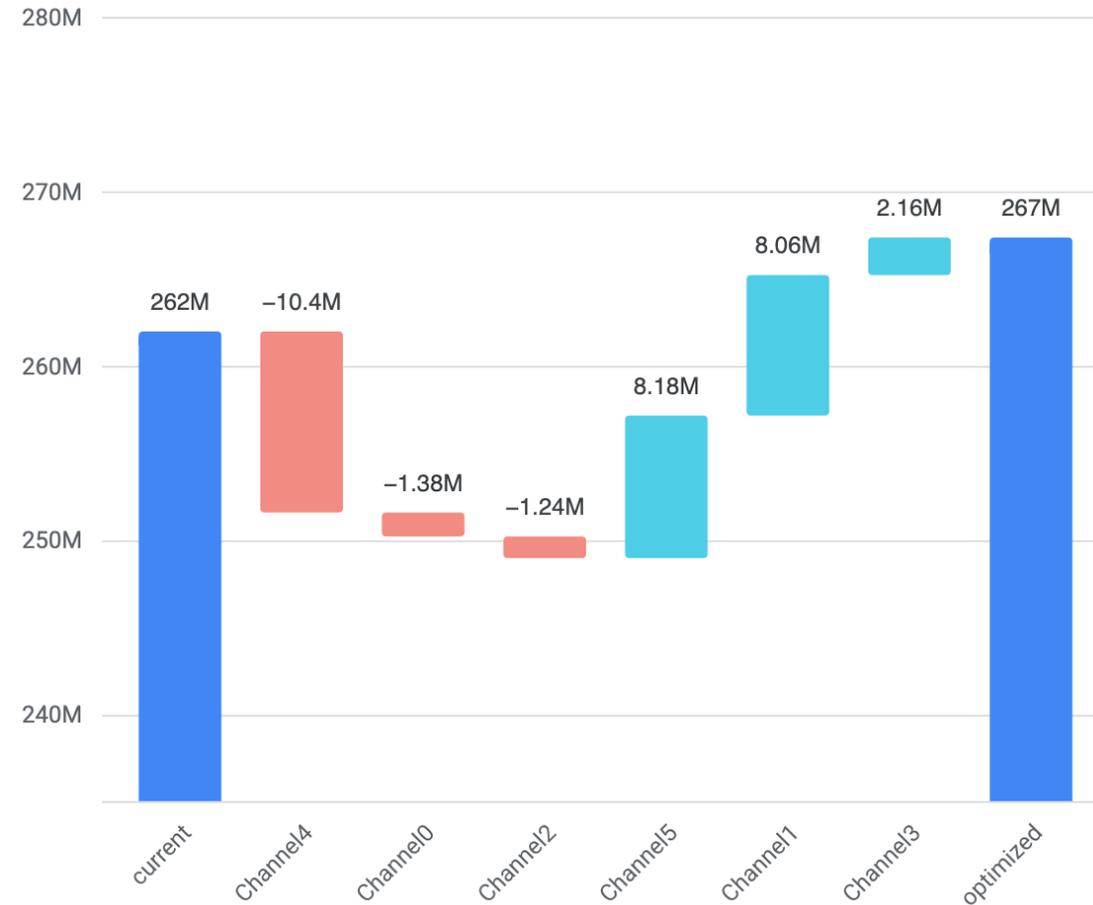
Budget Optimized on Response Curves
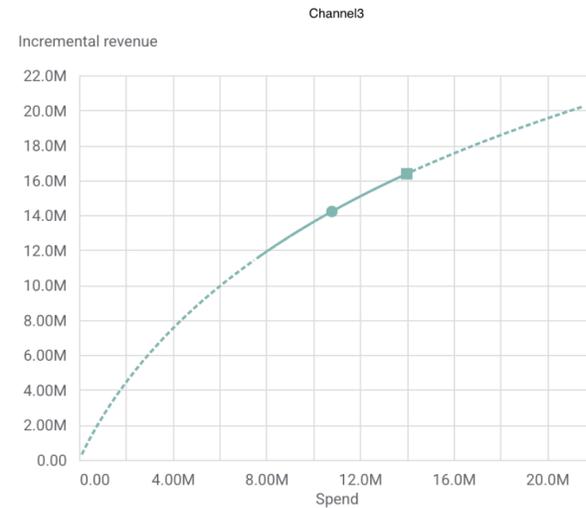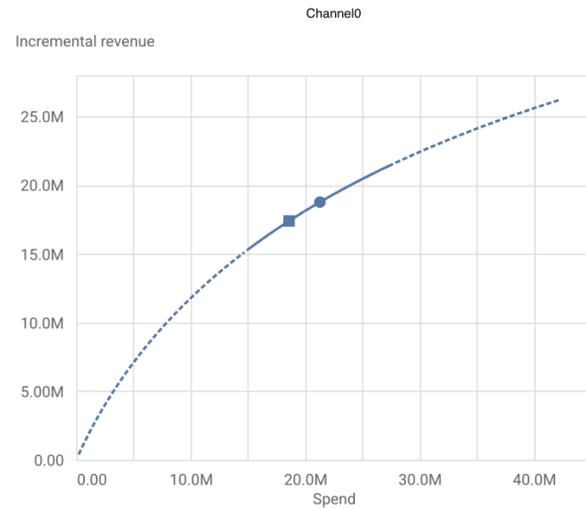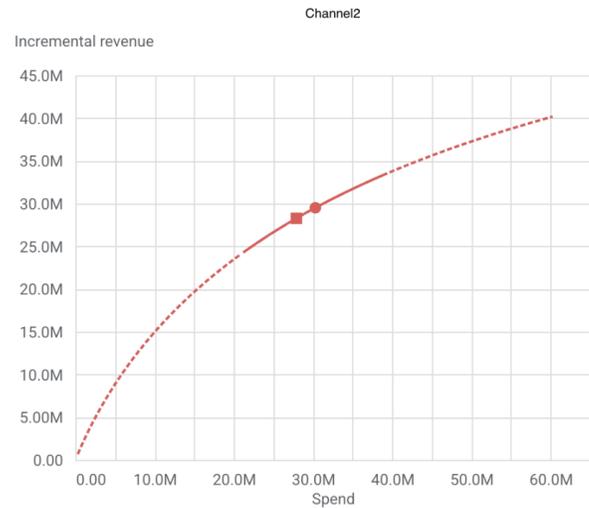
Optimal Frequency

Return on investment by weekly average frequency

rf_channel

Channel4

Channel5

— Optimal Frequency
— Expected ROI

Optimal Frequency 2.00

Optimal Frequency 2.10
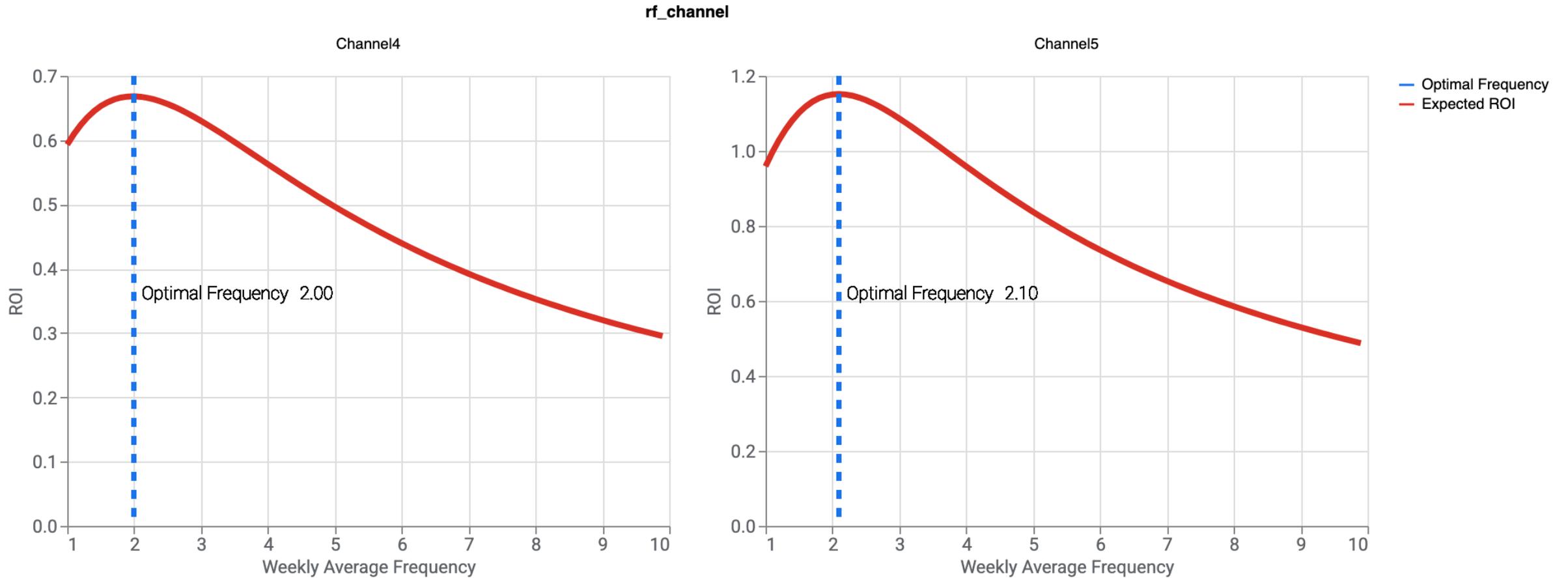
Who we are?

We are a team of tech and media enthusiasts rethinking how advertising impact is measured. Our journey began with the realization that TV campaigns were still relying on outdated, quantity-driven methods. Today, we empower advertisers with smarter, AI-driven tools to understand where their growth really comes from.

At Medialyzer, we combine data passion with cutting-edge technology. Our AI TV Planning Agent Lyzio brings automation and intelligence to TV planning, while our Marketing Mix Modeling expertise helps brands see the bigger picture of media and market dynamics.

Alongside these, our trusted solutions TV Attribution and TV Tracking continue to provide real-time insights and transparency in campaign performance.

We are driven by experimentation, continuous learning, and the energy of our talented team. Medialyzer remains devoted to building innovative products, improving media effectiveness, and creating one of the best workplace experiences in the industry.
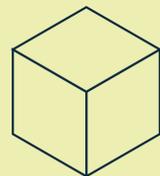
Smart Measurement, Incremental Returns
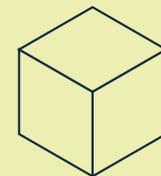
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Thank you

Enrich your media planning with Medialyzer's strong insights and increase your efficiency

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