THE FUTURE OF

MEASUREMENT

Improving Outcomes with Unified Analytics

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INTRODUCTION

At Procter & Gamble in the 1930s, Neil McElroy proposed to reorganize the company's marketing department around its brands. *That was revolutionary.* Instead of having a single marketing department overseeing everything the company sold, each brand got its own staff and control over its own strategy. From that point on, Camay ("The soap of beautiful women!") and Ivory ("It floats!") developed totally independent brand personalities and customer bases.

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Over the years, as new channels developed, marketing departments continued to fracture to get closer to the action on the ground. Digital marketing became its own department. Same with paid search and social. As the marketing function grew more technical, separate analytics departments emerged for different data streams or pieces of technology, creating **tension with IT and toe-stepping in the C-suite** over who owns what.

The initial reorganization of marketing departments to be more brand-centric was a great thing, but their continued fragmentation has been a problem. Are the people in charge of your brand's strategy on television the same as those in charge of telling its story on Instagram? Do you have a full grasp of your customer loyalty programs across all channels? Are your customer experience and innovation teams working hand in hand? If so, you're one of the lucky ones. Everyone else is struggling with **incompatible datasets, conflicting tools, and siloed expertise.**

It's time to break down those silos. As Forrester writes in its Q1, 2020 MMOS Wave report, "sustained growth requires a balance of short-term, revenue-generating marketing objectives and long-term, brand-building objectives."

To strike that balance and unlock the full value of your marketing investments, you need to align your measurement solutions.

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MARKETING TODAY IS CHANGING — ARE YOU READY?

Marketing is changing and you need the right tools to keep up. Today, we stand at the confluence of **four major trends.**

1 Choice

Consumers have more channels at their fingertips than ever before, and they use them on their own schedule, not yours. Appointment TV doesn't rule the day anymore. You need to recognize that you're not in total control of how consumers interact with your brand and that you need to measure success beyond immediate sales. To have any hope of driving the conversation, you need a reliable feedback loop.

2 Privacy

Personalization is the success story of modern marketing. Today's consumers are not just receptive to personal attention, they fully expect it from the brands in their lives. But that personal experience comes at the expense of some level of privacy, even if that's something as seemingly innocuous as remembering your shoe size, or that your car lease is due. As a result, regulators are jumping in to help consumers understand the trade-offs and prevent brands from using cookies and similar techniques to target them without their consent.

3 Agility

Today's global pandemic has upended lives in many ways. For marketers, it has been a wake-up call that everything can change at a moment's notice: your retail distributors might shut down, your supply-chain might see major disruptions, your best customers might flee to a cheaper brand, some elements outside of your control might challenge your corporate values. But whatever the unique challenges of the day are, marketers must be prepared to adapt and respond faster than their competitors.

4 Outcomes

One of the ways that marketers can adapt is by taking a step back from the metrics they've used all along (like gross rating points, or click-through rates) and determine whether they still make sense. Are they aligned with your business objectives? Are sales the only way to measure the effectiveness of your marketing campaigns and their impact on your business? Outcome-based marketing helps marketers see through the clutter and position their brands for success.

These trends add tremendous **pressure on CMOs and their departments to show their contribution to the bottom line and justify their marketing spend.** One of your very first steps should be to harmonize the way you measure success.

THE CORE PRINCIPLES OF MODERN MEASUREMENT

Today, you're under pressure to deliver on both short term and long term objectives for your brand. But you can't cobble together measurement solutions that were developed over time to address individual channels (with their own set of metrics and narrow objectives) and expect that they'll magically fit the bill.

You need a cohesive set of data, tools, and solutions that can keep up with your needs today and help you grow tomorrow.

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A modern measurement infrastructure should be:

Universal

Covers all the channels you care about, online and offline, with both user-level and market-level data from the most reliable sources in the industry.

Responsive

Designed to give you real-time measurement and activation. Act on insights, make campaign adjustments as needed and take advantage of new opportunities before your competition.

Future-Proof

Based on persistent and reliable consumer identity, it won't become obsolete when cookies or MAIDs disappear, or when privacy regulations make it more challenge to collect user-level data.

Collaborative

Provides you with access to partners that understand your needs and can help you make sense of all the data assets at your fingertips.

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MEASURE AND OPTIMIZE MARKETING INVESTMENTS

Know Your Customers

Orchestrate the Journey

Optimize Your Investments

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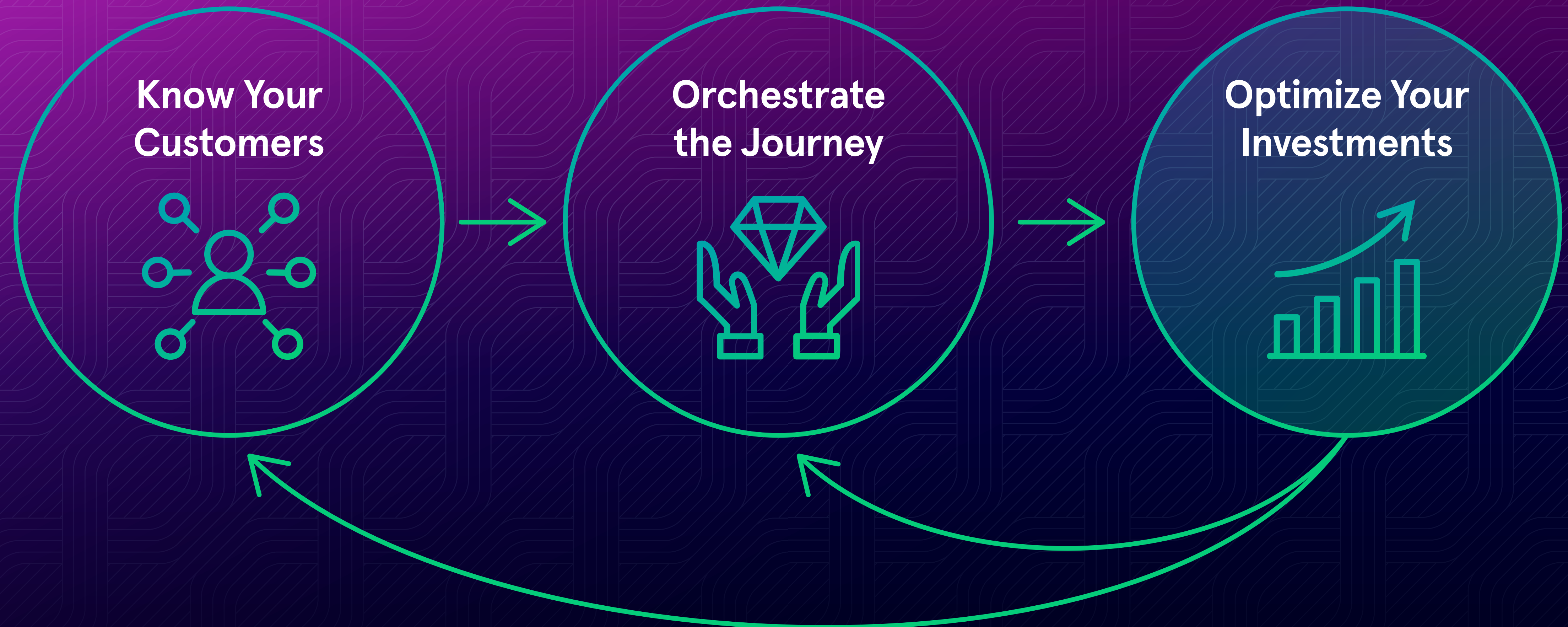
ⓘ WHAT IS MARKETING MIX MODELING?

Marketing Mix Modeling ("MMM") was developed in the middle of the 20th century to help retailers quantify the impact of their various marketing investments on in-store sales. In order to find the right combination of print, radio, TV, and trade promotions, they compiled historical data and used it to predict future performance. That work raised the profile of data science (before it was a thing) and opened the door to modern marketing.

The world is more complex today, of course: more channels, more devices, more volatility in consumer behavior. Marketers are not just trying to maximize sales either, but other business outcomes too, like organic searches, membership signups, or positive reviews. But MMM is still holding strong because it allows decision-makers to answer big planning questions:

"What if we moved 10% of the budget to local TV news this quarter in the Dallas/Fort Worth area?"

To do so, MMM feeds off historical market data in aggregate form, not at the user-level, and it takes into account outside factors like inflation, seasonality, fluctuations in energy costs, and pricing pressure from competitors.

Virtually all the top consumer brands in the world use MMM to support their planning decisions.

ⓘ WHAT IS MULTI-TOUCH ATTRIBUTION?

Multi-Touch Attribution ("MTA") was born out of the need for marketers to understand the consumer journey at a granular level, touchpoint by touchpoint, with the expectation that this understanding might lead to quicker and more effective optimization tactics.

When digital channels (display, mobile, social, etc.) started to multiply in the late 2000s, consumer behavior became much harder to pin down. Marketers recognized that they couldn't think of consumers as markets anymore, but rather as individuals. Consumers demanded personal attention, too. Thankfully, digital channels came with user-level tracking capabilities, and that big data was quickly put to use.

MTA enables marketers to count the individual contribution of each impression—or interaction—along someone's path-to-purchase and to draw lessons that can be applied to optimize their campaigns, from consumer segments to ad creatives and cross-channel messaging.

"Should we send an email now or wait until they've seen our ad on Facebook?"

MTA is newer and has less of a track record than MMM, but many of the top consumer brands in the world use it to optimize their media allocation, creative, and audience targeting decisions.

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MMM AND MTA: A SIDE-BY-SIDE COMPARISON

	MMM	MTA
Adoption	1960s	2010s
Familiarity among marketers today*	78%	46%
Primary business objective	Planning	Optimization
Scope	Long term	Short term
Frequency	Yearly, quarterly, monthly	In-flight
Channels	All (online and offline)	Identifiable (digital and TV)
Decision making	Top-down	Bottom-up
Primary focus	Strategic	Tactical
Data granularity	Aggregate	User-level
Primary data input	Time series data	Touchpoint data

LONG-TERM AND SHORT-TERM MEASUREMENT: CAN YOU REALLY HAVE IT ALL?

Marketers want to answer important questions about how they should allocate their marketing dollars, and they know that the answers are in the data. **But budgets are tight.** As a result, some marketers are being asked to pick between MMM and MTA.

You've heard the calls:

MMM is broken!

How can last year's data possibly be helpful to predict changes in behavior and adjust course during a pandemic?

MTA is dead!

You can't do user-level measurement without cookies or IDFA, and you can't see inside the walled-gardens anyway!

Absolutists always fail to see the big picture. It's true that the MTA camp can overestimate the impact of digital channels, and that recent privacy-related changes will require some adjustments. It's also true that the MMM camp can miss key opportunities to connect with their best customers at the right moments. **But one shouldn't have to sacrifice the long term for the short term, or vice versa.**

In fact, when it comes to the big decisions that marketers need to make to sustain their brands, neither camp has all the answers.

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WHAT MEASUREMENT TOOL WOULD ANSWER THESE QUESTIONS?

How should we allocate our media spend to maximize ROI in the future?

MMM. Especially if non-addressable channels (like linear TV and out-of-home) are part of your media mix.

But by using MMM alone, you won't be able to make course corrections along the way because you will lack the necessary feedback, and you'll miss out on last-minute digital opportunities because you won't be aware of them.

What is the effect of our competitors' actions on our business?

MMM. The tool is designed to account for the impact of outside factors (like the economy, the weather, and yes, competitors' actions) on your business.

But your competitors' actions might have a different effect on different segments of your customer base. Perhaps your high-value customers in Miami are immune. Or they're more vulnerable. You won't know without an MTA analysis.

You need the full picture and all the details to make important marketing decisions for your brand. In today's complex marketing environment, **MMM alone doesn't cut it.**

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Who are our best customers, and how do we reach more of them?

MTA. It offers granular feedback on how and where your best customers interact with your ads, and that's something you can emulate across your customer base.

But if you reach them offline too, you might not see that part of the picture, and it may turn out to be the most important. Outside of Neustar MTA, most MTA tools don't include any TV data or have a very limited view of activity within walled gardens.

How well do top-of-funnel touchpoints drive conversion for our brand?

MTA. It allows you to follow the consumer journey at the individual level, and therefore draw general lessons about the impact of this or that particular touchpoint in the process.

But many top-of-funnel interactions occur offline: via TV, for instance, or out-of-home. Direct mail is a strong addressable channel, but it's still an offline channel. To fully understand what drives conversion, you need insights on brand awareness and attitudes, and a strong grasp of consumers' propensity to convert in the first place. Outside of Neustar MTA, most MTA tools don't have that information.

You need to see all the details to make important marketing decisions for your brand. In today's complex marketing environment, **MTA alone doesn't cut it.**

THE SOLUTION IS UNIFIED ANALYTICS

Today's marketers need to be **strategic and tactical at the same time.** They need to react to events on the ground without jeopardizing the big picture—and have the ability to change that big picture when warranted. They also need to integrate insights from all the channels their customers come in contact with, online and offline, and make sure that the source of those insights is the best data around.

There's a solution for that, and we call it **Unified Analytics.** Simply put, it's the 1+1=3 of measurement, bringing together the best of what MMM and MTA have to offer while overcoming their respective limitations. When Unified Analytics is in place, output from the MMM model (like baseline demand or offline media contributions) feeds into the MTA model, and output from the MTA model (like digital spend or impressions) feeds into the MMM model. It's a **virtuous circle.**

MMM
Optimize strategy

Unified Analytics
Optimize all marketing, holistically

MTA
Optimize the journey

HOW UNIFIED ANALYTICS UNLOCKS THE FULL POWER OF YOUR DATA

Thanks to this holistic framework, we're able to help our clients create connected market-level and customer-response models that make the most of the data they own or have access to:

Customer predisposition:

People's lifestyle or income level, for instance, or where they live, their brand loyalty, and past purchase history. You're not starting from scratch with anyone, and the lift from your marketing campaigns needs to be measured against a baseline.
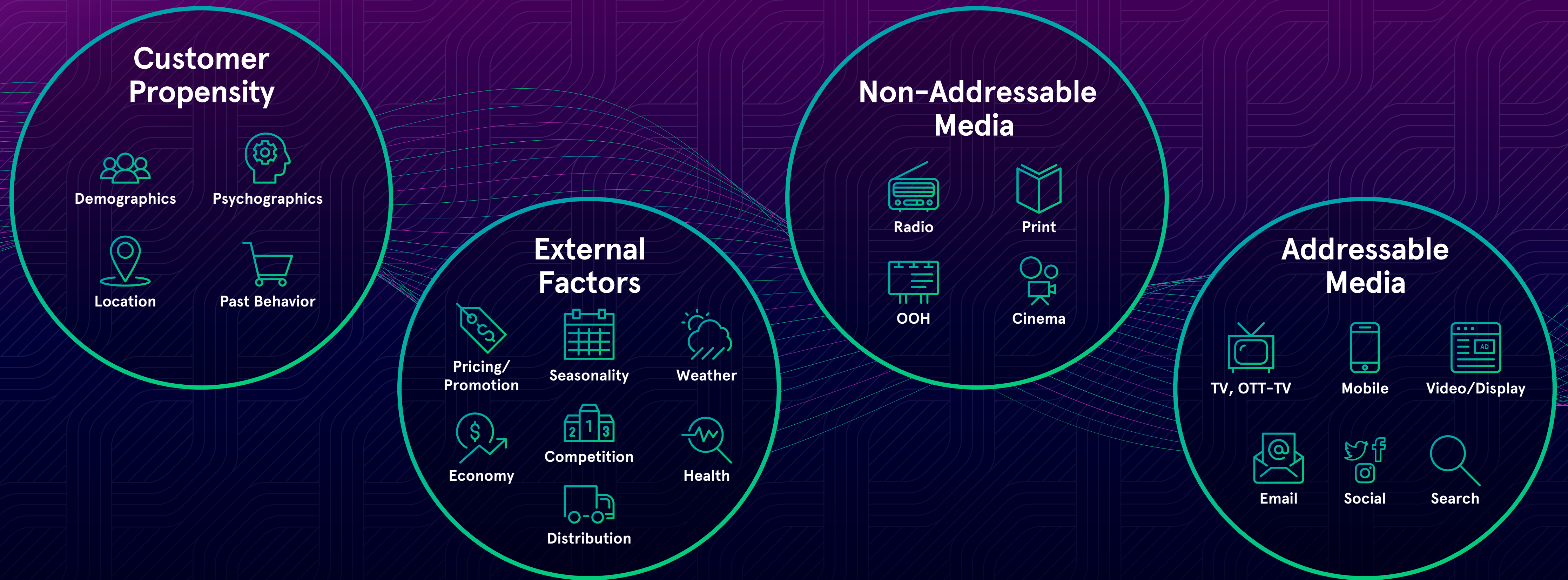
Timely macro-economic data:

Like the weather, seasonality, and the state of the local economy, but also pricing and competitive activity, and market-level media activity associated with non-addressable channels (like TV, radio, and out-of-home).

Exposure data across all key channels:

Detailed impressions at the user level for all addressable channels (like display, social, email, connected-TV, and online video).

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MEASURE THE REAL DRIVERS OF CONSUMER DEMAND

Quantify the what, when, where, and why of marketing performance.

Customer Propensity
- Demographics
- Psychographics
- Location
- Past Behavior

External Factors
- Pricing/Promotion
- Seasonality
- Weather
- Economy
- Competition
- Health
- Distribution

Non-Addressable Media
- Radio
- Print
- OOH
- Cinema

Addressable Media
- TV, OTT-TV
- Mobile
- Video/Display
- Email
- Social
- Search

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THE KEYS TO SUCCESSFUL UNIFIED ANALYTICS

Methodology Alignment:

Your MMM and MTA metrics and data dimensions have to be aligned with one another. You cannot define sales one way for MMM and another way for MTA, use households here and individuals there or define market boundaries differently. Population projections, if used, have to add up to the same universe.

Data Quality:

The data you use has to be the best data available. It's not a small ask: most user-level data is incomplete, sometimes duplicated, and often poorly identified. Aggregate-level data is often biased. All of that data can be overwhelming in its raw form.

A Solutions Team:

You need a strong analytics team in place to supervise your data infrastructure, fill in the gaps, and address the blind spots. You also need expert eyes on the models to make sure they're aimed in the right direction and provide useful insights.

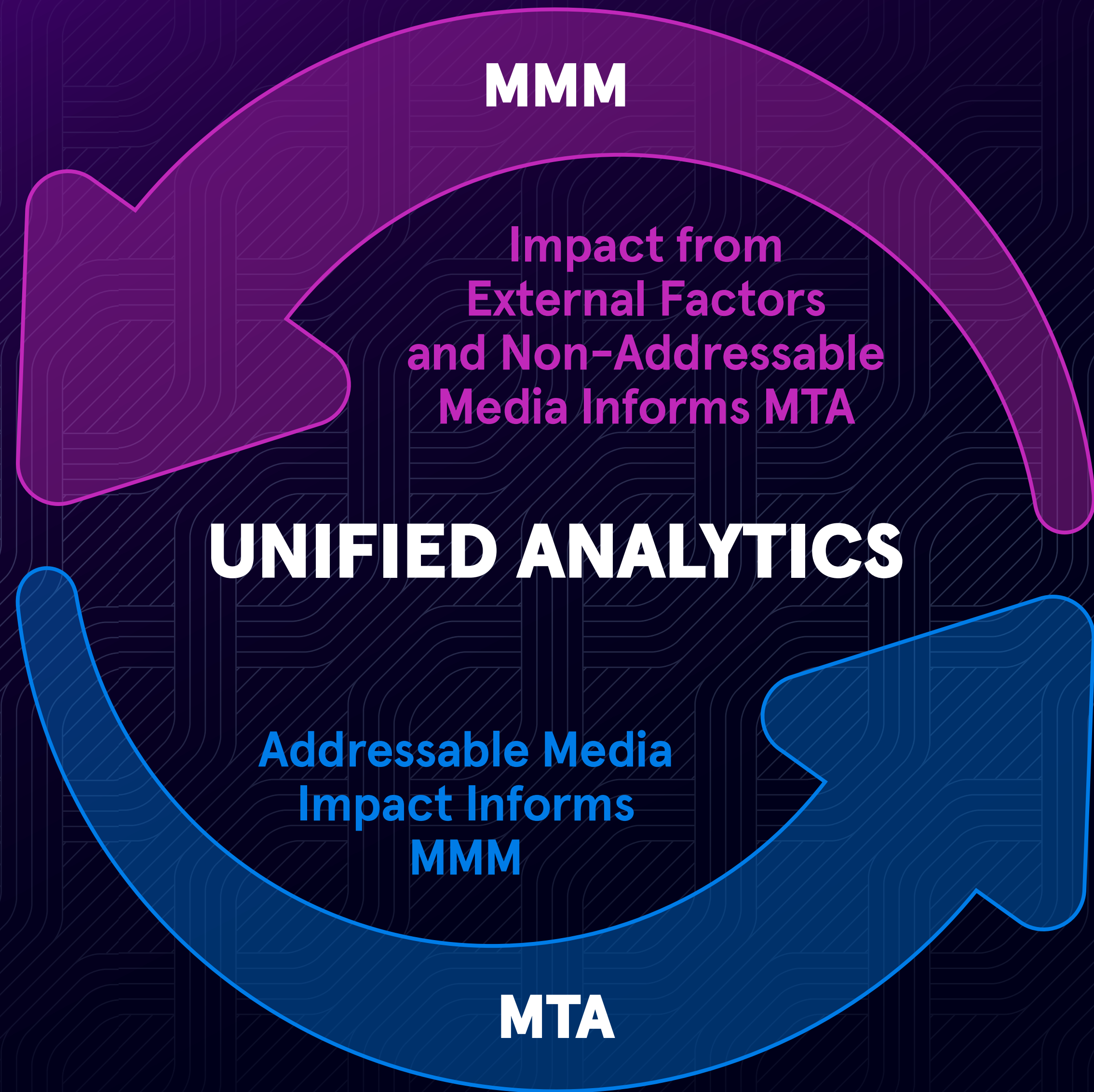# HOW NEUSTAR BRINGS IT ALL TOGETHER

On paper, there are many different ways to bring MMM and MTA together.

Market-level variables (from MMM) can be appended to user records to add new insights (like offline activity and market conditions) to an MTA analysis. Lift from digital influencers (from MTA) can be used to adjust the market-level contribution of online channels in an MMM model.

Marketers have a lot to gain from unifying their MMM and MTA infrastructures, but **the process can be complex and exposed to statistical traps.** The input datasets have to be trustworthy and well-aligned with one another. But even then, the introduction of new variables can create unwanted side effects and ultimately affect the quality of predictive analytics initiatives.

At Neustar, we've tested many different solutions, using rigorous statistical simulations as well as hands-on feedback from dozens of client engagements across a variety of industries. The specifics will vary from case to case, naturally, but we found much success in using compound variables to bridge the gap between market-level and user-level datasets without creating overfitting problems in our models.

Overall, the **Unified Analytics framework** outlined here works very well.

MMM

Impact from External Factors and Non-Addressable Media Informs MTA

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Addressable Media Impact Informs MMM

MTA

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MMM + MTA: STRONGER TOGETHER

CAN UNIFIED ANALYTICS HELP ME ANSWER THESE QUESTIONS?

Question	
How should we allocate our media spend to maximize ROI in the future?	**YES**
What is the effect of our competitors' actions on our business?	**YES**
Who are our best customers, and how do we reach more of them?	**YES**
How well do top of funnel touchpoints drive conversion for our brand?	**YES**
What impact do outside factors (e.g., the economy) have on our business?	**YES**
How should we adjust price and promotions to optimize ROI?	**YES**
What geographies and market segments should we focus on?	**YES**
How should we balance online and offline media buys?	**YES**
How do we create effective personalized customer experiences?	**YES**
How do we account for a customer's propensity to buy?	**YES**
What digital publishers are most effective for our campaign?	**YES**
How do we maximize reach and eliminate duplicates?	**YES**
How do we find optimal frequency and placement for our creatives?	**YES**
Should we send out a promotional email now, and to what segment?	**YES**

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WHAT ABOUT TV ATTRIBUTION?

TV is changing, but its strength as a marketing channel remains largely uncontested. A Unified Analytics solution is not complete if it doesn't account for television in all its forms: linear and time-shifted TV, of course, but OTT as well because the majority of video streaming today is supported by advertising.

At Neustar, we don't look at TV attribution on its own, but rather integrate user-level TV data alongside data from all other media channels by:

Resolving identity against the largest and most reliable consumer datasets in the industry.

Adjusting for possible bias in the TV data by using census and other benchmark data.

Matching TV impressions with digital and offline data to get a full view of brand exposure.

This allows our clients to gain invaluable insights not just into their TV performance per se, but into how TV and other media play off each other.

We're not just talking about optimizing TV reach and frequency anymore, but **reach and frequency across your omnichannel campaigns.** It's a whole new ballgame.
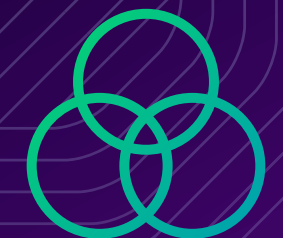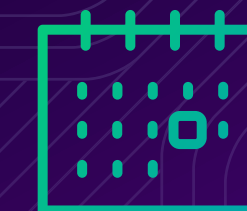
How does TV drive impact for my brand?
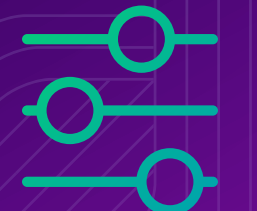
Which audiences drive the most impact for my brand?

How much of my ad budget should I allocate to TV?

What is the audience overlap between TV and digital?

Should I invest more in cable vs. network?

How should I allocate ad investment by TV network/ programs/creatives?

WHAT ABOUT THE WALLED GARDENS?

Social media has transformed media delivery and captured the attention of consumers everywhere, so it's not a big surprise to see it part of every marketer's digital media mix today. Walled gardens capture approximately 75% of digital ad spend in the U.S. – that's more than $110 billion a year.

But it's always been difficult to tease out exactly how ads perform on social media compared to how they perform on other channels, and more importantly, how they interplay in the context of a multi-channel campaign. First, you need to align the metrics to make it a fair comparison. Clicks and impressions aren't the same things. But you also need to work with a different set of privacy concerns when it comes to social media.

As part of its infrastructure, Neustar is working with walled garden partners to integrate their datasets with our clients' first-party data. We've developed a system that allows brands to benefit from granular insights from within the walled garden while protecting its users' privacy. Data scientists sometimes refer to this technique as **differential privacy.**

WHAT IS DIFFERENTIAL PRIVACY?

Differential privacy is a technique used to derive aggregate insights from a user-level dataset without compromising the privacy of individual users. Here's how we're doing it today:

Identity Sync:
Use identity syncs to connect platform users to the Neustar universe.

Segment users:
Every day, group users into sets of 100 based on similar ad exposure on the platform.

Compute average:
For each group, an average measurement is calculated (e.g., number of impressions to your brand's creative) and passed on to Neustar.

Assign value to users:
Neustar assigns the group's average exposure value to each user in that group.

You end up with an extremely close approximation of reality that you can feed directly into consumer-level models.

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NEUSTAR IS LEADING THE EFFORT

The world is changing too fast for you to sit back and watch it unfold. You need to be proactive, reorganize your marketing team to align with the new realities, and position your brand to take full advantage of new opportunities before someone else beats you to the punch.

Addressability is at the heart of the future of marketing. There's no turning back. But with the death of the cookie and changes in privacy regulations around the world, you need a whole new ecosystem to make it happen, and a Unified Analytics infrastructure to sustain it.

Learn how Neustar is writing the future of marketing measurement.

LEARN MORE

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Neustar Fabrick brings together all the ingredients that make Unified Analytics possible.

Universal: It covers all the channels you care about, online and offline.

Future-proof: It's based on persistent and reliable identity, not cookies or MAIDs.

Responsive: It's designed for real-time measurement and activation.

Collaborative: Through Fabrick, Neustar can help you stitch together your data assets and answer your most pressing marketing questions. You're not on your own.

YOUR DATA

NEUSTAR DATA

PARTNER DATA

neustar fabrick™

UNIFIED ANALYTICS
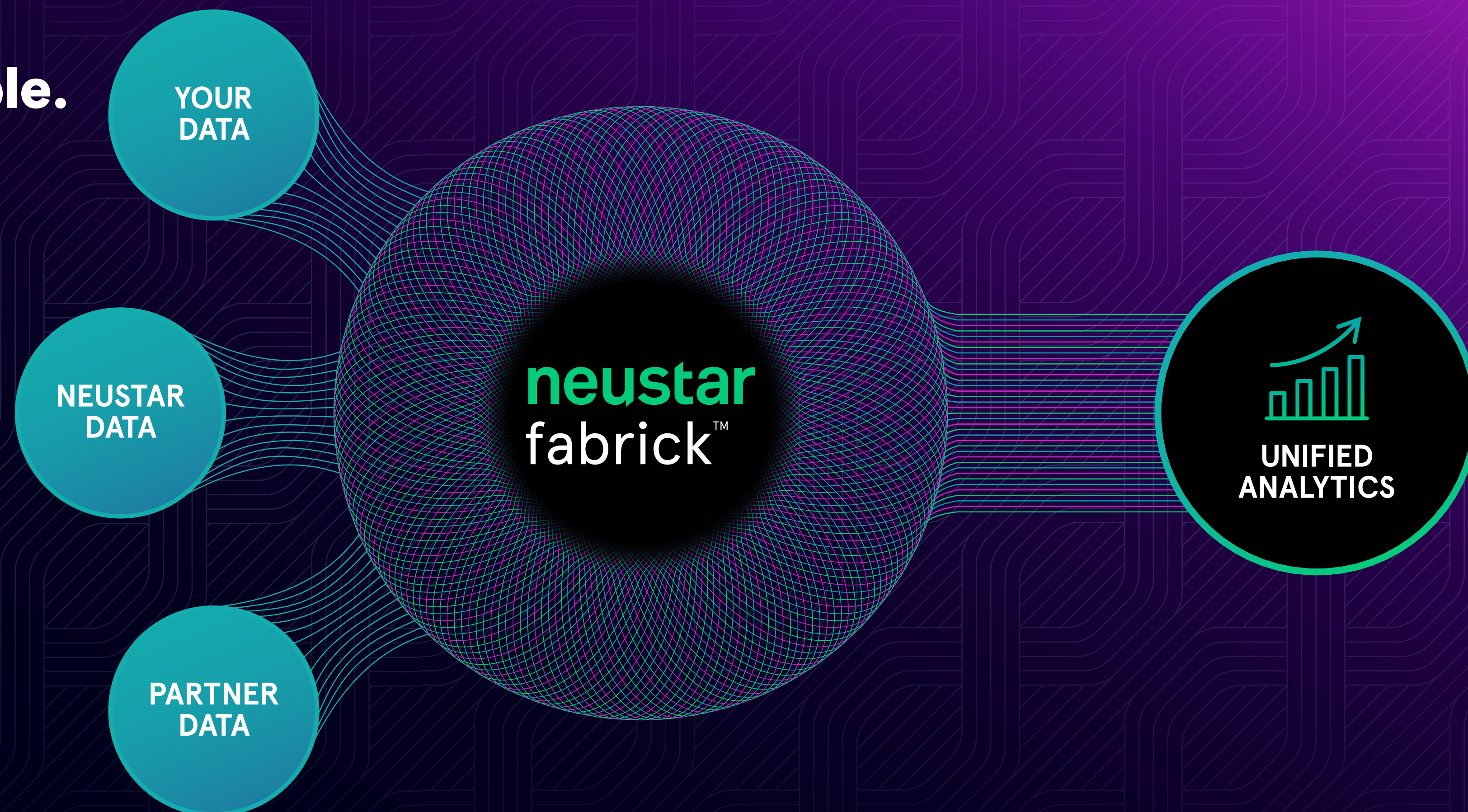
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ABOUT NEUSTAR

Neustar is an information services and technology company and a leader in identity resolution providing the data and technology that enables trusted connections between companies and people at the moments that matter most. Neustar offers industry-leading solutions in Marketing, Risk, Communications, and Security that responsibly connect data on people, devices and locations, continuously corroborated through billions of transactions. Neustar serves more than 8,000 clients worldwide, including 60 of the Fortune 100. Learn how your company can benefit from the power of trusted connections here: home.neustar

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