



Colgate-Palmolive selects SAP HANA to improve the speed of business analytics with IBM and SAP

Founded in 1806, Colgate-Palmolive is a global consumer products company which sells nearly \$17 billion annually in personal care, home care, oral care and pet nutrition products in 200 countries.

Business analytics is critically important to Colgate as it strives to achieve a win/win balance with its customers of the highest possible sales with the lowest possible cost across its vast array of global brands. With enormous volumes of data to crunch within limited time frames, the company is always looking to increase the amount of processing it can complete within the time available for decision-making.

Tom Greene, CIO of Colgate-Palmolive, comments, "Working as a team with SAP, we had deployed trade promotion management functionality within our SAP environment. The solution allowed us to do top-down target planning all the way down to the SKU [stock-keeping unit] level, and bottom-up

ROI analysis. However, we wanted to improve the performance of the solution, and we saw that the new SAP Accelerated Trade Promotion Planning application powered by the SAP HANA® platform might be the best approach."

Hundreds of times faster

With IBM and SAP as its strategic technology partners, Colgate decided to deploy the IBM Systems solution for SAP HANA, based on IBM System x® servers. The SAP HANA platform provides in-memory analytics capabilities that can deliver results hundreds of times faster than conventional environments. Initially, Colgate decided to run a test project to confirm the capabilities of the technology and assess its suitability for use on larger, more strategic projects.

This initial project, which is already in production for the Hill's Pet Nutrition division of Colgate, is a profitability

Overview

Challenge

Colgate-Palmolive wanted to increase the speed of data analysis in order to gain business insight faster. The aims were to improve profitability analysis and to enable a new trade promotions management capability.

Solution

Working as a team with SAP, IBM Business Partner Micro Strategies and IBM, Colgate is building a solution based on the SAP Accelerated Trade Promotion Planning application and SAP HANA.

Key benefits

Rapid, non-disruptive implementation took just eight weeks. Results were highly impressive: some processes that took 77 minutes before now take 13 seconds; Colgate will be deploying a solution for trade promotion management based on SAP HANA.

Business Challenge

Colgate wanted the ability to model profitability and trade promotions across large sets of customers and products, in enormous detail, and as near as possible in real time.

Its highly integrated sales planning process already supported both top-down and bottom-up analysis of SAP data in a large central database. However, the sheer volume of data made it difficult to run key analyses as fast as the business wanted.

analysis solution based on the SAP CO-PA Accelerator software. Powered by SAP HANA, SAP CO-PA enables real-time profitability reporting on large data volumes, with on-the-fly analysis of profitability data at any level of granularity, aggregation, and dimension.

Colgate selected the IBM System x3950 X5 Workload Optimized Solution for SAP HANA. This appliance features the advanced SAP HANA in-memory platform running on SUSE Linux Enterprise Server with IBM General Parallel File System (GPFS™), all pre-integrated on the powerful, scalable and compact IBM System x3950 X5.

Running customer and brand profitability analysis on the SAP HANA appliance from IBM is significantly faster than before, as Tom Greene explains: “Some things that took 500 minutes to run are down to 25 minutes, so the team at Hill’s get results 20 times faster. In another example, we had some processes that took 77 minutes and are now down to 13 seconds, which is 355 times faster. Everywhere we look, it is hours to minutes and minutes to seconds: a huge improvement.”

“The business users at Hill’s are now able to run reports more than 300 times faster than before, and on much more comprehensive sets of data.

“Based on our positive experience with the test project, we are confident that the technological edge provided by the IBM and SAP solution will produce significant benefits once our business users have access to the new insight.”

Tom Greene

CIO

Colgate-Palmolive

It is less about speed of access to information and more about having the time to actually do the analysis,” says Tom Greene. “We had all the data in the past, but it was difficult to analyze it in the time available. The CO-PA solution takes into account a huge number of different factors across massive sets of brands and customers to quickly answer questions such as, ‘Are we profitable with this customer today?’”

Using the IBM Systems solution for SAP HANA and SAP CO-PA Accelerator, analysts at Hill’s can, for example,



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check the return on investment in any given brand, and adjust promotional expenditure accordingly. This might mean redistributing funding from a brand that is already highly profitable for use in promoting a less profitable brand. In this way, the solution can provide highly effective support for brand portfolio decisions, backing them with solid and reliable analysis. The high speed of analysis also means that the brand teams can re-run the analysis frequently and see the effects their adjustments are having.

Tom Greene adds, “We received a lot of positive feedback on the CO-PA solution. The initial response was usually along the lines of, ‘Is this really doing what it was doing before?’, because people could not quite believe how fast it is now!”

Trade promotions

Based on the impressive results achieved with this initial project based on SAP HANA, Colgate took the strategic decision to develop its new trade promotions management (TPM) solution on the same platform. The user-base for the TPM solution in the global customer development teams across the whole Colgate business will number in the thousands.

Says Tom Greene, “Promotion planning is a key part of how our industry is managed. With our existing systems we can do ROI analysis on promotions, but only at a high level within the available time. When we introduce our TPM solution based on SAP HANA, we expect that thousands of users around the world will be able to do much better analysis, which will feed into improved quality of promotions and better conversations with customers.”

Analyzing the performance of promotions requires huge volumes of data across diverse subject areas,



Solution

Working in a team with IBM and SAP as its strategic technology partners, and with IBM Business Partner Micro Strategies, Colgate ran a test project to investigate the potential of using the SAP HANA platform for in-memory analytics. This initial project used the SAP CO-PA Accelerator software to deliver detailed customer and brand profitability analyses from large data sets at extremely high speed.

Based on the success of the project, Colgate is now building a second and much larger solution based on the SAP Accelerated Trade Promotion Planning application powered by SAP HANA. This is a new trade promotions management tool that is expected to revolutionize the company's understanding of vital KPIs around brand, customer and trade performance.

Key Solution Components

Industry

Consumer Products

Applications

SAP HANA, SAP CO-PA Accelerator, SAP Accelerated Trade Promotion Planning

Hardware

IBM Systems solution for SAP HANA, based on an IBM System x3950 X5 server with four 10-core Intel Xeon E7-8870 processors running at 2.4 GHz and 1 TB RAM

Software

IBM General Parallel File System (GPFS), SUSE Linux Enterprise Server

Services

IBM Business Partner Micro Strategies, IBM Lab Services, SAP Consulting

including pricing, raw material cost, volume discounts and more; numerous different variables can impact on the profitability of each campaign. Colgate needs to be able to tweak each of these variables to understand how to provide the most business value to its customers while also maintaining its own profitability.

“Trade promotions management is all about creating a win-win situation for us and for our customers,” says Tom Greene. “The complexity and volume of data involved in each promotion can be enormous, and it was difficult to analyze it in the way we wanted to before. As the project develops, we are hopeful that the SAP Accelerated Trade Promotion Planning application powered by SAP HANA is going to give us a clear competitive advantage. In the testing environment, we are seeing that the scalability is huge. You can throw several factors more data at it and the response times stay the same. When you are doing big, complex promotions with multiple KPIs, that is when the performance is really impressive.

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“Our highly virtualized global data center is practically 100 percent IBM, and our business software landscape is similarly dominated by SAP.

Both companies offer tremendous price-performance, and the benefits we get from our investments mean that our relationship with both companies is very tight, and we do not waste a lot of time looking at alternatives.

IBM, SAP and Colgate are really a close-knit team – that is our preferred way of working.”

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Colgate is designing the TPM solution with the goal of having SAP HANA enable real-time analysis of trade promotions while they are running, enabling the company to make adjustments and improve performance in-flight.

Tom Greene says, “We hope to be able to get much more detailed information much faster, enabling people to make better decisions as a result. We want to improve our share of each category in our customers’ stores, and we want to support them in growing their categories also.

“They want more information all the time; getting that information quickly from SAP HANA will certainly be a competitive advantage in terms of the

quality of relationships we can build with our customers. The company that is able to respond the quickest and is able to add value is the company that will win.”

Pre-integrated solution

The IBM Workload Optimized Solutions for SAP HANA are available in various configurations corresponding to different levels of capacity and performance. Colgate has one 1 TB appliance for the production SAP CO-PA environment, and one 256 GB appliance for its test environment.

The production environment features an x3950 X5 with four 10-core Intel Xeon E7-8870 processors running at 2.4 GHz, with 1 TB of memory, while the System x3690 in the test environment has 512 GB memory but with two 8-core Intel Xeon X7560 processors.

The Intel Xeon processors deliver performance designed to handle data-demanding workloads with improved scalability and increased memory and I/O capacity. They deliver performance that is ideal for the most demanding workloads and offer high scalability along with increased memory and I/O capacity, which is critical for SAP HANA. Advanced reliability and security features work to maintain data integrity,

Business Benefits

- **Following the rapid, non-disruptive deployment of the SAP CO-PA Accelerator software within the Hill’s Pet Nutrition division, users saw an enormous increase in the speed of profitability analysis.**
 - **The time taken to run analyses dropped by orders of magnitude in many cases – from hours to minutes, and from minutes to seconds.**
 - **One set of processes that previously took 77 minutes now takes just 13 seconds to complete.**
 - **With faster access to critical data on profitability across a much larger set of customers and brands, the customer development teams within the Hill’s business have better insight into customer behavior.**
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accelerate encrypted transactions and maximize the availability of SAP HANA applications.

Colgate achieved a four-to-one compression ratio for its data in SAP HANA, which will translate into long-term cost savings in hardware and energy by reducing the total capacity requirements.

The IBM System x3950 and x3690 servers can include IBM eXFlash units, each of which contains up to eight 1.8-inch hot-swap front-accessible solid state drives (SSDs), offering up to 240,000 random read IOPS and up to 2 GBps sustained read throughput.

SAP and Intel worked closely together on the optimization of the SAP HANA technology, ensuring that it uses the full

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features of the Intel Xeon E7 processor product family to the maximum. In particular, the technology takes advantage of the extremely large, high-speed caches on the Xeon E7 processors to keep data as close as possible to the cores, minimizing the time spent waiting for data.

Colgate will soon deploy several more IBM SAP HANA appliances as it continues to develop the trade promotions management solution.

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We anticipate that the SAP HANA solution from SAP and IBM will give us better tools and information that can help our people make better decisions.”

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performance SSD and disk access and the capability to implement high availability solutions using GPFS replication and seamless cluster extension.

No storage area network (SAN) is required, and the database capacity can be expanded by adding nodes. SAP has validated the IBM Systems solution for SAP HANA up to 16 IBM System x3950 X5 1 TB nodes, delivering a total of 16 TB of capacity, and larger clusters can be validated on request.

IBM Business Partner Micro Strategies provided implementation services, working closely with both IBM Lab Services and SAP Consulting.

Together, the partners successfully achieved full deployment within just eight weeks, with zero disruption to business users.

The appliances are being deployed at Colgate in a multi-node, scale-out configuration that offers high availability with the ability to accommodate considerable growth in data volume and demand.

IBM General Parallel File System (GPFS™) is deployed on all IBM System x workload optimized solutions for SAP HANA, enabling high

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“Both companies offer tremendous price-performance, and the benefits we get from our investments mean that our relationship with both companies is very tight, and we do not waste a lot of

time looking at alternatives. IBM, SAP and Colgate are really a close-knit team – that is our preferred way of working.

“Our relationship with IBM is very important. We feel that we get access to the best and the brightest people, and it is all hands on deck when there is a problem. Innovation is also an important factor: we are bringing in the latest IBM hardware on almost a quarterly basis, and we work closely with IBM to understand the product roadmaps and how we can take advantage of new features.

“The input from Micro Strategies was also an important factor. As early adopters of the SAP HANA technologies, we naturally faced some challenges, but the combined team of SAP, IBM and Micro Strategies pulled together and resolved all issues very quickly. We have had no hiccups whatsoever since going into production on the CO-PA solution. That was a really major success factor for us: all that the users noticed was a major increase in the speed of analytics!”

Global benefits

With Colgate's global business standardized on the SAP ERP application, the company has the advantage of a single, consistent source of enterprise data. The expectation is that the SAP HANA appliance from IBM will make it feasible to analyze this vast store of information within reasonable time limits, to generate better understanding of business performance across brands, customers and trade promotions.

Tom Greene concludes, “At the moment, I am not sure what we would not want to bring into SAP HANA – anywhere you have a data bottleneck is an opportunity! We anticipate that the SAP HANA solution from SAP and IBM will give us better tools and information that can help our people make better decisions – it is clearly an important benefit in improving our understanding of the global Colgate business.”



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