Retail Organizations Improve Productivity And Supply Chain Efficiencies By Hosting SAP On Google Cloud

Cloud-Enabled Agility Drives Retail Organizations To Invest In SAP On Google Cloud

According to Forrester, improving the use of data insights in business decision making is a high priority for global retail and wholesale executives. However, only one-third are actually using data for better customer insights. SAP applications are a key source of critical data for retailers, yet they face a number of challenges as they try to unlock and incorporate the data into their strategic decision-making processes.[1]

As retail environments become more digitized and sales continue to migrate online, retail organizations are seeking agile, cloud-based solutions to manage their critical SAP infrastructure and unlock the data. Cloud-based solutions such as Google Cloud enable retail firms to remain competitive by shifting the burden of infrastructure management away from internal IT teams, allowing them to focus on valuable initiatives like real-time inventory and supply chain tracking and improving communication between stores to provide a seamless customer experience.

A technical development manager in the consumer packaged goods (CPG) industry commented on the efficiencies that migrating its SAP infrastructure onto Google Cloud has afforded the IT team: "We don't have to spend the same amount of time dealing with vendors, sizing hardware, and having discussions about all of that stuff. We can deploy on Google Cloud very quickly. Our four-person team can focus their workload on other things now, and I would say overall effort spent on maintenance has been reduced by around 80%."

To highlight some of the ways that migrating and running SAP on Google Cloud can help retail organizations attract, retain, and delight customers, Google Cloud commissioned Forrester Consulting to conduct a Total Economic Impact™ (TEI) study and examine the potential financial impact of migrating and running SAP on Google Cloud for Google Cloud customers. You can download the full TEI study and an infographic highlighting the results.

For this spotlight, Forrester interviewed decision makers at three retail organizations with experience migrating their SAP infrastructure from an on-premises solution onto Google Cloud. Interviewed retail organizations included the following:

Industry	REGION	INTERVIEWEE
Consumer electronics	Europe	Product owner
Consumer packaged goods	Europe	Technical development manager
Food and beverage	MENA	IT director

This spotlight will focus on the retail journey with hosting SAP on GCP and its value to retail organizations.

SUMMARY

Spotlight on the impact of hosting SAP on Google Cloud for retail organizations. Based on a commissioned study, "The Total Economic Impact SAP on Google Cloud," July 2020.

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Technical development manager, consumer packaged goods

Investment Drivers For Retail Organizations

Interviewed retail decision makers at organizations with on-premises solutions for managing their SAP infrastructure faced higher costs for maintaining their legacy solutions, a weaker security posture, and a less flexible workforce.

These factors drove retail organizations to begin migrating their SAP infrastructure off their expensive on-premises, hardware environments onto Google Cloud.

› **Improving the resilience and reliability of inventory management to meet customer expectations.** Interviewed retail organizations sought to enhance their ability to meet customer expectations around delivery and real-time inventory updates by streamlining data transfers between store locations and HQ. In complex supply chain environments, interviewed retail organizations paid a high price for delays that occurred during information transfers between their stores and the central inventory database. Retail decision makers stated that they wanted to invest in a solution that would make their SAP infrastructure more responsive to real-time changes in their product stock and avoid costly delays and limitations associated with legacy, on-premises infrastructure.

An IT director in the food and beverage industry commented on the headaches unplanned downtime was causing the organization before migrating their SAP infrastructure onto Google Cloud: "Sometimes we would have downtime issues, and it would be disastrous, especially in the early morning around 1:00 a.m. or 2:00 a.m. This is a busy time when restaurants are closing, trucks are being loaded, and so on. If these issues prevent our trucks from loading, or if they are not able to enter cities before a certain time due to local regulation, all of our trucks will be stuck and will not be able to deliver necessary supplies to our stores and warehouses. These downtime events can be extremely expensive."

› **Enhancing productivity for frontline and business workers.** In the fast-paced retail industry, improving employee productivity and efficiency can lead to a competitive advantage. Interviewed retail organizations wanted to make their SAP infrastructure faster and more reliable for both employees in the field communicating with HQ and for those who used SAP to conduct inventory reporting. Google Cloud's ability to host SAP infrastructure offered the processing power and dynamic responsiveness required to ensure that employee productivity was not hindered by hiccups in the supply chain or slow reporting caused by bandwidth issues.

› **Improving security posture.** With SAP infrastructure responsible for hosting several business-critical processes on a day-to-day basis, establishing a modern security architecture for SAP infrastructure was top of mind for interviewed retail decision makers. Interviewees from retail organizations stated that they wanted best-in-class security capabilities for their SAP environments, leading them to divest in their legacy, on-premises solutions for hosting SAP in favor of the more robust cloud-based security that Google Cloud provides.

Results Realized By Retail Organizations Using SAP On Google Cloud

After partnering with Google Cloud and implementing the migration, retail organizations began experiencing the benefits of hosting SAP on Google Cloud. Interviewed retail organizations shared the following impacts after implementing the solution:

> "It's like we are running 24 hours a day now. The connections between our head office and factories are working very well. It's been almost seven months now, and we haven't experienced any downtime since we've moved our SAP infrastructure onto Google Cloud."
>
> *IT director, food and beverage*

> "The backup is one thing that gives me peace of mind now, because it is much easier than before. Now, I can monitor it. I have some analytic views, which shows me how the backup is made, the backup quality, and similar metrics. We are happy about the decision we've made about moving to Google Cloud."
>
> *Product owner, consumer electronics*

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- **Eliminated unplanned downtime.** Retail organizations quickly realized their cost savings by avoiding unplanned downtime, as these events could cause massive disruptions in the supply chain. Interviewees stated that Google Cloud's ≥ 99.99% uptime service-level agreement (SLA) had prevented delays they had experienced in the past using on-premises SAP infrastructure, ensuring that inventory arrived when it was supposed to and that customer expectations were satisfied.

- **Improved decision making enabled by cost transparency.** As retail organizations transitioned from capex to opex models for managing their SAP infrastructure costs, they had more visibility into their exact spending and could make more effective decisions based on their current needs. Furthermore, the flexibility that Google Cloud offers in terms of scaling up or down SAP instances has allowed organizations to quickly act on these decisions.

  A product owner in the consumer electronics industry noted: "With SAP on Google Cloud, we understand the costs so we can decide whether to archive or reduce the size of our database or buy new infrastructure. The additional transparency has enabled our business to make decisions based off of figures we now have access to. We trust that this will help us better manage our costs."

- **Additional flexibility in IT infrastructure, enabling retail organizations to scale.** Unlike on-premises solutions for hosting SAP infrastructure, Google Cloud's agility allowed organizations to quickly adjust the number and size of their SAP infrastructure. Interviewees claimed this flexibility was particularly beneficial during acquisitions or periods of high growth, when demands on IT infrastructure were high and new environments had to be malleable to support the organization's size. Without Google Cloud's ability to host a more agile SAP infrastructure, retail interviewees stated they would not have been able to sustain their current size or growth rate using on-premises solutions.

  A technical development manager in the CPG industry stated: "We've grown a lot and have pretty much doubled since our last acquisition, but we would not have been able to sustain our current size with our on-premises SAP infrastructure. With expansion comes the need to build new instances, increase the size of our instances, and build new products. You just don't have that flexibility with an on-premises solution; it's impossible. Now we can just make those adjustments in the cloud."

Total Economic Impact Summary

Turning focus to SAP customers, Google Cloud commissioned Forrester Consulting to conduct a Total Economic Impact™ (TEI) study and examine the potential financial impact of the solution on businesses. Forrester interviewed six organizations leveraging the solution to learn about its impact on practices at their organization.

Forrester aggregated and analyzed data from the interviews to form a composite organization and associated financial analysis. Forrester found that SAP on Google Cloud delivered $15.4 million in benefits versus $5.9 million in costs over three years, adding up to a net present value (NPV) of $9.5 million, a payback period less than six months, and an ROI of 160%.

Financial results are based on the composite organization, while the summary focuses on the experiences of the interviewed organizations. You can download the full TEI study and an infographic highlighting the results.

"For a new project, we have to replicate a few instances for an improved migration. All those things are much easier now. I mean, for getting a new instance of production or copy of production running in different instances, it typically takes less than a day now to create an application server and a database."

IT director, food and beverage

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ROI
160%

Benefits PV
$15.4 million

Costs PV
$5.9 million

Payback
<6 months

The SAP On Google Cloud Customer Journey

For this study, Forrester conducted six interviews with SAP on Google Cloud for customers. Interviewed customers include the following:

INDUSTRY	REGION	INTERVIEWEE	ANNUAL REVENUE
Food and beverage	MENA	IT director	$350M
Consumer electronics	Europe	Product owner	$22B
Consumer packaged goods (CPG)	Europe	Technical development manager	$1B
Consulting	Global	Managing director of technology	$25B
Industrial manufacturing/sales	Global	Manager of branch operations	$1B
Consumer packaged goods (CPG)	Global	IT manager	$16B

Key Challenges

Retail organizations adopting Google Cloud had similar goals to the other interviewed organizations including the following:

› **Scaling SAP infrastructure effectively while experiencing growth.** Interviewed organizations expressed their desire to manage their SAP infrastructure in a more cost-effective and flexible manner as they scaled operations.

› **Improved security posture.** With so many business-critical processes reliant on SAP infrastructure in each interviewed organization, improving security was top of mind for several interviewees. Older legacy systems were not able to adapt and prevent modern cybersecurity threats, and organizations enjoyed the peace of mind that Google Cloud's security suite afforded them.

› **Preparing for a mobile future.** As a part of wider organizational strategies toward enabling business to happen anywhere on any device, interviewed organizations sought to make components of their critical IT infrastructure more accessible from mobile devices.

Key Results

Interviewed organizations from other industries shared similar experiences to retail organizations after migrating their SAP infrastructure onto Google Cloud.

› **Significantly reduced downtime.** With Google Cloud, interviewees reported no downtime after migrating their SAP architecture onto Google Cloud. As interviewed organizations rely on SAP for so many business-critical processes, these reductions in downtime drove both significant savings and enhanced employee experiences.

> "Our main priority was making sure our HQ was not a single point of failure for our SAP infrastructure. As soon as we migrated our systems onto Google Cloud, there was no longer a single point of failure, and it greatly improved the reliability of our infrastructure."
>
> *Technical development manager, consumer packaged goods*

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> **A cloud-based platform that enabled greater organizational flexibility.** Unlike their legacy solutions, interviewed organizations reported that Google Cloud enabled IT teams to easily spin up and down instances of SAP depending on their needs. Sandboxing new environments was much easier, with developer resources requiring less time and effort for internal coordination.

> **Reduced effort and peace of mind for IT professionals.** Interviewed organizations stated that their IT teams benefited significantly from the migration onto Google Cloud, as it increased their productivity while simultaneously mitigating risks. The security architecture and cloud-based backups that Google Cloud provides reduced liability for IT professionals. Interviewees also stated that with the time Google Cloud saved their IT teams, they were able to reallocate resources into high-value projects for which they did not initially have time.

Composite Organization

Based on the interviews and survey, Forrester constructed a TEI framework, a composite company, and an associated ROI analysis that illustrates the areas financially affected. The composite organization is representative of the six companies that Forrester interviewed and the responses of the 95 decision makers whom Forrester surveyed; the composite is used to present the aggregate financial analysis in the next section. The composite organization that Forrester synthesized from the customer interviews has the following characteristics:

The global, publicly traded, $5-billion conglomerate has a centralized headquarters and regional locations around the world. In addition to offices, the organization has warehouse and supply chain considerations that rely on SAP infrastructure for daily logistics reporting and tracking. The organization has completed its migration of SAP instances to Google Cloud, including migrating a HANA environment.

Before investing in Google Cloud for SAP, the organization spent a significant amount of its annual IT budget on on-premises hardware, software, and maintenance and was planning a new data center buildout before deciding to invest in Google Cloud.

The organization has daily reporting requirements that impact its supply chain logistics and frequently experienced downtime or issues related to these reports. Additionally, weekly financial reports were relayed to the global HQ to meet financial reporting requirements, and these reports were frequently delayed or encountered errors in processing.

The organization releases two iterative or new SAP releases each year to deliver new and updated capabilities to the business. Testing and deploying these SAP releases often resulted in unexpected issues, delaying deployment timelines.

After migrating the SAP infrastructure to Google Cloud, the organization continues to run parts of its legacy deployment in parallel before retiring the legacy infrastructure entirely in Year 2.

Benefit Analysis

Interviewed organizations that migrated SAP onto Google Cloud realized cost savings from retired hardware, efficiency gains for employees, and improved supply chain management. These results, modeled by the composite organization, include:

> **Avoided costs related to running and supporting legacy solutions.** By retiring on-premises infrastructure related to SAP, the composite organization saves over $2.3 million annually on associated hardware, software, and other operating costs. As a result of shrinking the on-premises footprint, the composite organization also reduces its monthly energy consumption.

Key assumptions
Two SAP releases per year
$3M per year spent on legacy SAP hardware infrastructure
Frequent issues related to data processing and financial reporting

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› **Eliminated costs associated with unplanned downtime.** Google Cloud's SLA with ≥ 99.99% guaranteed uptime prevents unplanned outages, providing relief to organizations that are heavily reliant on an active supply chain. Migrating SAP infrastructure onto Google Cloud prevents downtime events for the composite, saving over $1.5 million annually.

› **Enhanced productivity for frontline workers.** As the migration onto Google Cloud improved network performance and reliability, employees who frequently leveraged SAP reporting experienced fewer system delays and greater productivity as a result. The total efficiency gains for the business users and frontline workers totals about $522,000 per year for the composite organization.

For the full calculation tables on each benefit category, please review the full TEI study.

Total Benefits

| REF.	BENEFIT	YEAR 1	YEAR 2	YEAR 3	TOTAL	PRESENT VALUE
Atr	Avoided on-premises hardware, software, and other operating costs	$2,327,500	$3,182,500	$3,182,500	$8,692,500	$7,137,134
Btr	Avoided cost of downtime	$1,530,000	$1,530,000	$1,530,000	$4,590,000	$3,804,884
Ctr	Productivity improvement for business and frontline workers	$522,237	$522,237	$522,237	$1,566,712	$1,298,727
Dtr	Efficiency gains for IT team	$510,300	$510,300	$510,300	$1,530,900	$1,269,041
Etr	Development effort reduced for SAP releases/updates	$323,190	$323,190	$323,190	$969,570	$803,726
Ftr	Improved supply chain management efficiency	$426,600	$426,600	$426,600	$1,279,800	$1,060,891
	Total benefits (risk-adjusted)	**$5,639,827**	**$6,494,827**	**$6,494,827**	**$18,629,482**	**$15,374,403**

Costs Analysis

Before migrating SAP to Google Cloud, organizations complained of expensive on-premises environments that were challenging to manage and did not meet the evolving needs of the business. During the start of the migration, the composite organization allocates 10 full-time employees spending half of their time on initial testing for six months. After this period, this team decreases to four full-time employees for the rest of the year, with a singular full-time employee dedicating half of their time to testing and migration during subsequent years. In addition, the 15-person SAP team requires 16 hours of initial training; and an additional 4 hours of training each of the following years. These costs are reflected in the implementation and ongoing support figure. The licensing cost for Google Cloud's services is at $1.8 million per year to reflect the size of this organization and the size of its SAP deployment.

Total Costs

REF.	COST	INITIAL	YEAR 1	YEAR 2	YEAR 3	TOTAL	PRESENT VALUE
Gtr	Google Cloud fees	$0	$1,800,000	$1,800,000	$1,800,000	$5,400,000	$4,476,334
Htr	Implementation and ongoing support	$975,127	$345,107	$89,957	$89,957	$1,500,147	$1,430,791
	Total costs (risk-adjusted)	**$975,127**	**$2,145,107**	**$1,889,957**	**$1,889,957**	**$6,900,147**	**$5,907,125**

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Financial Summary

The financial results calculated in the Benefits and Costs sections can be used to determine the ROI, NPV, and payback period for the composite organization's investment in SAP on Google Cloud. Forrester assumes a yearly discount rate of 10% for this analysis.

ROI
156%

NPV
$9.3 million

Payback
<6 months
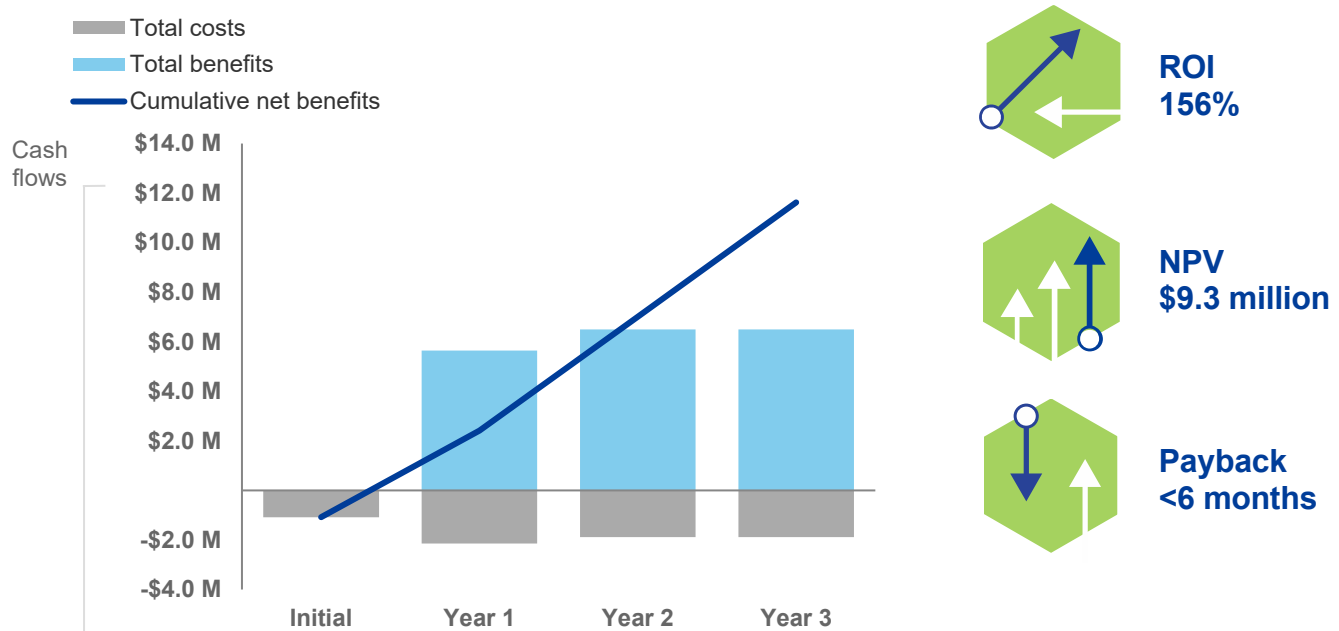
For more information, you can download the full SAP on Google Cloud TEI analysis here and an Infographic highlighting the results can be downloaded here.

Disclosures

The reader should be aware of the following:

› The study is commissioned by Google Cloud and delivered by Forrester Consulting. It is not meant to be a competitive analysis.

› Forrester makes no assumptions as to the potential ROI that other organizations will receive. Forrester strongly advises that readers use their own estimates within the framework provided in the report to determine the appropriateness of an investment in Google Cloud for SAP.

› Google Cloud reviewed and provided feedback to Forrester. Forrester maintains editorial control over the study and its findings and does not accept changes to the study that contradict Forrester's findings or obscure the meaning.

› Google Cloud provided the customer names for the interviews but did not participate in the interviews.

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ABOUT TEI

Total Economic Impact™ (TEI) is a methodology developed by Forrester Research that enhances a company's technology decision-making processes and assists vendors in communicating the value proposition of their products and services to clients. The TEI methodology helps companies demonstrate, justify, and realize the tangible value of IT initiatives to both senior management and other key business stakeholders. The TEI methodology consists of four components to evaluate investment value: benefits, costs, risks, and flexibility. https://go.forrester.com/consulting/content-marketing-consulting/

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Appendix A: Endnotes

[1] Source: "Predictions 2020: Retail," Forrester Research, Inc., November 5, 2019.

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