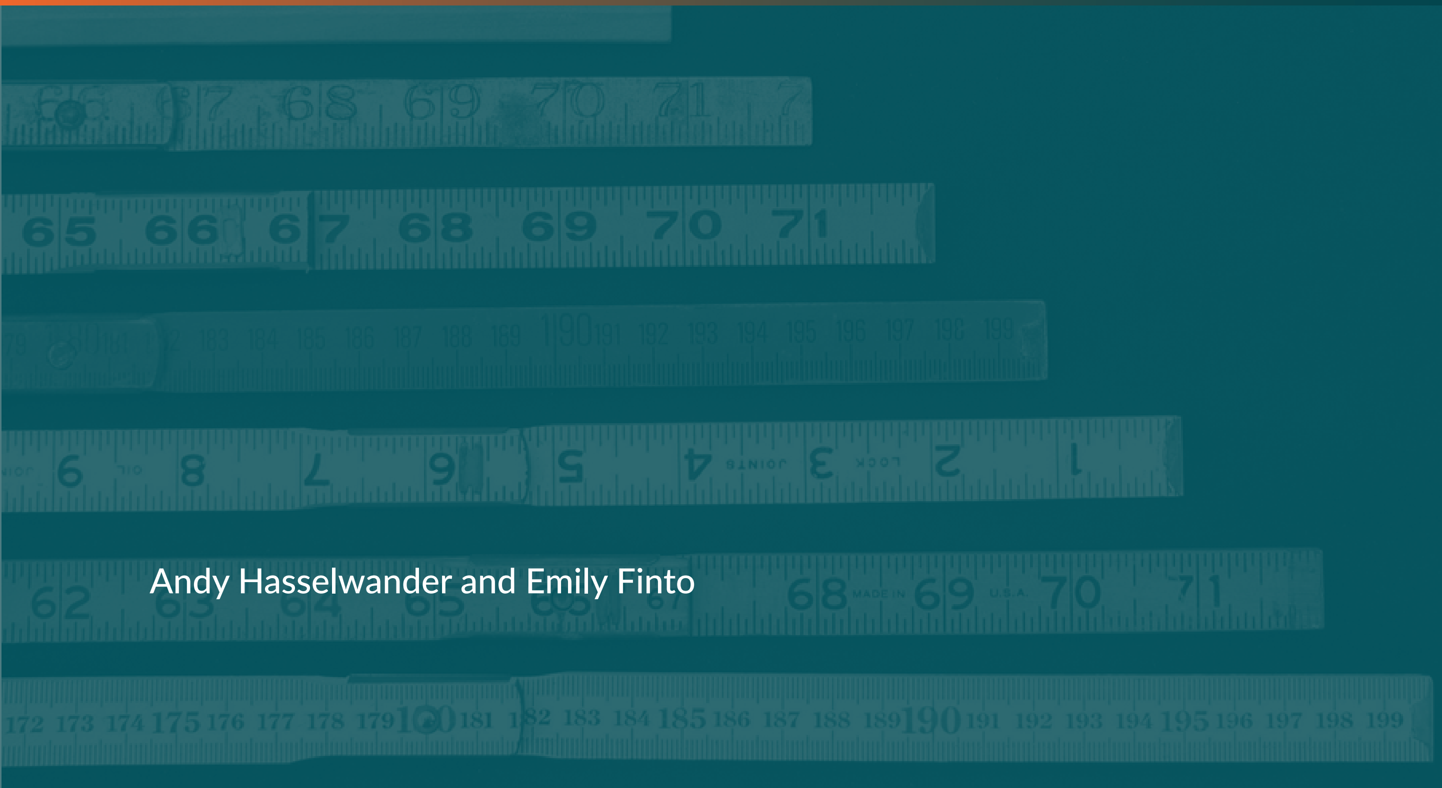
MARKETBRIDGE

EXECUTIVE WHITEPAPER

Measuring Marketing's Effectiveness

Imperatives and Methods for *CMOs & Analytics Teams* in Driving Measurable Marketing ROI



Andy Hasselwander and Emily Finto

The Ultimate Strategic Resource on Measuring Marketing Effectiveness

Gartner has predicted that by next year (2022), profitability will overtake customer experience (CX) as a top strategic priority.[1] This change is part of a longer-term trend. CFOs want rigorous measurement of marketing activities. Metrics like cost per acquisition are at a premium. These metrics are linear and atomic, much like accounting and financial data. This conundrum has led to a plethora of methods and tools to measure marketing effectiveness, and ultimately to optimize the marketing mix. But now this confusing landscape cries out for a more clear-eyed answer of "*what's really working and what's not?*" when it comes to marketing measurement and optimization. The answers are not simple or easy; this is a nuanced and deep topic. This paper will cover several topics in-depth; today's imperative behind measuring marketing effectiveness; definitions and terms; upper-funnel brand measurement; multi-touch attribution and online identity.

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Introduction

A Difficult Task: Measuring Marketing Performance

Of the core functions of a corporation, marketing is unique because it faces outward. Marketing's job is to be the public face of the company, making its activities inherently wilder, riskier, and less measurable than those of accounting, finance, or operations. This isn't a problem to be solved, but rather a situation to be embraced. Putting the customer first means letting go of internal controls and focusing on empathy. The halcyon days of trusting creative types and playing the long game are history. Instead, CFOs want rigorous measurement of marketing activities. Yet, maniacal focus on measurability can lead to bias for well-instrumented channels and downstream activities. This is a very real danger, particularly for larger companies who compete in broad market spaces.

A variety of methods are available to measure marketing success. Marketing Mix Modeling (MMM) has been around since the 1970s, when large advertisers enlisted the help of economists to understand the impacts of their investments on performance. Direct marketing measurement is built into the medium itself. With key-coded telephone numbers and vanity URLs, it is possible to design information-rich experiments which independently measure the impacts of creative, list/model, and media. More recently, digital platforms have made bold claims about attribution across all channels, and almost magical levels of optimization.

Despite the advances in measuring marketing investment, willy-nilly spending on marketing has tendency to move in waves that follow large expansions. As the economy has roared forward since 2010's recovery, so has advertising. Startups spent heavily to establish dominance, while larger companies ramped up spending to take advantage of increased consumer spending. It seems that the hangover from this unbridled optimism has started to take effect, and the pandemic's impact on budgets doubtlessly hastened this abrupt shift.

Imperative: Proving Profitability & Bolstering Effectiveness

The pressure for more efficient—and more measurable—marketing will dominate the next several years in the office of the CMO. Yet, proving marketing's value hasn't gotten easier. Seventy-one percent of B2C marketing executives say that demonstrating marketing's value to the rest of the C-Suite and the Board will be very or extremely challenging in 2022.[2] This really hasn't budged much in the past decade.

While marketing's expected contribution to growth is increasing, marketing budgets are still being cut. Marketers polled by the CMO Council and Televerde indicate that their expected contribution to revenue stands at 44%—up from 10% in 2016. [3] Still, marketing budgets as a percentage of revenue, sometimes called marketing "E/R", have fallen from 11% in 2020 to 6.4% in 2021, the lowest measured value in the history of Gartner's CMO spend survey.[4]

71% of B2C marketing executives say that demonstrating marketing's value to the rest of the C-Suite and the Board will be very or extremely challenging in 2022.

All this points to simple imperatives for CMOs: **measure all marketing channels; increase spending where there is marginal room for efficient growth; and cut ineffective spending.**[5] We call this marketing effectiveness. This is extremely complex and difficult in practice. Challenges in measurement techniques, data sourcing, customer opacity and increased privacy, communication of results, and innovation all make marketing effectiveness one of the thorniest challenges for executives.

The Scope of Marketing Effectiveness

Marketing Effectiveness as a discipline touches many functions from marketing planning through marketing measurement—a huge swath of marketing's overall scope of responsibilities.

BUDGET AND PLANNING	DATA MANAGEMENT	MARKETING SOFTWARE	MARKETING REPORTING	ATTRIBUTION & MIX MODELING (MMM & MTA)
Scenario planning, looking-forward simulation, forecasting	Stimulus, response, stable and accurate metadata	Digital marketing provides consistent customer logs, marketing planning appends accurate and clean dimensions	In-process metrics, outcome metrics, time series, gap-to-forecast	Econometrics approach, up-funnel scale, discrete logic approach for known touches

BUDGETING AND PLANNING

The start of the process relies on the end of the process. In other words, marketers must know how each channel performs—and what its elasticity (see below) is—to put together a high-ROI plan. While media experts, creatives, and consumer researchers also have a critical role to play in budgeting, it is ultimately the job of the marketing effectiveness team to provide the normative model of how marketing should drive performance up and down the funnel.

Sometimes called scenario planning or mix optimization, these tools and methods allow executives to simulate how various marketing mixes, aimed at various audience segments, will likely drive key metrics. The inputs for scenario planning typically arise from the outputs of measurement—but must also pass face validity.

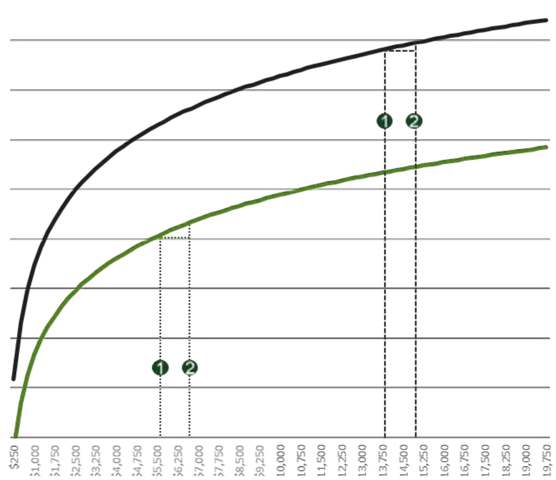
A close cousin of scenario planning is forecasting, a more formal exercise than scenario planning, in which specific targets are set by dimensions (audiences, geographic areas, etc.) and time (days, weeks, months, or quarters). Scenario planning is generally a finance-led activity, but marketing has a key role to play in setting the likely effectiveness of various tactics, as well as diminishing returns to scale from higher spend levels.

What is Elasticity?

- Elasticity is the marginal percentage gain in outcome (leads, sales) a brand will achieve by doubling marketing investment.
- In other words, a brand might currently be spending $1M on demand generation to drive $2M of revenue. The next $1M investment might drive an additional $1M (half of $2M), making the elasticity 50%.
- More complex S-shaped curves are also potentially useful for brand development investments.

Example:

The **Black** response curve has a higher coefficient, but the next dollar should be allocated to the **Green** stimulus given it is lower on its response curve and will have greater return



PERFORMANCE DATA MANAGEMENT

Marketing data are critical to an organization but are among the dirtiest and hardest to keep consistent. The reason is simple. Marketing data reflect people who you don't control, your prospects and your customers. Furthermore, marketing activity data is unusually reliant on partners. Most companies use agencies to buy media and to execute at least some of their campaigns, and third parties all typically use slightly different data formats to track campaigns and interactions.

Successful marketing data managers focus on simple, consistent dimensions to accurately and easily measure marketing performance. The bane of accurate measurement are ever-changing, poorly organized taxonomies. For example, the direct mail function might have a complex way of sending out mail tests, with different creatives, form factors, and so forth. Ultimately, however, it is critical that all of the mail be tagged accurately with a few simple, consistent dimensions—postcard vs. letter; test vs. control; prospect vs. house. This sounds simple, but it is amazing how common it is for enterprises to be simply unable to roll up stimulus and response to "least common denominator" levels for accurate measurement.

Successful marketing data managers focus on **simple, consistent dimensions.**

MARKETING SOFTWARE

Marketing software was supposed to make marketing performance management easy. The reality is that this is an ever-receding pipe dream. Marketing software is absolutely necessary, but the idea that every marketing use case can be handled by one platform is foolish due to the very nature of marketing. Similarly to the case with data, marketing software is hard to build because it is dealing not with assets of the company, but with live, breathing people who don't do what you want them to and vendors who do their own thing. This isn't to say that marketing software is not needed; it is critical. However, it is not a measurement panacea.

It is critical to always have an eye towards marketing measurement when choosing, installing, and maintaining marketing software. Digital marketing is the obvious standout in terms of impact. Whether using Adobe, Salesforce, or HubSpot, digital marketing software provides a huge part of the "log" for each prospect and customer. Making sure that these data are comprehensive and well described via metadata is critical to measuring and optimizing effectiveness.

In addition to digital marketing platforms, it is critical to get marketing campaign planning software right in order to enable marketing effectiveness. Ensuring that campaigns and tactics are correctly characterized via the dropdowns and picklists that will ultimately form the metadata backbone for marketing effectiveness is key. Simple design decisions will have major downstream implications on dashboards, reports, and modeling.

MARKETING REPORTING

Accurately communicating what happened—by campaign, over time, or to a specific customer segment—is critical for marketing, and surprisingly difficult in a multichannel environment. **Dashboards** are currently very popular for communicating information, particularly for "in-process" metrics like promotional volume, generated leads, and last-touch attributed sales. Good dashboards depend on clean, consistent dimensional/ metadata—a recurrent theme.

> Accurately communicating what happened is **critical for marketing.**

Tabular reports are probably more effective, if somewhat less accessible, to a broad audience of managers. Tabular reports are essentially SQL queries from databases that collect information in rows (grouped by some set of dimensions) and columns (typically sums, averages, or other simple statistics). These reports can be further analyzed in pivot tables and graphs by managers—still a powerful tool when trying to get to a more textured understanding of what is happening, or why something is happening.

Ultimately, more advanced "how" analytics (MMM and MTA) belong in marketing reporting, too—but it's a mistake to focus too quickly on dashboarding these types of metrics. Focus first on clean versions of basic data, and progress to systematizing MMM and MTA once the analyses are stable.

MIX MODELING & ATTRIBUTION (MMM & MTA)

Ultimately, CMOs—and their CEO and CFO counterparts—want to know the actual value that marketing provides to the business. This has been the hard question from the start for advertisers. We all know that advertising works, it's just difficult to quantify. There is typically suspicion about "messier" channels (up-funnel media like television, out-of-home, or influencer/local) that don't have clear calls-to-action.

Marketing mix modeling (sometimes called media mix modeling) or MMM looks to understand all promotional impacts on sales—both up and down funnel. This method is powerful because it is channel agnostic—both broad reach and direct response marketing can be evaluated—and it can also estimate impacts on brand health attributes. For example, a marketing mix can be used to estimate the impact of TV advertising on survey-measured consideration, as well as the impact of consideration on sales, providing a much more realistic financial estimate of up-funnel marketing ROI.

Multi-touch attribution or MTA has a very similar goal to MMM but is focused on attributing value to specific touches on a discrete action, and then laddering up these attributions to an overall estimate of marketing effectiveness. This was made possible when digital marketing started to dominate the media mix in the 2010s, but it has become more challenging as privacy restrictions have limited the ability of advertisers to track prospects and customers across multiple domains. That being said, the methods of attribution are still valuable, particularly in interaction-rich customer environments like health insurance and digital apps.

History of Marketing Measurement, Evolution, and Current State

Marketing measurement's history can broadly be divided into two streams, which remain distinct today: advertising and direct marketing. Advertising's measurement has relied heavily on market research, market-level experiments, and econometric analysis. Direct marketing measurement and optimization is a linear but deeply nuanced science; indeed, measurement is the core idea behind direct marketing.

Advertising Measurement

Advertising began in print publications in the nineteenth century. By the early twentieth century, it had expanded to out-of-home. Sepia-toned photographs of pre-WWI cities are covered with skillfully designed art advocating for the virtues of Lifebuoy Soap, Barbasol shaving cream, Coca-Cola, and many other consumer products. Radio followed as a channel in the 1930s, followed by the big one, television, in the 1950s.

Market Research

As soon as advertisers started spending money, they wanted to know if it was working. Even in the late nineteenth century, the phrase "how did you hear about us"—whether at the store counter or on a mail order form—was a common question, but not really scientific. **Market research** started in earnest around 1910, when J. George Frederick started *The Business Bourse* and later *The Eastman Research Bureau*. Initial research was conducted via mail, attempting to understand basic consumer statistics. Gallup—the famed polling firm known primarily for political research—started as an advertising research company in 1923 measuring advertising reach for publishers.

Market research exploded post-WWII, corresponding to the massive increase in consumer wealth and spending driven by returning GIs and a supercharged economy. Research remained primarily mail-based, though telephonic research started to take hold alongside more advanced quantitative analysis techniques emerging in management schools' curriculum. By the 1970s, research was at least 50% telephonic, increasing the speed to see results, and then computers emerged as tools to tabulate results.

Today, market research has largely shifted online—with dubious results. As consumers have increasingly stopped answering phones or opening mail, email, and web-based research seemed appealing; but professional survey takers, gamers, and the like have made online research unreliable at best. However, high-quality campaign measurement is still possible using innovative sampling methods, including text-to-survey.

Marketing Mix Modeling (MMM)

Econometric analysis of advertising campaigns emerged in the 1960s, but became more common in the 1970s. Because econometric analysis requires significant computation, the idea of using least squares regression to estimate the impacts of promotions on sales was dependent on the widespread use of computers. Initially, advertising agencies and research groups were slow to adopt computers. However, the advent of desktop statistical software such as SAS in the mid-1980s made MMM much more accessible to advertisers, agencies, and consulting firms.

Today, MMM is ubiquitous for large consumer products advertisers. It measures both upper funnel/advertising contribution to sales and spending tradeoffs between media channels, geographies, and customer segments.

Direct Marketing Measurement

Direct marketing measurement has always been mathematically straightforward—but the devil is in the details. The techniques that catalog and mail marketers used to measure effectiveness in the 1960s haven't changed much—there are just more data and channels to analyze. However, marketing automation technology has made it feasible to create complex test designs.

Direct marketing measurement has always used the concept of the funnel. As prospects pass through different stages, they drop out. For example, the funnel for direct mail is typically universe > mailed > responded > converted. At each stage, a "rate" is calculated as the number passing through divided by the starting population. This simple arithmetic—also known as ratio analysis—allows apples-to-apples benchmarking comparisons between creative approaches, lists, models, channels, and companies.

Perhaps the most innovative area in direct marketing is **testing.** As marketing automation software has made direct marketing planning easier, more complex tests have become possible. Full or fractional factorial testing—in which multiple variables are tested together—allows results to be read via simple least squares regression. For example, creative can be tested alongside audience segmentation and channel mix. Not only can analysts measure each independent factor, but they can also infer the interactions between them. In some cases, “1+1=3” relationships can be uncovered.

Digital Marketing Measurement

Marketers still measure the first real digital channel—email—using the same linear direct response marketing funnel as its cousin direct mail. However, display, search, app, and digital affiliate marketing are different, and require different measurement techniques.

The basis of non-email digital marketing is the concept of the cookie or pixel. In essence, this can be thought of as a key that links the individual to a marketing tactic online. In a perfect world for advertisers, all cookies would be interoperable and transparent, allowing every advertiser to know every time an individual was exposed to a message, and what they did about it. This platonic ideal is the basic idea behind digital multi-touch attribution (MTA).

This perfect world for advertisers is a privacy nightmare for many consumers. While some argue that better tracking allows for “more relevant ads” (and indeed, this is the positioning that Facebook and other huge networks use when asking for permission to track on iOS), perfect tracking of individuals as they go about their digital lives is a dystopian idea for many others. This has made multi-touch attribution increasingly more difficult from a purely technological perspective. We will discuss this topic further in the second part of the following section.

Pure digital reporting is still largely “last touch.” For example, we can understand how much paid search drove in terms of leads and conversions, but for many marketers the upstream impacts remain unclear. Most infer that paid search acts primarily as a demand harvester, but they also understand that stopping it will cause other advertisers to take the customers that would otherwise have clicked on your ad.

Five Areas That CMOs Struggle in Measuring ROI and Where to Focus

Despite a progression of technology, methods, and practices, this complex landscape makes marketing effectiveness hard to navigate. We see five key challenges for CMOs tasked with driving measurable ROI over the next decade. These topics are not intended to be collectively exhaustive; however, they represent some of the most common problems we encounter when speaking with clients.

1. Measuring Return on Upper Funnel Brand Investments
2. Navigating the Post-Cookie World
3. Measuring Earned Media’s Impact
4. Engaging Buyers in a Crowded Media Landscape
5. Implementing The Right Marketing Effectiveness Solution

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Measuring Return on Upper Funnel Brand Investments

Upper funnel brand investment, or brand marketing, is intended to bolster the influence of the brand with a broad audience, rather than directly targeting individual consumers to drive a sale. Common examples are television ads, outdoor banners, and radio. Unlike a targeted piece of direct mail, brand advertising ideally leads to an indirect increase in sales via an increase in a companies' share-of-voice—and ultimately in consumers' brand awareness.

The History

For Consumer-Packaged Goods (CPG) advertisers in particular, brand marketing is essential. Because most CPG companies don't control distribution, they lack strong direct relationships with their customers. This means that direct marketing, for the most part, is off the table. Instead, manufacturers of cereals, personal care items, and household goods rely on communicating the general benefits of a product to a broad audience—and know from experience that this advertising will eventually move product off supermarket shelves.

However, the substantial number of companies with direct relationships with their customers cannot simply ignore upper funnel brand investment. They (in theory) know every customer who purchases—or even expresses interest in—their product. They have far more distribution power and more powerful downstream tools to drive demand and conversion. However, this power can lead to an ironic problem. Because downstream pipeline tactics are more precise and measurable, the argument is commonly made that upstream brand investments are not necessary. This short-term decision making can lead to long-run market-share decay.

> "... the substantial number of companies with direct relationships to their customers **cannot simply ignore** upper funnel brand investment."

In 2010, Les Binet and Peter Field published an examination of over 700 primarily UK-based brands over a 30-year period examining the relationship between upper funnel brand investment and long-run revenue growth. The results were striking; brands whose share-of-voice was higher than their share-of-market grew; while brands whose brand spending was less than their market share shrank. They proposed a metric, extra share-of-voice (ESOV), to measure this over- or under-investment. Positive ESOVs predict growth all things being equal, and negative ESOVs predict shrinkage.[6]

Furthermore, Binet and Field found that "System 1"-type messaging—defined as more emotional, less transactional content—is more effective at driving long-run brand growth than "System 2"-type messaging. In other words, traditional "touchy-feely" advertising works better than more measurable direct response marketing in driving sustainable growth.[8]

Many companies have seized the opportunity to realize the benefits of brand marketing. In the 2020 CMO Survey, marketers reported that nearly 30% of their marketing budget was allocated to online/digital channels, with 50% of that for brand efforts.[9]

Share-of-Voice Shortcuts

To estimate relative brand share-of-voice without spending hundreds of thousands of dollars on survey-based tracking, take advantage of already available data sources from Google and social media sites. Companies like Honest Marketing and Cashcow use Google's Search Console and Google Analytics to glean information on impressions, clicks, and mentions related to their brands. Other companies focus on social media reach as a proxy for brand awareness, and take the time to analyze each post's performance to develop the most efficient brand marketing approach in the future. [7]

Justifying the Importance

Despite ample evidence of the impact of brand-focused marketing, CMOs still face difficulties in measuring and reporting its impacts. CMOs at many direct channel companies struggle to justify upper funnel advertising, as concepts like brand lift seem too vague for effective quantitative analysis. A typical measurement trap goes like this: The CMO makes the case for advertising. The CFO and Board agree to a test. The test is short and under-invested, and results are uncertain at best. The conclusion: Advertising doesn't really work, and if it does, the cost-per-acquisition metrics are far higher than they are for direct mail or digital performance marketing. In all likelihood, the CFO and Board will continue to be frustrated with stagnant market share in the years after the test—but performance marketing will still show good CPAs.

This tension is often rooted in the conflict between two different perspectives: marketing as a **cost center** versus marketing as an **investment center.**[10] The CFO and Board tend to be skeptical that marketing is a necessary long-term investment in growth, and instead focus on shorter-term KPIs. In a study from the Harvard Business Review, the short tenure of brand managers, the emergence of instant data availability for down-funnel marketing, and the low access to information on long-term brand investments have combined to leave many companies myopically focused on a limited view of their sales.[11]

Additionally, many marketing departments lack ownership of customer data and interactions, and thus miss opportunities for measurement and optimization. Customer ownership allows a team to connect directly with the customer, leading to a greater understanding of customer behavior and a better ability to analyze the effectiveness of a brand campaign.[12] Less than 36% and 19% of B2B and B2C companies, respectively, believe that the marketing function of their companies "own" the customer.[13] A predicted shift away from marketers' focus on customer experience to profitability further jeopardizes the marketing team's ownership of the customer and makes it more difficult to collect the relevant data needed to measure the impact of brand marketing.[14] Marketers should prioritize framing brand marketing as an investment and maintaining customer ownership to improve the quality and analysis of campaigns.

Forward Thinking

Marketers can arm themselves with tools to correctly measure the impact of upper-funnel brand investments.

First, upper funnel investments take longer to manifest than down-funnel performance marketing tactics. Typically, effects are noticed over weeks and months, not hours and days. Thus, time series/econometric analysis must use *adstocking* to correctly estimate impacts. Adstocking simply applies the stimulus from a campaign over some period after the stimulus was sent into market, typically with some kind of decay function. By correctly using adstocks—and staying patient—the full temporal impact of the campaign will be captured.

Secondly, marketers need to remember that upper funnel "System 1" messaging impacts attitudes more than it drives a specific behavior. Those attitudes then drive long-run behaviors from specific individuals. Thus, a two-stage model makes more sense for measurement. Concretely, this means tracking attitudes like awareness, affinity, or comprehension before, during, and after a campaign. Marketers can then build two models: one that estimates the impact of advertising on attitudes, and a second that estimates the impact of attitudes on behavioral metrics like leads, sales, or revenue.

It's critical to note that changing attitudes have a critical bonus—they have a far more lasting effect than driving one sale or lead. After one positive impression, the "halo effect" can lead to long-lasting value once consumers have a positive connotation of the brand name.[15] There's a reason you still remember jingles for brands you watched on television as a kid, but don't remember the junk mail you receive every day in your mailbox.

Finally, **scale** is critical for upper funnel investments. Unlike direct mail, for example, brands don't see immediate marginal return on a tiny television buy. Instead, upper funnel advertising impacts the market with an "S-curve;" a barely noticeable impact at first, then steep returns as the campaign hits scale, and finally a slowdown as saturation is reached. Companies that are skeptical of upper funnel advertising typically go too small on tests, which then fail to show results. The moral of the story—if you're attempting an advertising test, go big or don't bother.

CASE STUDY

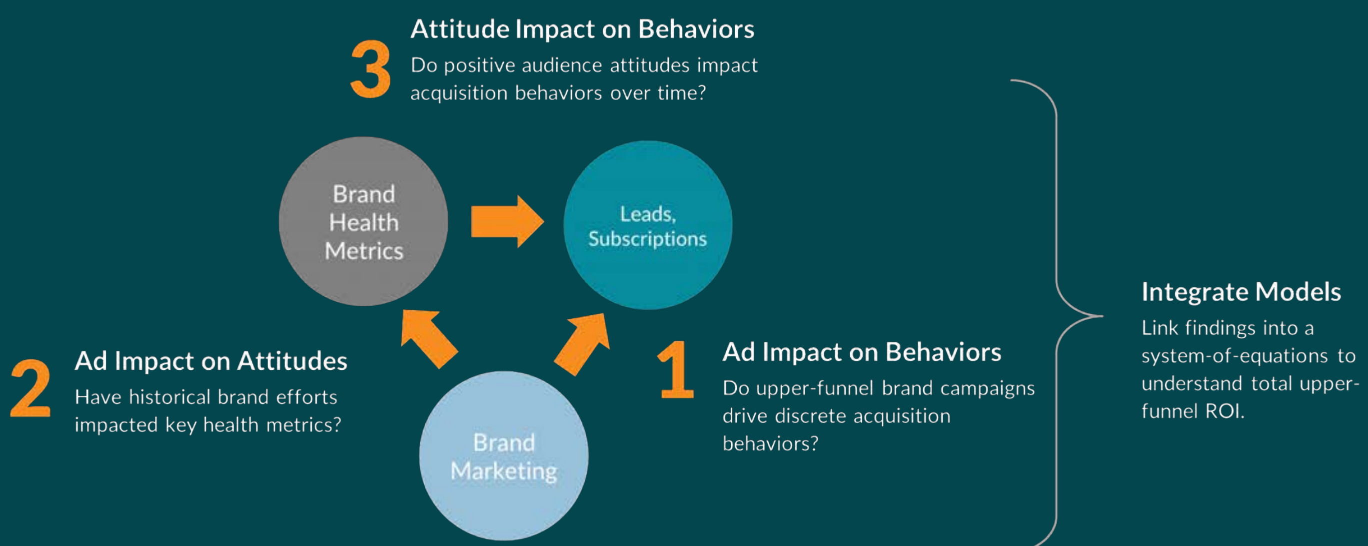
A Deeper Look at Upper Funnel Brand Investments Shows 50% ROI

A large media brand was struggling to justify upper-funnel brand investment after focus on down-funnel digital performance marketing led to stagnant market share. While cost-pers remained positive, there was a general perspective that weak and declining brand health was impacting acquisition and stickiness.

To better understand the true impact of upper-funnel brand marketing, a test was devised in three parts. First, brand tracking was established across a number of metrics for one year prior to the test. Second, an upper funnel brand campaign was built with enough weight to matter, over the course of three months. National television, digital, and outdoor buys were coordinated and focused on key brand attributes, achieving a share-of-voice well above market share (extra share-of-voice or ESOV of 10+ points). Finally, behavioral metrics—inbound leads, trials, and subscriptions—were measured by the "last touch" inbound channel (paid search, digital, organic, mail, etc.). The final data artifact was a data frame with columns representing brand stimulus, down-funnel stimulus, attitudinal metrics for the audience, lead, and sales performance.

This data frame was used to estimate three models. Model one estimated the impact of upper-funnel marketing on leads and subscriptions, model two estimated the impact of upper-funnel marketing on brand attributes, and model three estimated the impact of brand attributes on leads and subscriptions. These three models were then put together in a "system of equations" to estimate the total impact of upper-funnel brand marketing.

After applying the math, the total value of the upper funnel campaign in terms of customer lifetime value generated exceeded its cost by about 50%. This incredibly positive ROI was not surprising, as the brand had been underinvesting relative to its market share for years. Of the total generated ROI, about 95% was generated by the long-term "brand tail" (the 2-to-3 route in the figure below)—which explained why previous tests had shown extremely poor ROI relative to down-funnel performance marketing.



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Navigating the Post-Cookie World

Multi-touch attribution (MTA) was initially made possible by digital marketing. In the early days of the internet, browsing privacy was an afterthought—people were more worried about credit card numbers getting stolen than they were about brands tracking their behavior. Advertisers and publishers soon realized that by tracking people online, they got much better information about real-time interests than they could ever get from a third-party data source. Marketers used browsing behavior to create flags to bid for users minutes or seconds after they first expressed interest, ultimately driving higher click-through rates than standard broad-based internet advertising could achieve.

Then came cookies and pixels, which only improved the effectiveness of MTA analysis. In theory, companies could use cookies to track a closed sale back across all the times the consumer was exposed to an ad, clicked on a search result, or received an email. The real value came not from knowing what a customer did on an advertiser's own sites, but out in the wild west of the internet, using something called third-party cookies.

The Third-Party Cookie

Third-party cookies are simply cookies from domains other than your own. They are used for a variety of reasons, from providing a more personalized online experience to tracking and targeting consumer behaviors on third-party sites. Third-party cookies are appealing as they give marketers the ability to track consumer activity across broader stretches of the internet, not just their own sites.

For example, if I am selling flower arrangements at flowers.com, I might drop cookies in the user's browser registry telling me who that user is, their username, or places they've been using my domain–these would be first-party cookies. Third-party cookies would be cookies dropped onto my own website by a site like weddings.com to target potential clients.

The availability of consumer information through third-party cookies has been invaluable to marketers as data analysis techniques like MTA now heavily rely on the ability to link a consumer across multiple ad platforms.

The Post-Cookie World

However, using third-party cookies is getting harder and harder. Stories of data breaches at large-scale companies like Yahoo and Facebook, along with general news-spurred anxiety about foreign data interference have led to an increase in consumer concerns over data privacy. Legislative pushes like the

General Data Protection Regulation (GDPR) and the California Consumer Privacy Act (CCPA) marked a world-wide shift towards increased data privacy regulations. The demand for online privacy often overrules desires for greater efficiency and personalization, posing a difficult task for marketers seeking to balance these priorities.

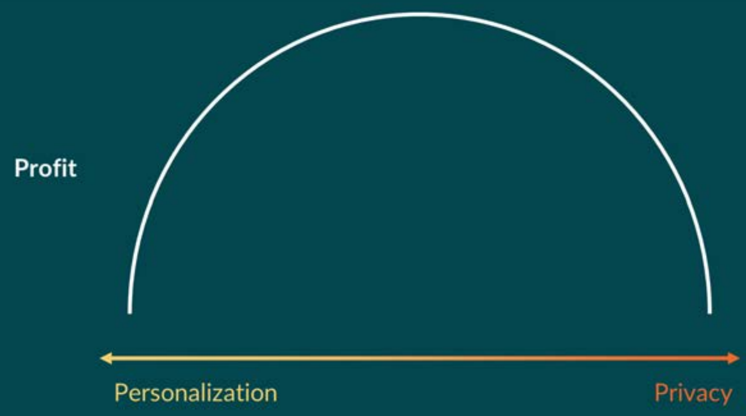
Furthermore, in a bid for consumer trust, Google announced in 2020 that it would be phasing out third-party cookies on the Chrome browser. Consumers and marketing were largely supportive of this change, but some claimed that this was simply a move to bolster control over customer information. Regardless of the intent, Google's decision dealt a significant blow to the availability of third-party cookies, as Chrome is the most commonly used browser in the world, with about 65% market share.[16] With Chrome's cookies officially set to crumble by 2023, more and more tech companies like Apple (on both Safari and in-app on iPhone) are joining the trend towards greater consumer privacy and more data siloing.

This decline in consumer information availability has caused uncertainty among marketers, with 41% citing the inability to track relevant data as their biggest upcoming challenge and 44% predicting a 5-25% increase in spending needed to achieve the desired ROIs.[17] Coupled with other budgetary and data management problems, few marketers feel prepared for the post-cookie world.

An article by the Harvard Business Review notes that when it comes to data privacy protocols and a firm's value, there is an inverted-U trend. Firms that adopt good data privacy standards see high increasing returns in valuation, up to a certain point. Beyond that point, firms that prioritize their data privacy standards at the expense of technology and customer service begin to see negative returns to their valuation.[18] Marketers are being asked to balance increasing demands for both customer privacy and personalization, both of which already present challenges to the marketing team.

The Privacy-Personalization Curve

Too much specificity makes consumers feel uneasy about privacy violations, while more personalization leads to better targeted ads for consumers



Forward Thinking

There are possible **post-cookie technology solutions** to strike this balance. Google's Privacy Sandbox initiative, including its Federal Learning of Cohorts (FLoC), allows companies to continue tracking online behaviors with differential privacy, looking on the cohort-level but not the individual-level. Users' online behavior via browser history will be stored within a group of similar online users, a "cohort," for analytical use. This solution claims to balance users' demand for privacy with companies' desires for targeted marketing analysis.[19]

Another approach is to bring cookies in-house. By shifting to a syndicated or partially-owned cloud system to track first-party data and develop consumer identity graphs, companies can track customers in more private ways. Data clean rooms—in which customer data are either physically or virtually locked and accessible only by encrypted IDs—are also increasingly attractive, particularly for industries with particularly sensitive data, such as financial services and health care. Solutions like these can be developed with a knowledgeable internal team, or through partnerships with tech experts like the IAB Tech Lab or Partnership for Responsible Addressable Media (PRAM).[20]

Analysts with Gartner and McKinsey Propose Four Strategies to Prepare for the Post-Cookie World. [21,22]

1. **Start the Shift from third-party cookies early -** Just because third-party cookies are becoming obsolete doesn't mean that the benefit of other direct consumer measurements will be. Advertisers and publishers with vast pools of first-party data and demand-side platforms that have their own consumer IDs will be in an advantageous position in the post-cookie world.

2. **Adapt to a walled garden world -** Just as companies should look inward to develop their data collection structures, they should also become comfortable relying on direct media buys for data from "walled gardens", powerhouses like Google, Facebook, and Amazon.

3. **Rethink data collection and measurement practices -** Work from the already known information about the customer to improve the consumer experience and gain the consumer's trust. This may be easier for companies with stronger consumer engagement like retail and finance, but will be essential for other industries. In addition, overhaul current strategies to prepare for an "era of advertising experimentation." Companies should invest in market research, reassess measurement baselines, and establish resource connections whether that be software or corporate partnerships.

4. **Prepare for sustained disruption -** Prepare for the coming effects of privacy and identity changes by re-evaluating the media mix and budget allocations to cookie-related media.

In a survey of marketers by Epsilon in 2020, over 65% had already taken steps to establish strategies for first-party data usage, build a private ID graph, build their own customer data platform, and move towards contextual targeting strategies.[23] Marketers in 2022 can and should get a jumpstart on the impacts of the post third-party cookie world by rethinking their consumer data collection and data partnerships earlier rather than later.

3

Measuring Earned Media's Impact

Earned media—buzz created by anyone other than a brand itself—is perhaps the fastest growing piece of the marketing pie. Amidst the growing noise of information and advertising that people are exposed to, customers are more trusting of earned media, as it is considered less biased than other more controlled media sources, making it even more influential as an "amplification tool" for brands.[24]

> ". . . buzz created by anyone other than a brand itself—is perhaps the **fastest growing piece of the marketing pie.**"

Take, for example, a Facebook user @JaneDoe. Jane hires a new painting service, Brushes, for her living room and is so pleased with the results that she wants to share the good news with her followers. She posts a rave review and links to the company's website. With Facebook's 69% reach, she reaches a relevant audience looking for painting services; some may even hire the service themselves and further spread the word to their friends.[25] These impressions were neither paid for nor curated by the Brushes marketing team. Instead, the boost in awareness resulted from the interconnectedness of Jane and her network of followers.

Earned media has grown in prominence over the past two decades, driven by the explosive growth of social media, online PR efforts, and general consumer connectedness. Consumers increasingly rely on social media for information and brand updates, from companies, influencers, and friends. About 54% of social media users say they use social media to research products and even prefer social media as the primary channel for advertisements.[26,27] An even greater 79% state that social media content greatly influences their purchase decisions.[28] As a free and organic source, earned media is an increasingly important method in digital marketing to boost brand awareness and consumer response. Previously, brands like Estée Lauder devoted roughly 75% of their marketing budget to influencer marketing, recognizing the beneficial impacts of the potential paid and earned media down the road.[29]

Earned media is difficult to measure because it is an intermediate and uncontrolled step sitting between promotion and results. First, it is difficult to measure what effect promotion has on earned media **(causality)**. Secondly, it's difficult to know how earned media is driving outcomes **(impact)**.[30,31]

The Earned Value Media Chain

THE EARNED MEDIA "ICEBERG"

PROMOTION

- Upper funnel
- Demand generation
- Influencers

Causality?

Impact?

OUTCOMES

- Leads
- Sales

To truly understand earned media causality and impact, it is necessary to carefully measure it. This is easier said than done. First, earned media is like an iceberg; 80% of it is not seen. These are the direct messages, zoom calls, and real-world conversations that are simply not measurable. Secondly, much of the earned media landscape that is measurable is still somewhat opaque. Facebook and Instagram, for example, are harder and harder to monitor due to ever-tightening privacy rules; Twitter is really the only truly open platform. Even assuming that the data are available, however, there are still challenges in measuring what is truly your earned media. Try writing a Boolean query to pick up on mentions of brands that are animals, fictional characters, etc.—you are bound to get a lot of noise.

Forward Thinking

With careful construction of queries in social listening tools, and confirmation of face validity, it is possible to build robust time series data sets of earned media. Once these are built, earned media should function as both a receiver of marketing impact and a driver of marketing impact in a "system of equations" regression model. This can be layered into a marketing mix model once the "iceberg" is even partially measured.

In addition to a company's own earned media, other social listening approaches can be helpful when understanding and forecasting demand. The University of Vermont's hedonometer, a measure of overall societal happiness driven by textual analysis of Tweets, has been shown in MarketBridge analysis to be a key predictor of overall engagement with media.[32] Perhaps not surprisingly, it is negative emotional energy that predicts content seeking behavior.

This begs the question of whether it is essential that earned media necessarily be positive to drive marketing performance. Given the importance of metrics like net promoter score (NPS) to managers, it might be assumed that the answer is always yes. However, the flip side of this argument is that buzz trumps sentiment. The answer is probably somewhere in between these two poles, depending on industry. For mature, competitive industries, earned media sentiment is critical, as consumers are making choices between competitors. For new or startup industries, it is more likely that any attention is good attention—and thus overall buzz beats sentiment.

4

Engaging Buyers in a Crowded Media Landscape

> "You now have a shorter attention span than a goldfish."
> - Kevin Spadden, Time Magazine

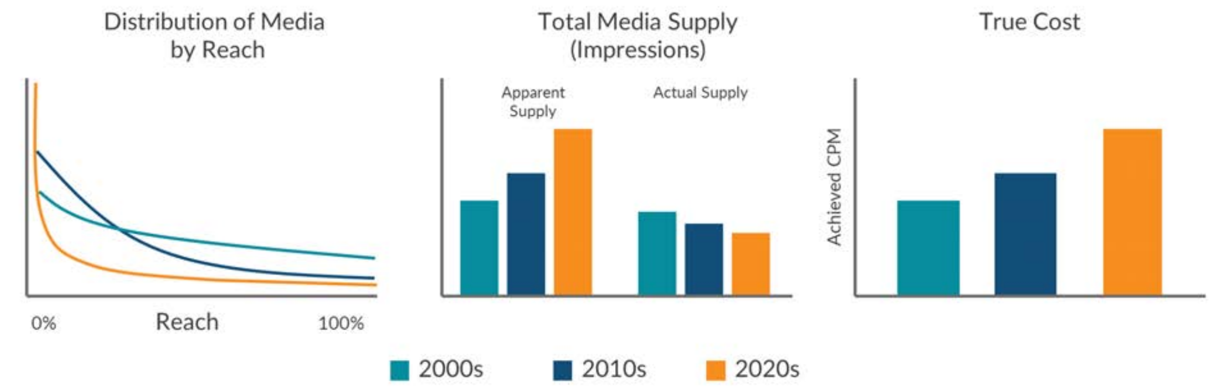
A recent Microsoft study asserts that modern consumers have an average attention span of eight seconds, one second less than that of a goldfish and 35% shorter than attention spans in 2000. The study also finds that modern consumers have traded dedicated attention for multitasking. Seventy-seven percent of people ages 18-24 agreed that as soon as nothing is distracting them, the first thing they do is reach for their phone. [33]

Today's consumers are more distracted and the content options available to them are increasing exponentially. Streaming video and audio, online print, games, and social media all vie for attention. This means that media supply is high—though this is not necessarily the case for media quality. In 1995, it was possible to reach 20% of a market with a 30-second primetime spot, and not break the bank. Advertisers also knew what they were getting; fraud (either soft or hard) was not a big issue. Audiences are fragmented and polarized, network television reaches smaller and smaller chunks of people, and digital advertising is extremely targeted. The result is a "long tail" media supply landscape.

This landscape manifests itself in three ways. First, it is necessary to have more granular media strategies to reach a significant number of people. In the figure below, the distribution of reach for the entire media landscape is notionally distributed. Twenty years ago, there were many options to achieve broad reach (teal line), and while there were certainly more long-tail options, most brands went for a shotgun vs. a rifle approach. Today (orange line), media opportunities are virtually all concentrated in the micro-targeted/long-tail area (first panel in the figure below).

Second, the total supply of impressions seems much higher than it was ten or twenty years ago. There is more content, and publishers are anxious to sell it. However, more people are choosing to subscribe to premium content for entertainment and information, removing advertisers from the equation. The result is that the actual supply of impressions has been decreasing, not increasing (center panel in the figure on page 22).

Finally, the interplay between these factors is driving up the true cost of media on a per-impression basis. Not all media is even real; ad and click fraud cost marketers $35 billion in 2020 and is expected to rise to $50 billion by 2025.[37] But, while ad fraud does happen, this isn't the main factor behind media's inflation. It's more expensive to reach a person because people are more distracted by too much content, much of it without any advertising potential at all (last panel in the figure).



Combatting Ad Fraud

Organizations like the Media Rating Council recommend accredited platforms that arm marketers against ad fraud. Secondly, bounty campaigns and pay-per-click (PPC) marketing add extra steps to measure marketing effectiveness which make it more difficult on fraudsters. Bounty campaigns require a high performance of the company in order for the ad vendor to see a return.[34] PPC requires that consumers click on an advertisement, preventing vendors from, for example, simply overlaying multiple digital ads on top of one another and charging companies.[35] Finally, fraudsters are better able to scam marketers focused on reach, whereas marketers seeking high-quality traffic and conversions are less likely to fall prey to fraud.[36] This is where channels like influencer and podcast marketing can be beneficial. Specific links and promotions can drive quality traffic with high conversion that is harder for bots to replicate, for example.

What should a marketer to do to maintain quality reach and frequency in the 2020s? Think big and plan small. **Thinking big** means remembering that the goals of marketing haven't changed. To win market share, it is still necessary to achieve a greater real share-of-voice than your competitors. Don't fall into the trap of putting too much focus on performance and direct attribution, thereby ignoring less targeted but still valuable audiences.

Planning small means realizing that to put together a high share-of-voice strategy, many small, targeted placements will be necessary. The complexity of putting together a high-quality, broad reach campaign has increased, but it is still possible.

Future-Forward Thinking

While it's impossible to cover every channel in one whitepaper, we examine five channels that will make up a big part of long-tail strategies for the next ten years below.

Audio (Radio & Podcasts)

With the rise of internet radio and streaming on platforms like Spotify and Pandora, audio advertising remains a viable option for media marketing. Radios are extremely accessible and 97% and 95% of Gen X and Millennials, respectively, listen to the radio throughout the week. The rise of popular podcasts greatly contributes to the sustained relevance of audio advertising. About 55% of Americans listen to podcasts and 54% of them are more likely to consider products advertised on the show.[38] Radio and podcast hosts gain the trust of their audience and can be highly effective in promoting brands.

While consumers are better at multitasking and do so more often, a drawback of audio advertising is that the listener is more likely to be preoccupied with another task while an ad is playing. Marketers must prioritize simplicity and reiteration for audio channels.

Moving Forward: Podcasts allow the host and listeners to form a unique relationship and serve as a more relatable marketing channel. Marketers should take advantage of the recent increase in demand for podcast content.

Video (Online & Television)

Traditional broadcast and cable television, along with "over the top" video streaming on platforms like YouTube (OTT), make up the video category. Video advertising has always produced good results both because of storytelling ability and context. Video is the ultimate storytelling medium; video allows marketers to bring a wholistic story right to the comfort of a consumer's couch, with sound, motion, and characters. Indeed, many brand campaign characters are as familiar to viewers as those from movies. Think of the Geico Gecko, the LiMu Emu, or the Budweiser Clydesdales.

Context is also critical. Prime time is sought after not just because of its audience but because of the audience's mood. At nine o'clock PM, viewers tend to be passive and accepting of messages. Using the language of Daniel Kahneman, they are "thinking fast" (or not at all); messaging can enter the subconscious with minimal rational interrogation.

Moving Forward: Gartner predicts that consumers will watch 20% fewer minutes of video advertising per day by 2023.[39] Brands should look to shorter-form video ads to avoid consumers losing interest in an advertisement. The increase in YouTube video streaming can be an effective source to repeatedly stream short videos and tackle the loss in consumer attention.

Social Media

Social media is a cost-efficient, targeted media tactic that yields easily measurable impact. On the other hand, these traits are driving up costs as supply stagnates. Marketers must tackle the crowded landscape of social media to make their brand stand out. Social media is also very politically charged in 2021; while advertising on Instagram might still be somewhat apolitical, Facebook's never-ending scandals seem bound to increase regulatory scrutiny and the potential for tainted brands.

Moving Forward: Influencer marketing is becoming a significant source of paid and earned reach. Like podcast hosts, consumers build a trust in influencers which makes for high-quality traffic and conversion rates from influencer marketing. Consumers are more likely to be driven to an action through social media and influencer advertisements and this trend is likely to continue in 2022.[40]

Paid Search

While paid search has one of the highest conversion rates of marketing channels, it is not always clear whether this marketing is incremental. Paid search is effective because of timing and need; consumers are already searching for an answer to their problem, you just have to offer the needed solution.[41] However, branded paid search—when you use your brand or another brand's name (known as *conquesting*)—is in many cases adding another layer of cost to a lead that was already on its way to conversion.

Moving Forward: Like social, paid search drives high conversion rates. This performance will outweigh its questionable incrementality, making it a key component of the lower-funnel mix for the next several years.[42]

Email

Email is perhaps the most cost-effective channel due its essentially zero cost per piece. It is targetable and content can be easily catered to audience segments. However, email's zero cost comes with a predictable side effect; the glut of junk emails filling inboxes is making it harder and harder for brands to break through. This makes relevance increasingly critical; in some ways, email seems destined to move from a mass medium to a micro medium, as algorithms in Gmail act as a relevance sifter, getting smarter and smarter about what consumers actually want to see.

Moving Forward: Email, particularly sign-up newsletters, continues to be a low-cost media channel that will still play a role in future marketing strategy. However, marketers should look to increase relevance of opt-in emails, spending time and money on content and avoiding the "spray and pray" tactics that have dominated the last decade.

5

Thinking Beyond a "One-Size-Fits-All" Measurement Solution

In 2019-2020, on average, market research and analytics made up 29% of marketing budgets–13% and 16%, respectively, according to Gartner. However, marketing research and analytics consistently underwhelm executives. The promise of data science applied to marketing always seems to overshoot actual results.

One trap to avoid is relying on a partial marketing solution for effectiveness measurement. For example, an online marketing solution will have reporting and dashboards. These should never be used to measure all-in marketing effectiveness. They are designed to work only with that application's native data, and will not scale to meet the challenges of upper and lower funnel, cross-channel measurement and optimization. Instead, build a **marketing effectiveness data warehouse** fed by a **marketing data lake**. We will get into more detail on what the difference between those two pieces is in a moment.

Robust Marketing Data

Measuring and optimizing marketing is impossible without relatively clean and consistent data. Any honest data scientist will tell you that they spend at least 50% of their time identifying, cleaning, and reformatting data. This will never go away; anyone who claims that we will get to a "pure, clean data" enterprise where data scientists and BI engineers simply create is trying to sell something. Data will always need to be munged. What we should instead be focused on is making sure that marketing data be three essential qualities: **Exhaustive, Keyed, and Labeled.**

> Data should be three essential qualities: **Exhaustive, Keyed,** and **Labeled.**

It seems obvious to say that marketing data be **exhaustive**—after all, it's critical to understand the entire marketing universe to get to a holistic picture of ROI. However, this is a special challenge when dealing with marketing data—because new channels are always being added. Thus, it's critical to think of the marketing data team as futurists; they need to see around the corner to anticipate the next channel, and make sure that the data model will be able to handle it.

It also seems obvious that data should be **keyed**; this is just a basic requirement of a relational database. This has unique meaning for marketing data, however. The main key is the individual or identity. Having a reliable way to identify one human across channels and pipeline stages is perhaps the biggest business in marketing technology—and the most challenging. Having a reliable identity key enables countless use cases, from audience profiling to multi-touch attribution to propensity modeling. In reality, it is extremely difficult to have one key that works across all systems; in most enterprises, there are a multitude of keys that work well for certain use cases but lose power with others. Even so, it is critical to minimize the number of keys, and maximize their assignment and accuracy.

Finally, and perhaps most importantly, marketing data must be aggressively well **labeled**. This might seem elementary, but more analysts' time is wasted on understanding what various data truly are than perhaps any other task. Concretely, we are talking here about metadata, or data about the data. For example, say we have a promotional table with information about email, direct mail, paid search impressions, and so on. For each row in the table, there might be ten or fifteen things we want to know about the stimulus, such as the creative format, the intended audience, the list, or model source, etc. It's critical to know these things—and this goes back to the marketing planning software interface. If the picklists aren't set up correctly up-front, the analysis on the back end will be extremely difficult or even impossible.

Separating the Four Key Jobs-to-be-Done

Once a robust marketing performance data environment is established, it's time to move to measurement and optimization. It's tempting to seek a one-size-fits-all analytical solution for marketing effectiveness, but there are really four key jobs that need to be done—and they require different toolsets and different personalities. A more equitable focus on these questions empowers better marketing decision-making.

WHAT?

"How much, how many" reporting showing progress-to-goals, conspicuous misses, and areas for increased investment

End-state: 80% automated

- Sometimes seen as table stakes, but it is difficult to get right
- Typically solved via:
  - A marketing performance database, with a well-built metadata infrastructure and...
  - Tabular OLAP-ish reporting such as Business Objects
- Dashboards can help—but they are not a panacea

WHY?

Answers to questions and analytics-generated insights that lead to big decisions

End-state: 20% automated

- Driven by data detectives—a specific archetype of data scientist who are impatient to get to meaningful answers with multiple levels of digging
- Empowered by:
  - Clean, comprehensive data, whether in "lake" or "warehouse" format
  - Fast compute environments and open-source, reproducible tools (R, Python)

WHO?

Audience-profiling, segmentation, and persona development

End-state: 50% automated

- A clear understanding of the audiences that the brand is successfully or unsuccessfully connecting with
- Based on a three-part combination of behavioral data, purchased data, and primary research
- Can leverage audience dashboards, but ultimately must be enhanced with clear, audience-focused analysis and storytelling

HOW?

Multi-touch attribution and marketing mix optimization

End-state: 50% automated

- What most business owners really want—a clear answer to what channels are driving what value, and how much more or less to invest in each to reach the efficient frontier
- Requires some combination of econometric time series analysis, last-touch attribution, and prospect-graphs
- Empowered, again, by fast compute environments and open-source tools

The **what** job is all about basic reporting. What were my campaign-attributed sales; what was my lead volume; etc. There are no advanced statistics involved; basic pipeline analysis is all that is required. This is the most automatable of the four marketing effectiveness jobs-to-be-done. Dashboards and tabular reports can be set up for executives to track these basic, linear data, with only modest quarterly or annual maintenance to keep up with changing data sources and metadata taxonomy.

The **why** job can only be done by data detectives (humans) and is perhaps the most challenging and least structured role. Once sales are down—or if sales unexpectedly shoot up—executives want to know why. The why job relies heavily on good data (see the previous section), but ultimately requires individual analysts leveraging flexible, fast, code-based tools to answer questions and convert those answers into visual stories for executives.

The **who** job is all about the actual humans that companies market to—the audience. This job is about creating actionable segmentations and real insights. To understand audience, it's necessary to have a good identity key (see previous section) to cross-reference marketing responsiveness, demographics, and even survey data. Perhaps the most important who job is keeping audience definition and segmentation simple and consistent.

Finally, the **how** job is really where the rubber hits the road with marketing effectiveness. The how job looks at how the firm got a specific sale (attribution), or flipping this question a bit, how the total revenue for a business unit, or coming into a specific capture channel, was generated by the entire marketing mix. The easiest way to get to the "how" is with pipeline or ratio analysis; simply tracking leads or customers as they progress through a linear marketing funnel. The costs of the various elements of the funnel can be added up, and divided by the value of a successful conversion, and voila—we have a cost per acquisition. But there is only so far that pipeline analysis can take you.

MMM & MTA

Beyond traditional ratio (pipeline) analysis, MMM and MTA are critical to understand the holistic and non-linear elements of multiple marketing channels. As of 2019, 72% of advertisers used MMM and MTA, the majority of which are more familiar with MMM.[43] While both methods are essential to marketing as we move into 2022, many companies struggle to even gather the data for a good model–or filter their data to the necessary levels. A majority of marketers do not feel they have all the data they need for MMM, while over 30% feel they have too much data to analyze.[44] MMM and MTA are more accurate using data measured over longer periods of time (a minimum of two years, ideally five or more)—a tall ask for startups, small companies, or companies that have rapidly changing marketing mixes.

However, companies should not be intimidated by wading into MMM and MTA. The techniques to estimate marketing effectiveness using time series (MMM) and discrete data (MTA) are relatively mature, and the benefits to understanding long-run brand impacts, cross-channel halo, and diminishing returns to scale are huge.

Open-source approaches to MMM and MTA—like those pioneered at MarketBridge—allow companies to leverage their own data infrastructure and data science teams, while leveraging expertise, packages, and libraries that grow over time.

Forward Thinking

Over the next decade, successful MMM and MTA efforts will increasingly rely on three key best practices: **reproducibility, hybrid frequentist-Bayesian estimation, and solid version control.**

Reproducibility means that the final output of an analysis is completely transparent, ideally using compiled, text-based code like R or Python, all the way back to the source data. The idea is that one analyst can present a report, hand the report to another analyst, and that analyst can then "knit" the report, precisely, with the push of a button. This has many advantages; work can be easily checked, allowing for greater quality; scenarios can be easily run by changing back-end queries; and manual PowerPoint and deck creation activities can be greatly reduced.

Most MMM approaches use a primarily **frequentist** approach to estimation. This is why MMMs typically need years of data for each channel to yield good results; even with daily granularity, there simply isn't enough variation in independent variables to estimate terms with confidence. This is problematic for new or low-spend channels, in particular. **Bayesian** approaches, leveraging prior expectations of responsiveness, can alleviate this problem. When new or sparse channels are added, Bayesian priors can be added to the frequentist estimates. Using reproducible approaches, analysts can both track coefficients and check for convergence. While not statistically "pure," this approach greatly improves the usability of models, especially in a dynamic channel environment.

Finally, **version control**, most notably the git language and the GitHub platform, have made MMM and MTA much more scalable. By keeping models in a "repo," companies can build on them much like software. As new channels are added, for example, teams can pull and remerged files to the master code base when estimations are confident. Companies can download or develop their own packages and libraries to support MMM generally, or a company's model specifically, along with documentation and readme files that ensure that future generations of analysts and data scientists will be able to successfully operate the models.

Conclusion

Marketing effectiveness measurement just might be entering a golden age. Essentially unlimited computing resources, significantly faster data storage techniques, and open-source data science code have put big data econometric and machine learning approaches within reach for even the smallest companies.

CMOs should remember that their role in the enterprise is nothing less than Chief Growth Officer. By broadening their aperture from funnel-based marketing focused on demand-generation to long-run growth—supported by a robust set of marketing effectiveness tools and best practices—a CMO can predict, measure, and achieve desired market share growth in the coming years.

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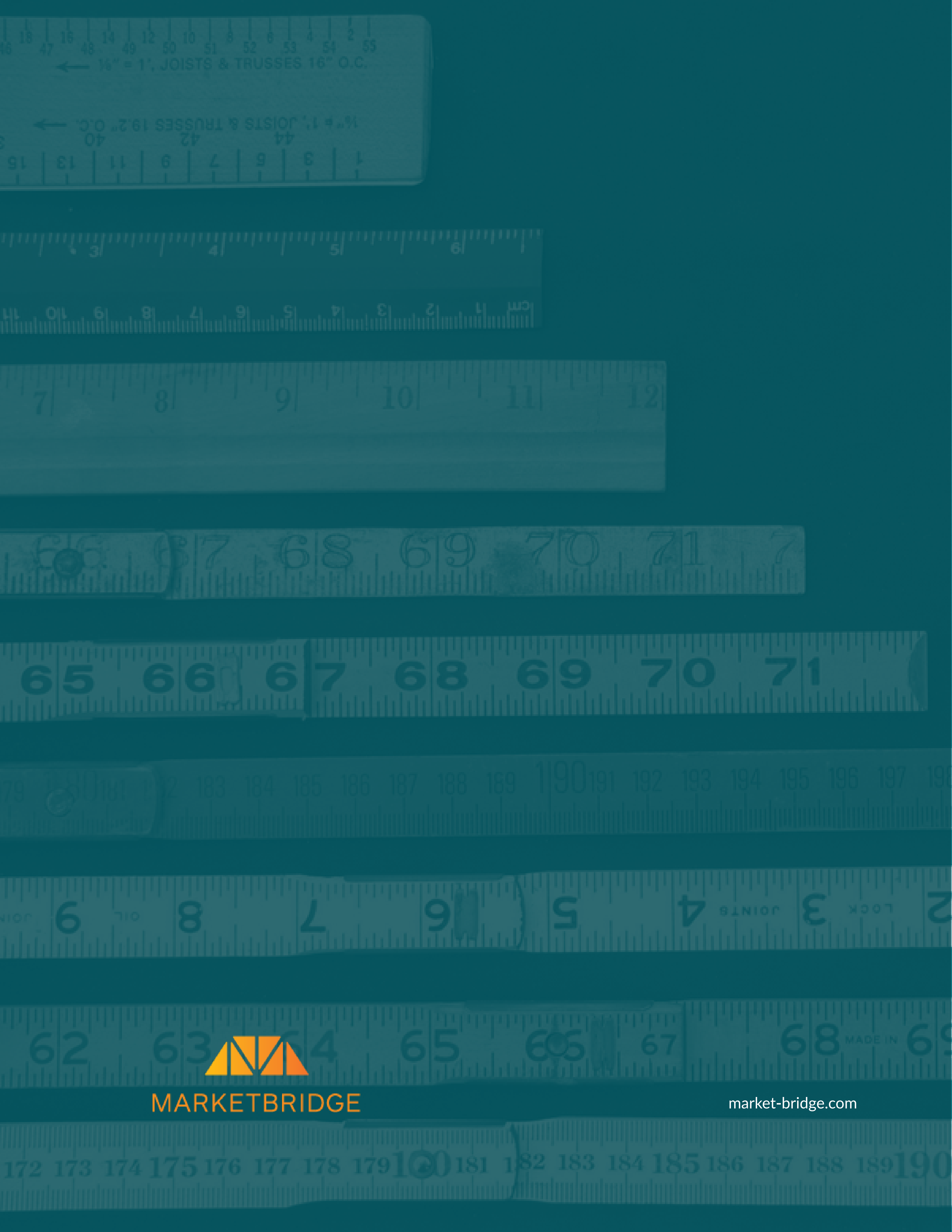

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