



HOW SNOWFLAKE POWERS YOUR PERSONALIZATION INITIATIVE

WHY MARKETERS ARE INCREASINGLY EMPHASIZING PERSONALIZATION

For decades, advertising relied on mass reach, but personalization at scale is now achievable. This means that marketers can now deliver tailored content, experiences, and offers to thousands or even millions of individuals.

According to Harvard Business Review, personalization can reduce acquisition costs by up to 50%, boost revenues by 5% to 15%, and increase the efficiency of marketing spend by 10% to 30%¹, which explains why marketers are investing heavily in it. The average brand spends 14% of its entire marketing budget on personalization, according to Gartner, with most brands planning to increase their spend in the near term.²

Although the positive results driven by well executed personalization initiatives are undeniable, successful implementation remains difficult. A recent McKinsey survey of senior marketing leaders found that only 15% of CMOs believe their company is on the right track when it comes to deploying personalization.³

For brands, the problem usually boils down to an inefficient data analysis ecosystem. Specifically, legacy data warehouses don't allow for accessing and querying information in real time or in parallel, which is critical for a holistic and up-to-date understanding of customers. In some cases, troves of consumer data (including purchase, CRM, paid media, website traffic, and loyalty program data) are held in silos, making it impossible to execute a complete personalization strategy.

This white paper explains how Snowflake Cloud Data Platform enables marketers to perform brand personalization at scale, while keeping customer data secure and enabling compliance with GDPR and other regulations. By enabling near real-time campaign analytics, enriching third-party data, and increasing the productivity of analytics teams, Snowflake helps drive significant increases in brand value and lifetime brand loyalty.

HOW NEAR REAL-TIME ANALYTICS SUPPORT PERSONALIZATION

By unlocking near real-time insights, you can gauge how your campaigns are performing with granular audiences and quickly identify any underperforming segments. From there, you can adjust the messaging delivered to those segments to improve campaign performance and ensure the content resonates with the audience.

Legacy solutions hinder effective testing and reporting

Legacy data warehouses are not agile enough to allow effective experimentation, which puts you at a disadvantage when optimizing your campaigns and implementing personalization programs.

Legacy ETL technology relies on scheduled batch jobs to process response data into your data warehouse. Batch data loads often take place just once a day (typically overnight when business usage is lowest), which can result in at least a day of latency. A one-day delay means you're unable to see how customers are responding to your campaign.

Consider the example of a national retailer promoting its new apparel collection. The digital marketing team has several versions of the ad based on age, location, household income, and other factors. The first reporting becomes available 36 hours after the campaign launches, and only then does the team learn that it's underperforming with high-value customers. They decide to use the version that performs best with this key audience, but they have missed hundreds of thousands of dollars of potential revenue.

How Snowflake powers real-time campaign optimization

The flexibility and scalability of Snowflake's cloud infrastructure enable near real-time data integration, making it possible to measure customer response and optimize campaigns much faster.

¹ "How Marketers Can Personalize at Scale." Harvard Business Review. bit.ly/2RsnAlf

² "Making Personalization Pay." Gartner. gtrn.it/36bgKe4

³ "The future of personalization—and how to get ready for it." McKinsey. mck.co/2Lui5oA

With Snowflake, there's no need to balance batch data loads with processing for business intelligence and business analytics. These jobs can happen in parallel, since computing resources can be added to available clusters as required. This means your data analysts no longer have to wait for batch data loads to run; they can check on response data any time. As a result, your campaigns will be more effective, driving higher ROI and keeping your top customers more engaged.

WHY THIRD-PARTY DATA IS CRITICAL FOR PERSONALIZATION

Your customer data has one major limitation: It only shows you the ways in which people interact with your own company.

Even if you are storing and analyzing brand data from dozens of customer touchpoints, that information can't provide a complete view into who your customers are and what drives their behavior. You can achieve a 360-degree view when you bolster your customer data with third-party data sources, but putting that into practice with a legacy data warehouse can be difficult.

Barriers to use of third-party data

A robust ecosystem of companies has emerged to sell demographic data, purchasing data, life-event data, and other data types to help build your customer profiles. This information can increase the ROI of your personalization initiatives.

However, getting external data into your environment and converting it into a usable format is challenging for technical teams, since ingesting data from even a single source can require considerable engineering resources over the course of weeks or even months.

Leverage more data, faster: How Snowflake delivers scalable data enrichment

Built on top of Snowflake's secure data sharing technology, Snowflake Data Exchange allows companies to publish a variety of data sets, which then become immediately available for use or purchase by other Snowflake users. Users gain instant access to always up-to-date data from a robust and growing pipeline of providers, including Weather Source, Wunderman, LiveRamp, and FactSet. This external data is kept up-to-date within the Snowflake platform, enabling you to quickly and easily enrich your own customer data to derive more detailed, unique insights.

By integrating your data with third-party data from the Snowflake Data Exchange, you can extract insights in a fraction of the time it would otherwise take to engage with external data sources. As a result, you can take campaigns to market faster, conduct real-time testing and optimization, and obtain a 360-degree view of customers to accelerate your personalization initiatives.

Snowflake Data Exchange



Data Enrichment Use Case: Snowflake and DemystData

Snowflake partners with DemystData to bring DemystData's marketplace of over 500 data products—including offerings from providers like Acxiom, Discover Org, Equifax, Experian, and Infogroup—to the Snowflake Secure Data Exchange.

"As most data-driven leaders know too well, discovering, contracting, evaluating, and deploying impactful external data can typically take six months and comes with a high fixed cost, even before the value is known," DemystData's CEO, Mark Hookey, said. "Through our partnership with Snowflake, we take all of the friction out of testing; leveraging more than 500 data products and over 100,000 unique attributes. All Snowflake users can now start to expand the use of external data for better business decisions."

Snowflake customers can use DemystData products to build on what they already know about their customers and refine their audience segments for ad targeting. Measures of income and affluence, employment, lifestyle interests, newspaper readership, and car ownership can be applied as targeting parameters on top of a company's own brand data. That means a retailer can segment its high-value customers based on their interest in European travel, for example, and promote trending European brands to that group based on their interest.

WHY AGILE ANALYTICS TEAMS SCALE PERSONALIZATION

Advanced personalization initiatives can generate \$20 in ROI for every dollar spent.⁴ To unlock this value, marketing organizations are scrambling to hire data science talent, and demand is far outpacing supply.

Adding data scientists and analysts can increase the delivery of actionable insights and personalization models if you have a flexible and scalable data infrastructure. However, if you have a legacy infrastructure, your data teams may be spending most of their time on low-impact data manipulation

tasks, such as transforming raw data to make it usable for downstream purposes. The cost of recruiting and retaining data analysts can significantly reduce your ROI.

The challenge of scaling data and analytics teams with legacy technology

Legacy data warehouses require that you schedule and queue jobs at different times of day to maintain stability and throughput, which can curtail the productivity of data scientists.

As organizations set up new analytics teams to drive initiatives like personalization, a new layer of queries and analyses result in the need for additional resources. Balancing ad hoc data science workloads against routine batch data loads and business intelligence reporting is complicated when you have a fixed number of servers.

Unrivaled concurrency: How Snowflake enables teams to deliver more models, faster

The modern cloud data warehouse eliminates concurrency constraints and frees your team to produce outputs as quickly as they can. With Snowflake, your team can automatically allocate different workloads to different parts of the platform, even if the workloads overlap. Cloud-based data warehouses can also instantly scale up capacity to deliver more computing power to the most robust personalization models to get results faster. This removes scheduling and batching concerns, allowing data scientists to work in parallel on more complex problems.

Ultimately, Snowflake gives your analytics teams the freedom to experiment, try new queries, and make new connections without fear of slowing down or breaking core activities. This is especially important for verticals like retail, where timely information is critical to success.

⁴ "Advanced personalization can generate \$20 in ROI for every \$1 invested: report." Econsultancy. bit.ly/34eGS6J

Modern Data Architecture with Snowflake

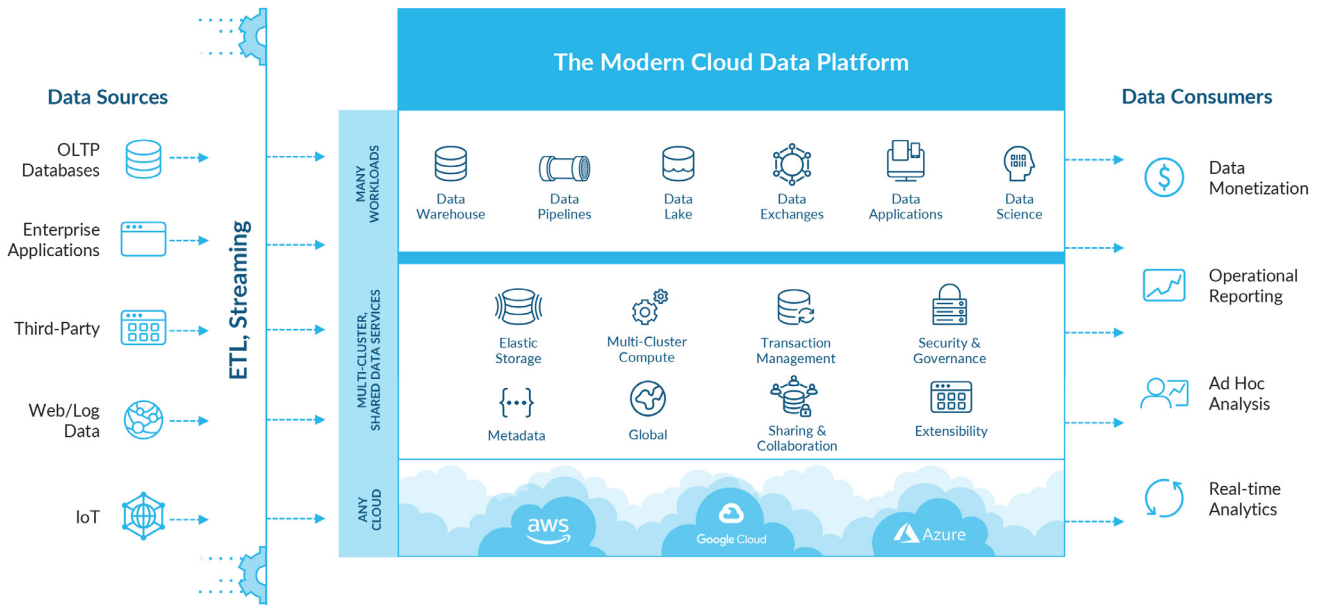


Figure 1: Snowflake powers and extends your data architecture, so you can easily get all your data into a single location and get all the insights from that data.

HOW SNOWFLAKE PROTECTS CUSTOMER DATA AND ENABLES REGULATORY COMPLIANCE

Your customer data is among your most valuable assets, but it can quickly become a liability. Failure to properly secure customer information can result in significant financial penalties and lasting damage to your brand.

Regulations like the EU’s GDPR and the California Consumer Privacy Act (CCPA) have set new standards for how organizations collect, store, and use customer data. In the case of GDPR, noncompliance can result in millions of dollars in penalties. As marketing organizations store and analyze PII, they expose their companies to risk if they don’t have stringent data practices.

Best-in-class data security

Without detailed customer data, your marketing personalization initiatives won’t be successful, and without a fully-secured data warehouse, your customer data won’t be safe. Securing your data

is just as important as setting your strategy for deploying it.

Snowflake is built on a multilayered security foundation that includes encryption, access control, network monitoring, and physical security measures, with comprehensive monitoring, alerts, and cybersecurity practices. Every aspect of the platform is geared toward protecting your data, both in transit and at rest.

“We came to the conclusion that we achieved better security with Snowflake than we could ever do on our own,” CapSpeciality’s CIO, Bob Asensio, said.

How Snowflake Protects Your Cloud Data

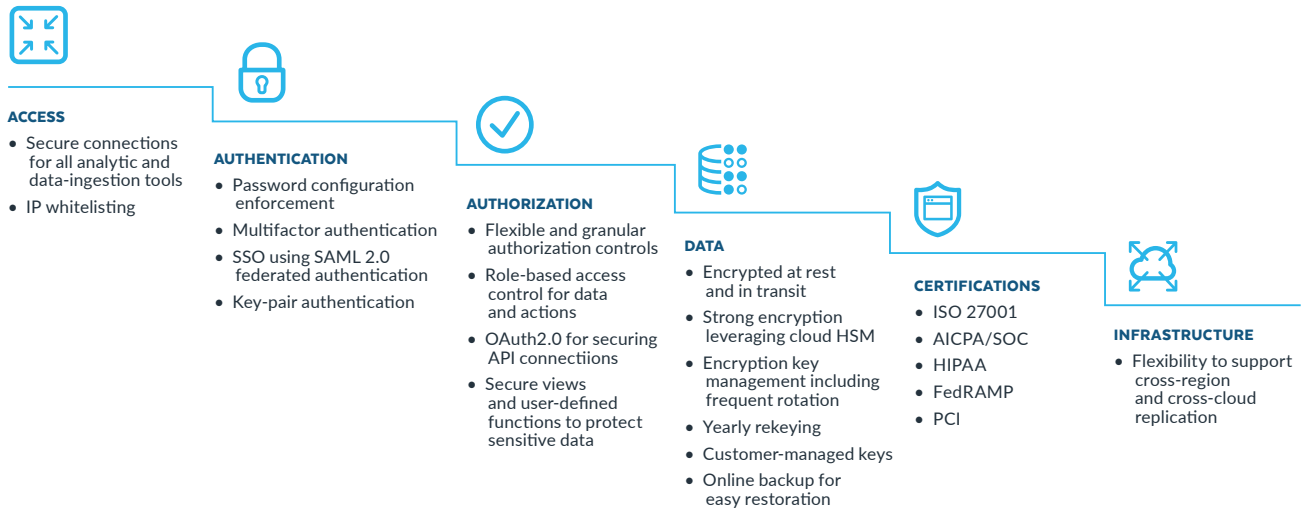


Figure 2: Security technologies are woven throughout every facet of the platform.

Data storage and processing

As a Snowflake customer, your organization's data is stored in an independent directory and encrypted using customer-specific keys, which are accessible only to you.

Snowflake isolates the virtual data warehouses running on its platform on separate servers. This ensures consistent performance and best-in-class security by preventing sensitive user queries from being run on the same machines.

Encryption everywhere

Snowflake encrypts your organization's data whenever possible. Data is initially encrypted when it's moved into a Snowflake-provided staging location for loading into its platform and encrypted at all times when not being used. Data is also encrypted when it's stored within a database object in Snowflake, when cached in a virtual warehouse, and when stored as a query result.

For data stored in a customer-provided staging location, Snowflake recommends that your organization encrypt the data. Snowflake encrypts any unsecured data when it is loaded into the Snowflake platform.

A SINGLE SOURCE IN SNOWFLAKE: SIMPLIFYING GDPR COMPLIANCE

Your legacy technology solutions probably require that your customer data be copied across multiple locations, stored in multiple locations, and cached in temporary environments. This process didn't raise compliance issues historically, but each layer needs to be documented and accessible now that GDPR is in effect. Your organization needs the ability to erase any source of data pertaining to customers upon their request at any time.

As a cloud data platform, Snowflake can serve as the single source of truth, powering all your customer data needs without having to replicate or move a single row of data from one system to another. This significantly reduces the complexity of GDPR compliance.

THE SNOWFLAKE DIFFERENCE

SECURELY QUERY YOUR CUSTOMER DATA IN NEAR REAL-TIME

By enabling personalized content and communications, Snowflake's cloud-built data platform lets you forge connections with your customers that endure beyond a transaction. By storing and analyzing customer data within Snowflake's platform, you can ensure that high-value customers get the best possible experience, resulting in more revenue and significantly lower churn.

To summarize, Snowflake powers your personalization initiatives in three key ways:

- **Near real-time campaign analytics**, which let you adjust messaging and creative on a granular basis to improve performance
- **Scalable data enrichment**, which gives brands instant access to third-party data sources to derive more detailed and unique insights into their customers
- **More productive analytics and data science teams**, which results in increased delivery and utility of personalization models

At the same time, Snowflake mitigates the risk of a data breach or regulatory noncompliance, which can damage your reputation and result in fines. This is crucial now that your brand is part of customer data sets that are several times larger than ever before.



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. More than 2,000 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 only 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](https://www.snowflake.com).

