



Google Cloud strategy guide: 5 learnings for your SAP retail workloads

Google Cloud



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Retail's changing landscape

Driven by customers who expect a seamless experience between online and in-store, the retail industry is transforming. Retailers are searching for innovative ways to improve and personalize the customer experience and leading retailers are turning to cloud technologies to help meet their digital transformation needs.

Cloud isn't just about technology; it's a fundamentally new paradigm that places human creativity and ingenuity at the heart of the modern retail enterprise. With the total global digital commerce market opportunity nearing \$4 trillion, the timing has never been more urgent to decide on a cloud strategy and to make the move.¹

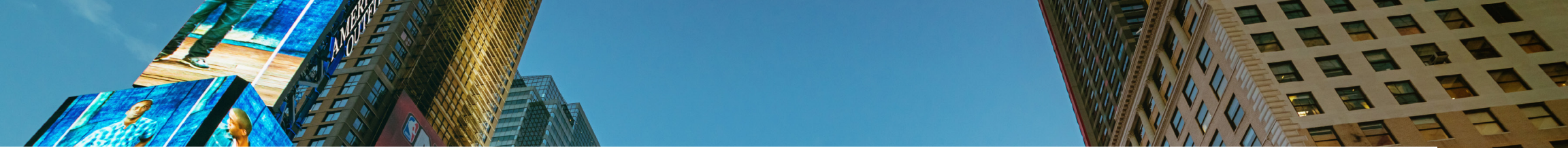
For retailers running on SAP, they are dealing with the additional complexity of whether to move SAP workloads as a "lift and shift," migrate to SAP HANA and move to a public cloud as a single step, or consider migrating to a hybrid or multi-cloud environment.

Realizing a successful SAP transformation

SAP customers in the retail industry need both the technology and the people and processes that form the unique fabric of their organization. They need a stable, secure, and efficient cloud foundation in order to innovate their processes and customer experiences. This requires an agile, flexible cloud that can deliver seamless, omnichannel retail experiences. The ideal cloud will add the greatest value to existing SAP data and services from advanced, built-in analytics to the best in machine learning and artificial intelligence.

SAP cloud deployments don't need to be complicated or implementations lengthy. Choose a cloud partner that understands the complexity of migrating SAP environments to the cloud, takes action to simplify the journey, and helps you grow your business in today's ever-evolving world.

¹ Statista, Digital Commerce Worldwide, 2019



Five key learnings from Google Cloud retail industry migrations

From our experience working with retailers of all sizes, around the globe, we have identified five key learnings that can help retailers migrate and manage their SAP environments in the cloud. Each learning includes a real-world example of how Google Cloud retail customers have solved challenges and met their migration and innovation goals.

#1 Advanced analytics

#2 Secure by design

#3 Meets your needs, not the vendor's

#4 Seamless retail experiences

#5 Future-proof and innovative



Learning #1: Add value to your SAP data and solutions with advanced, built-in analytics technologies.

Retailers generate vast volumes of valuable data, often across disparate systems. The ability to uncover hidden insights could be the difference that makes or breaks the business.

Employ powerful analytics with machine learning and AI for SAP solutions.

This is where the cloud presents a huge opportunity for innovation. The ability to process, enrich, and analyze data at scale, and leverage advanced machine learning and artificial intelligence capabilities, can transform how a retailer operates.

For retailers on SAP systems, choose a cloud partner that adds value to your SAP investments. Ensure your provider offers powerful analytics with advanced machine learning and artificial intelligence capabilities that easily integrate with SAP systems, and can enrich your SAP data with other sources so you gain the deepest intelligence into your operations and customers. Cloud-based intelligence turns data from disparate sources into innovative digital solutions.



Metro: Effective cloud migration happens at the customer's pace.



METRO, one of the largest B2B wholesalers and food specialists in the world, serves businesses in 25 countries. In 2017, METRO decided to embrace digitalization as a way to better understand customers and deliver on their needs. The company began a migration of its entire e-commerce platform to Google Cloud to improve performance, scalability, and compliance. Now, the company leverages tools like BigQuery to generate data-driven insights for more personalized customer experiences.



METRO also uses Google AI and machine learning technologies to better serve customers, many of whom are restaurant owners. With machine learning, METRO can identify when a restaurant is out of a particular ingredient and automatically order more. Sven Lipowski, Unit Owner Customer Solutions says, “By connecting data points, we can offer advice like hygiene laws for certain foods, or information on provenance. We can even integrate their local weather forecast so a store doesn’t run out of ice cream on a sunny day.”²

METRO is continuing its journey with SAP on Google Cloud by consolidating 100 different SAP instances into one SAP S/4HANA system. The previous solution was complex, with finance systems that were unique to each country. Updates or system testing required time-consuming and costly coordination across numerous teams.

Migrating away from on-premises to one centralized cloud-based system, METRO can support everything from classical role-based accounting to the use of cognitive tools. Not only does this have technical advantages, it helps improve collaboration between teams.

² Google Cloud, METRO: Stacking technology and business intelligence to simplify customers’ lives

The collaboration between Google Cloud and METRO is not only about technology. It’s also about shaping our culture. Google is a relevant partner for us.”

Timo Salzsieder
CIO/CSO, METRO

Learning #2: Make availability and security central tenets in your journey to the cloud.

Retailers move in a fast-paced world and they need a cloud solution that can keep up. When any measure of downtime can damage a retailer's reputation and bottom line, availability and security are critical must-haves.

Ensure high availability and SAP certifications.

Look for a cloud provider that offers proven high availability and a 100% SAP-certified, virtualized infrastructure. This helps reduce risk by ensuring reliable service and the ability to scale your infrastructure as demands and requirements change.

Keep customer data secure.

Examine the controls and capabilities that cloud vendors provide across the spectrum of cybersecurity: infrastructure security, network security, endpoint security, data security, identity and access management, application security, security monitoring and operations, and governance, risk and compliance.



Secure by design.

Google Cloud was named a Leader in the Forrester Wave: Data Security Portfolio Vendors, Q2 2019 report.³ As one of the largest privately managed networks, Google Cloud minimizes the risk of customers being exposed to the inherent risks of the public internet.

Google Cloud is unique in automatically encrypting data at rest—from store sales to personnel records—by default. Retailers can use [Cloud DLP](#) to automatically discover and redact sensitive data like credit card numbers with 90+ predefined detectors, as well as a continuum of encryption key management options to protect sensitive data, including sales, transactions, and payment card information.

“While most companies say they value security, I see too many try to save money in this area by thinking all cloud security is created equal. It’s not. Google invests roughly \$2 billion annually in security. With Google Cloud, encryption is a default rather than an option, which is not true for other public clouds.”

Tomas Kandl

Ecosystem & Partnerships Managing Director, Accenture

³ Google Cloud, Google Cloud named a leader in the Forrester Wave: Data Security Portfolio Vendors, Q2 2019 report, 2019

The Home Depot: Reimagining the possibilities with secure, data-driven decision making.



The Home Depot is the world's largest home improvement retailer, with 2,300 stores globally and 150 supply chain facilities in North America alone. While The Home Depot is a retail company, technology is at the heart of the business.

The team wanted to extract more value from their technology investments and operational telemetry. Their complex IT landscape harbored a wealth of valuable data: metrics and traces from applications, DNS queries, logs from systems of servers, in-store registers, and mobile devices.



The Home Depot needed a solution that could collect data once and provide access to multiple teams. It had to be able to handle scale, have multiple modes of data ingestion, offer users a fairly shallow learning curve, and be fully encrypted and secure.

BigQuery was, as David Narayan, Distinguished Engineer at The Home Depot describes it, “The only service that met all of these considerations”.⁴ The Home Depot has now reimaged what is possible with a data warehouse and built a secure and reliable experience for thousands of technology associates.

Running for over a year, Narayan outlines its success: “It’s easy for us to load 10s of terabytes and the data retention is simply a setting per table. Our query performance is down from hours and days to seconds and minutes.”

Using the petabyte-scale storage of BigQuery, The Home Depot has gone beyond traditional use cases to fully empower its organization with a planet-scale application and network log monitoring system for their organization. The Home Depot also runs SAP Customer Activity Repository (CAR), SAP Extended Warehouse Management (EWM), and SAP BW in production on Google Cloud.

⁴YouTube, Reimagine Data Warehousing: How The Home Depot is Using BigQuery to Scale (Cloud Next '19), 2019

We felt confident to be able to partner with Google to discuss or uncover any challenges that we might expect.”

David Narayan

Distinguished Engineer, The Home Depot

Learning #3: Find a flexible cloud solution that meets your needs, rather than the vendor's.

Retailers have a myriad of needs when it comes to technology, and many have an IT stack that reflects that. From inventory management, to ecommerce websites and point of sale systems, complexity is an unavoidable legacy in retail.

In moving to the cloud, SAP customers in retail may look to modernize these and other areas of their business. This can include decommissioning, consolidating, or even selling on-premises data centers, migrating existing virtual machines (VMs) or upgrading them to containers, or transforming applications into cloud services.

Flexible cloud infrastructure to only pay for what you use.

Choosing a pay-as-you-go model adds flexibility to your cloud solution, but not all cloud vendors offer true consumption-based billing. Look for a vendor that offers per-second billing, with no upfront costs or termination fees. The second you turn off services should be the second you stop paying for that service.

Google Cloud offers customer-friendly pricing innovations, like an automatic discount of up to 35% off on-demand pricing when consumption is sustained.

Ensure the best cloud for your needs.

The ideal cloud provider is your trusted advisor. They should deliver flexible solutions that support implementation at your own pace and provide the resources needed for innovation that are specific to your business, while being highly cost-efficient.

Also, you need a cloud solution that operates across systems and vendors, so you can leverage your SAP data with other sources of data for deep intelligence that leads to better, faster innovation. Look for a cloud vendor that is committed to an open cloud so you can set up your optimal solution without being locked into a single provider.



The modern application platform for retail.

Anthos is the open application platform that empowers you to modernize your existing applications, build new ones, and run them anywhere.

Built on open source technologies pioneered by Google, Anthos enables consistency between on-premises and cloud environments.

Anthos is a 100% software-based solution, so you can quickly get up and running on your existing hardware with no forced stack refresh. Anthos helps accelerate application development and strategically enables your business with transformational technologies.

Multipharma: Delivering unique solutions to best serve customers' needs.



Multipharma is the largest pharmaceutical retailer in Belgium, operating more than 250 stores. Part of the Multipharma promise is the fast delivery of orders to pharmacists, the result of investing in a state-of-the-art retail distribution warehouse and next-generation robotics and automation.

Multipharma took a unique path to partner with Google Cloud which reflects retailers' needs for a migration journey that works for them.

When transforming its legacy back-end SAP system to SAP HANA, Multipharma decided to move from a private to a public cloud to increase flexibility and reduce costs. Multipharma benchmarked cloud providers



and chose Google Cloud because of its superior virtual machine sizes and pricing structure, both of which were more flexible than the competition.

Innovation was another defining factor, with access to Google's industry leading capabilities like the monitoring and management tool, StackDriver. Plus, Google Cloud's SAP certifications and commitment to deeper integrations made the final choice a simple one.

The migration of SAP workloads to Google Cloud is phased. First, a development environment was completed on which the team will conduct agile testing before finishing the production environment, the second phase.

Multipharma is already experiencing greater flexibility and has its eye on the future. Once the new environment is operational, Multipharma will shift focus to innovations that can future-proof their business, like optimizing ecommerce and creating new applications for their customers.

This is really the beginning of our Cloud journey. Once we have completed our SAP journey to Google Cloud, the next step will be thinking about offloading our current workloads which we run at the private cloud to Google Cloud. We're also considering replacing their current SAP BW solution with BigQuery. That's the ambition for the next couple of years."

Dirk Dussart

Lead Enterprise Architect, Multipharma

Learning #4: Ensure your cloud provider can meet customer expectations for seamless retail experiences.

Retailers need a cloud provider that can deliver on the promise of omnichannel across the customer journey, support and enhance SAP applications, and deliver the flexibility and support necessary to meet spikes in demand.

Scale up or down instantly to meet demand.

A primary consideration for retailers moving to the cloud is how to meet the demands of both preplanned sale days, like Black Friday and Cyber Monday (BFCM), and unexpected surges in traffic.

An average day of retail sales in the U.S. totals about \$1.4 billion. This leaps to \$6.22 billion on Black Friday and up again to \$7.9 billion on Cyber Monday.⁵

⁵CNET, Cyber Monday beats US records with \$7.9billion in online sales

When traffic hits these peaks, availability or scalability issues can result in millions of dollars of lost sales. Avoiding downtime — along with the accompanying reputation damage, unhappy customers, and stressed, overworked IT teams — is crucial.

Your cloud platform needs to instantly increase and decrease in capacity, smoothly and automatically. Every retailer sitting in a BFCM war room knows that, even at peak demand, a slower sales cycle is never far off the horizon. You want the option to scale down the moment you need— without difficulties or financial penalties.

Increase shopper engagement.

Identify and offer the most compelling products and services – unique to each individual customer – by combining customer insights from past transactions, captured in your SAP commerce and merchandising systems, with external online interactions.

Greater relevance leads to increased sales and higher brand loyalty, while retailers gain predictive insights into market share evolution and revenue impacts related to scaling call center capacity and shifting outbound strategies.



**MediaMarktSaturn: Data-driven,
omnichannel solutions that scale.**

MediaMarktSaturn Retail Group

MediaMarktSaturn Retail Group (MMS) is a leading consumer electronics retailer, operating in 14 countries and generating annual sales of approximately €21.5 billion. In a strategic shift to becoming a true omnichannel retailer, MMS sought to unify its vast data sets for easier access to insights that could guide the business and better serve customers.

Google Cloud was chosen as the cloud partner most closely aligned with their vision. As Managing Director, Dr. Johannes Wechsler, puts it, “The Google Cloud team shares the same outlook as us and really helped us get into an engineering mindset.”



With the SAP suite critical to the business, MMS wanted to ensure maximum availability and supportability when running on Google Cloud. The Google Cloud Professional Service Organization's "Cloud Sprint for SAP" gave MMS the knowledge to assess the readiness of Google Cloud to run its SAP workloads and migrate its SAP BW on HANA to Google Cloud.

Two months after the Cloud Sprint, MMS successfully went live with SAP on Google Cloud.

Now, using Google Kubernetes Engine, BigQuery, and Google Cloud SQL, MMS can easily store, mine, and analyze data for insights on how best to respond to customer needs.

MMS scales up to meet the demands of heavy traffic and back down again, without sinking resources into hardware. Deploying new instances and updates takes minutes, instead of months, with no disruption to the customer experience.

Conversion rates have improved by 30 percent due to a combination of optimized search technology and high-performance data handling. Armed with the power to collate and standardize its data, MMS has started to explore advanced enterprise solution suites like Progressive Web Apps to give customers faster loading, more engaging web experiences.

We work so much faster now. We can set up a configuration file and launch a fully-featured production environment in just a few minutes. We went from doing two updates a month to two hundred."

Dr. Johannes Wechsler

Managing Director, MediaMarktSaturn

Learning #5: Future-proof your cloud strategy with a partner that can support your overall business goals.

Above and beyond the technical features a platform provides, or the approach the provider takes, deciding on a cloud partner should ultimately be about choosing the one that aligns most with your overall business objectives for today and tomorrow.

Organizations are realizing that the cloud isn't just about technology, it's also about culture, co-innovating, and sharing a vision for the future. Particularly for retailers, cloud isn't limited to isolated IT projects. To realize its full potential, cloud has to transform the retail value chain.

Integrate with SAP retail.

Retailers running on SAP are already managing their inventory based on demand. Inventory management can be greatly enhanced by adding data like Google analysis of magazine images, ad effectiveness metrics, YouTube, and internet searches to better understand demand for a particular product.



This level of insight is invaluable for retailers operating in areas such as fast fashion, where new products need to be introduced every few weeks. It also provides the information retailers need to sort inventory by location. Based on demand signals, you can answer questions like, “should we stock more blue or yellow shirts in Austin, TX?” Your cloud provider should recognize, and invest in, innovations that will make a difference to your bottom line.

Leverage AI in new ways.

Retailers know that personalized experiences are crucial to building trust and loyalty with consumers and the potential for AI in this area is only starting to be realized. New developments are changing how we shop and making personalization at scale possible. AI-powered recommendation engines can automatically deliver hyper-personal recommendations, delighting customers and driving sales.

Intelligent insights

Google Cloud and SAP worked together to develop Dynamic Assortment Planning, a solution that helps retailers deliver innovative experiences with insights into behavior and demand. Google Shopping reporting gives planners intelligent insights to enhance inventory, boost customer satisfaction, and increase profitability.

Loblaw: Building the future of personalized customer experiences.



Loblaw, Canada's largest retailer with over 2,000 stores and a growing ecommerce business, based its personalized product recommendations on previous activity but this approach did not always accurately reflect a customer's current needs. The company saw a major opportunity to build loyalty and gain a competitive edge with more timely data analytics. Rather than expanding its on-premises data centers, Loblaw decided to migrate to Google Cloud in phases – the first involving its online grocery system.



Loblaw is also using BigQuery to conduct real-time analysis of customer data to generate more relevant offers. There has been a 4x improvement in online grocery site performance, while site capacity has increased threefold.

Now, employees focus on driving the innovation Loblaw needs to succeed. The move has freed up 50 percent of its Site Reliability Engineers' time, which they use to create better customer experiences.

Partnering with Google Cloud, Loblaw continues to grow and provide convenient and rewarding shopping experiences for its customers.

Google Cloud opens up a whole new world, helping us spur innovation while reducing our time to market for new features that make shopping fun and engaging. It gives us the speed and flexibility we need to drive change.”

Hesham Fahmy

Vice President Technology, Loblaw

Transforming retail on SAP with Google Cloud

Retail is in the midst of a major transformation, and retailers on SAP systems are working with Google Cloud to be at the forefront of this shift, using technology and innovation to guide their digital transformation.

In fact, seven of the 10 largest retailers worldwide partner with Google Cloud for their digital transformation.⁶ We offer a robust set of solutions for retailers to quickly take advantage of cloud capabilities for specific use cases. The solutions are focused around six core pillars in the retail value chain and aim to help companies apply cloud technology to get the most from each.

Working with the top global retailers, Google Cloud has developed the expertise to deeply understand the nuances of leading people, process, and technology through a journey to cloud. We can help you accelerate your cloud migration, and de-risk the journey.

Through our partnership with SAP, we enable retailers to run reliably on a highly secure infrastructure that minimizes downtime risk while offering an open architecture that supports hybrid and full cloud scenarios.

Google Cloud also has a robust portfolio of SAP-certified VMs optimized for SAP HANA to safeguard your investments and provide the flexibility to scale with your ever-changing business requirements.

In a crowded, competitive landscape where consumers and technology continue to change the rules, Google Cloud provides the leading-edge capabilities and ongoing innovation to empower retailers to get – and stay – ahead.

⁶Google Cloud, Google Cloud Next '19: Welcome to the future of digital transformation, 2019

Google Cloud for retail



Logistics, fulfillment, and delivery

Real Time Inventory
Management & Analytics
Smart Supply Chain



Store operations

Frictionless Checkout
Empowered Associates
On Shelf Inventory Tracking



Product lifecycle management

Demand Forecasting



Customer acquisition

Cloud for Marketing (for Retail)
Targeted Digital Marketing
Contact Center AI



Omnichannel commerce

eCommerce Hosting
Vision Product Search
Recommendations AI
Digital Shopping Assistant



Merchandising and assortment

SAP Customer Activity Repository (CAR) on Google Cloud
Intelligent Inventory
Dynamic Assortment Planning



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Google Cloud