MOVING FROM BASIC TO
ADVANCED MARKETING ANALYTICS

Harness a 360-degree view of customers to implement attribution modeling, personalize content, improve product recommendations, and more.

CHAMPION
GUIDES

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PHASE 1: CREATE A 360-DEGREE VIEW OF CUSTOMER DATA

Every customer touchpoint produces valuable customer data, but with legacy data architectures purchase data, website traffic data, email and mobile app data, paid media data, loyalty program data, and data from other categories might be stored in different places. This makes it onerous for data scientists to build attribution models that draw from a variety of sources, and the siloed data makes it nearly impossible to create personalization models that rely on real-time information. Different business units tend to see data filtered through different dashboards, giving only a partial view of the larger picture.

Meanwhile, the rapid growth of the marketing technology stack over the last decade adds to this complexity. Tools that help marketers perform web analytics, build ecommerce platforms, play videos, optimize emails, and more also produce valuable data that often remains siloed.

To have a true 360-degree view of customers, marketers need to have both structured and unstructured data in their data warehouse. (Structured data is what's put into specific fields, such as what a salesperson might enter into Salesforce,

while unstructured data is free-form, such as the content of customer reviews.) They also need a single source of truth in the form of clean, merged data sets that a variety of teams can use.

Finally, it's crucial that this 360-degree view of the customer does not depend on engineering support. Advanced analytics require agility and speed, so business users need to be able to add data sources on their own without having to request engineering resources.

INGESTING FROM DATA SOURCES

To avoid burdening engineers with ongoing data maintenance, which can be costly and slow, marketing organizations need an ETL tool with prebuilt connectors to data sources. These solutions extract data from the original source (for example,

Facebook or Adobe), clean it or change it into a useful form for the company's purposes (such as converting full addresses into zip codes), and load it into their data warehouse.

ETL tools worth exploring include Fivetran, Segment, and Alteryx. When vetting ETL vendors, marketing organizations should consider what percentage of their data sources are included as prebuilt connectors, and whether users can add new sources without engineering help.

STORING THE UNIFIED DATA

Companies need a single platform like Snowflake's cloud data platform that can natively support semi-structured data (for example, JSON data from a website) and structured data in the same system. They also need an elastically scalable platform that enables large numbers of users to run a variety of concurrent workloads from personalization to attribution to ad hoc analysis. Scalability ensures that an organization has the compute resources to introduce advanced analytics without slowing down other processes.

ACCESSING AND QUERYING THE DATA

Many enterprises are starting to recognize that analytics must be available to users beyond a handful of data scientists and data analysts for data to drive results. Marketing organizations need a BI analytics platform such as Tableau or ThoughtSpot that can provide self-serve analytics to most team members.

Generally, an "80-20" rule applies to making analytics self-service for non-technical users. If they can quickly access the data they need on their own 80% of the time, the effort has been successful. (The other 20% of the time, they may need help from an analyst to write a complex ad-hoc query.)

To achieve an "80-20" balance, analytics teams must closely collaborate with business users to understand which operational dashboards and data sets they need and identify how to make requests self-service through dashboards, pre-canned queries, or pivot tables. Some companies have made tremendous strides in this direction. One public company provides a Snowflake account to every person in a business unit, for example.

Unfortunately, some BI solutions that call themselves "self-service" are not meant for business users with only general, basic data skills. Those kinds of incomplete solutions should be avoided. Business users need to quickly find information on their own and understand how campaigns are performing in real-time with specific audience segments without enlisting an analyst to help. If the process to access data is onerous, business users will be unable to incorporate data into decision-making, leading to missed revenue and inefficient marketing spend.

PHASE 2: OPTIMIZE THE ROI OF EACH TOUCHPOINT

Customer journeys have grown increasingly complex over the last decade due to the number of devices people use and the wealth of information available online. This has led to a huge increase in the number of touchpoints along the path to purchase. According to Think with Google, even the purchase of a candy bar could involve over 20 touchpoints.[3]

UNDERSTANDING ATTRIBUTION MODELING

Because consumers no longer follow a straight path from awareness to consideration to purchase, the practice of attribution modeling, or determining how much credit for sales or conversions should be assigned to various touchpoints, is increasingly important. For example, marketers need to know how much ROI to credit to Facebook, Google AdWords, and other media channels to determine whether they should increase or decrease spend with each partner.

Marketers can use many different approaches to attribution, from models that give full credit to the first or last touch to ones that apportion credit among various touchpoints. The optimal choice depends on the marketer's sales cycle and mix of the touchpoints involved. Many marketing organizations will start with a static allocation for each touchpoint (for example, two points for a website visit or one point for a Facebook ad impression) and then use data-driven modeling to update the allocations in real time based on how much each channel contributes to conversions.

But before organizations can use any attribution modeling, customer data from every marketing channel has to be kept in one unified location.

DRIVING ROI FROM ATTRIBUTION MODELS

Marketing organizations can build their own attribution models or select an off-the-shelf solution from companies such as Looker, Tableau, and Power BI. From there, they can make spend decisions based on actual revenue impact (specifically, how much each customer touchpoint is contributing to conversions).

In practice, this involves monitoring campaign performance on a weekly or even daily basis and reallocating spend to ensure the channels receive a share commensurate with their impact on sales and conversions. The marketing mix should then be rigorously evaluated and adjusted every month or quarter.

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[3] "How intent is redefining the marketing funnel." bit.ly/2MWFuPl

CASE STUDY: How Firefly Health Built a Powerful Attribution Model in Just Days

Trying to obtain data-driven insights into patient health, virtual healthcare company Firefly Health relied on a combination of MySQL Workbench and Google Sheets. Seeking a more scalable approach to data analytics, the company's analytics team began exploring data architecture enhancements, but siloed data sets prevented them from developing marketing attribution models and inhibited them from effectively tracking clinician productivity.

Realizing the need for a single source of truth for all of their analytics use cases, the team turned to Snowflake's cloud data platform.

Snowflake's easy-to-navigate interface, comprehensive documentation, and integration with Fivetran and Looker enabled Firefly to consolidate the Snowflake implementation into a one-day project. Ingesting data from AppsFlyer (a mobile attribution platform) into Snowflake via Fivetran enabled the rapid development of Firefly Health's marketing attribution model.

"Centralizing data in Snowflake allowed us to do the impossible and prototype in a matter of days," Firefly's Head of Analytics, Jacob Mulligan, said.

Now successfully deployed, Firefly Health's marketing attribution model provides campaign-level insights, enabling visibility into customer journeys and maximizing return on advertising spend.

PHASE 3: OPTIMIZE CAMPAIGNS ACROSS CHANNELS

Unifying customer data in one location is just the beginning. From there, companies need to be able to activate data across their marketing channels to enable personalization at scale. That means syncing customer data to channels like an ecommerce interface, Facebook, Salesforce Marketing Cloud, and other customer touchpoints to send personalized content, offers, and experiences that result in higher conversions and more revenue.

AVOIDING THE ENGINEERING BACKLOG

Personalization initiatives can be time-consuming and expensive when companies lack a single source of truth for their customer data. That's because engineering resources are often required to download customer information from one source and upload it to another for activation. For example, if a marketing organization wants its daily email blast to include personalized content based on recent browsing activity, it may need to sync thousands or even millions of values from its data warehouse to its email platform every night.

Meanwhile, engineering may be contending with a backlog of requests to sync new data to marketing channels, making it nearly impossible to have the agility and speed required for effective personalization.

SYNCING DATA TO MARKETING CHANNELS TO DRIVE INCREMENTAL REVENUE

To send the right messages to the right people at the right time, marketers need to be able to build audience segments and activate customer data on relevant marketing channels themselves, without having to submit an IT ticket and wait for engineering help.

Out-of-the-box solutions like Simon, AgilOne, and Segment, which have prebuilt connectors to platforms like Google, Facebook, and popular email systems, can help eliminate the need for engineering resources. Marketing organizations may also opt to build their own customer data platform solution, which comes with great flexibility and power, but a higher integration cost.

Giving marketers direct control over targeting and segmentation can dramatically improve campaign performance. For example, one Snowflake customer previously relied on engineering to update the audiences of their most important ongoing campaign. Because the process was so onerous, they could make only four adjustments per year. After implementing continuous optimization via Snowflake, campaign performance improved by 300%, resulting in millions of dollars in additional revenue.

After one custo[...] implemented cont[...] optimization [...] Snowflake, their ca[...] performance imp[...] by 300%, resulti[...] millions of dolla[...] additional reve[...]

PHASE 4: OPTIMIZE PERSONALIZATION WITH DATA SCIENCE

Attribution modeling and personalization of content, offers, and experiences are foundational applications of advanced analytics, but they're not the only ones.

HARNESSING PREDICTIVE ANALYTICS

Sophisticated data practitioners can harness predictive analytics to do things such as target ads and offers to segments that are similar to high-value customers, or identify existing customers at risk of churn and proactively improve their experience. They can also dramatically improve product recommendations on their websites, apps, and other touchpoints by using affinity scoring models to gauge people's interests based on what they've looked at in the past.

Machine learning can also improve ad-bidding optimization, product upgrade propensity scores, lead scores, and next-best-offer recommendations.

Cumulatively, these efforts will reduce costs and increase customer lifetime value.

Data science teams can tax legacy data platforms with resource-intensive queries that can cause delays and impact other parts of the business. Snowflake's separation of compute and storage, as well as its ability to automatically scale up by increasing compute power and scale out by adding more compute clusters, enables all teams to query the same data with no resource contention.

POWERING ALGORITHMS WITH A SINGLE SOURCE OF DATA

Algorithms are only as good as the data that powers them. As a result, marketing organizations need to give their data science teams access to clean, merged data sets in an environment where all customer data is available.
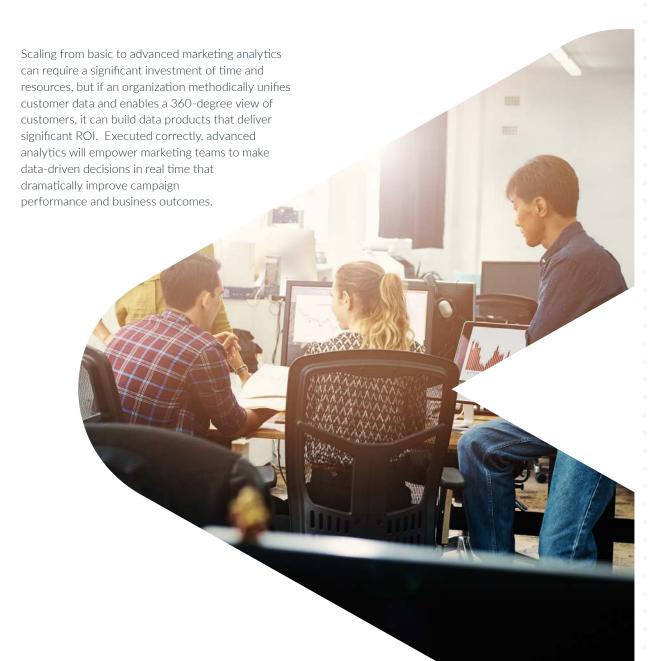
With Snowflake, data science teams can operate on a single copy of customer data; there's no need to copy or move data to a special environment. And since data doesn't need to move between environments, there's less of a delay between prototyping and deploying a model for marketing, sales, product experience, and other applications.

NEXT STEPS

Marketing organizations are under pressure to cut costs and deliver ROI, and they must increasingly rely on advanced analytics tools. These tools can help marketers reallocate spend across channels based on actual revenue impact; personalize content, offers, and experiences in real-time to increase customer lifetime value; improve product recommendations and category affinity scores; and harness predictive analytics to mitigate risk of churn.

Storing customer data in a single, queryable location is key to ascending the maturity curve. Organizations can begin by following three basic steps:

1. **Ingest from data sources:** Marketing organizations should procure an ETL tool with prebuilt connectors so they don't have to rely on their engineers for ongoing maintenance.

2. **Store the unified data:** Companies need a single platform that can natively support semi-structured and structured data in the same system and the concurrency and scalability requirements of all your marketing workloads.

3. **Make the data accessible to business users:** To be useful, analytics must be widely available to users beyond a small group of data scientists and data analysts. If business users must submit an IT ticket whenever they want to see real-time campaign data or combine data sources, the effort to harness advanced analytics is doomed.

Scaling from basic to advanced marketing analytics can require a significant investment of time and resources, but if an organization methodically unifies customer data and enables a 360-degree view of customers, it can build data products that deliver significant ROI. Executed correctly, advanced analytics will empower marketing teams to make data-driven decisions in real time that dramatically improve campaign performance and business outcomes.

ABOUT SNOWFLAKE

Snowflake's cloud data platform shatters the barriers that have prevented organizations of all sizes from unleashing the true value from their data. Thousands of customers deploy Snowflake to advance their businesses beyond what was once possible by deriving all the insights from all their data by all their business users. Snowflake equips organizations with a single, integrated platform that offers the data warehouse built for the cloud; instant, secure and governed access to their entire network of data; and a core architecture to enable many types of data workloads, including a single platform for developing modern data applications. Snowflake: Data without limits. Find out more at **snowflake.com**.