Business Challenge
To meet growing demand for a flexible shopping experience, Coop Group wanted to offer click-and-collect services. How could Coop ensure that the right stock is at the right place at the right time?

Transformation
To support changing shopping styles, Coop Group expanded its business model, using near real-time insight into orders and inventory to increase customer satisfaction.

Business benefits:

Near real-time insight into inventory data improves planning and distribution processes

5x quicker analytics with 85% fewer processor cores enables a more effective use of data

20x faster SAP HANA provisioning increases agility to innovate faster

Coop Group
Improves customer satisfaction through more-flexible and convenient shopping services

Operating more than 2,200 branches and outlets across Switzerland, Coop Group is one of the country’s largest supermarket chains. The company manufactures, distributes and wholesales foods, delivering goods to restaurants, hotels and staff cafeterias across Europe. Headquartered in Basel, Coop Group has around 2.5 million cooperative members and employs almost 85,000 people, generating annual sales of CHF28.3 billion (USD28.1 billion).

“Using SAP HANA on IBM Power Systems enables us to deliver cutting-edge click-and-collect services with up-to-the-second inventory data.”

Thomas Vielhauer, Head of ERP Processes, Coop Group
Benefits in detail

- Lifts satisfaction by enabling customers to reserve items online and collect them in their preferred store.
- Near real-time insight into inventory data improves planning and distribution processes.
- 5x quicker inventory analytics with up to 85 percent fewer processor cores enables Coop Group to use up-to-date data more effectively.
- 20x faster SAP HANA provisioning increases agility to innovate faster.
- 34x better disk throughput and 50% shorter disk latency, measured using the SAP HANA Hardware Configuration Check Tool, enables Coop Group to use available bandwidth and computing capacities more efficiently.

Delivering on customer demand

In a world where you can buy goods by pushing a button and consumers expect the convenience of ordering online anytime anywhere, an integrated shopping experience has become an essential offering.

As consumer behavior changes rapidly, Coop Group knew it needed to expand its core business model, giving its customers different ways to buy, particularly by linking online and in-store retailing.

In a challenging market, Coop Group decided that its comprehensive network of stores across Switzerland provided a ready-made advantage: let customers collect online purchases from their local store at a time that fits best for them. Clearly this service would provide a quick and convenient process for customers. However, enabling back-office support for the new retail model presented a significant challenge.

Thomas Vielhauer, Head of ERP Processes at Coop Group, elaborates: “Ensuring that inventory information is always accurate and that the products customers order online are actually available for collection in their preferred store at their preferred time is a major challenge. To offer this service, we needed to transform internal processes and gain almost real-time insight into stock levels at all locations.”

Managing and analyzing the data presented a considerable workload, and the Coop Group team knew that, as volumes increased, scalability would be key.

Christoph Kalt, Lead IT Architect at Coop Group, explains: “With data growth of 30 percent each year, we needed a flexible IT solution that would support our retail strategy without reducing performance, increasing costs, or adding to the management and administration workload.”

Coop Group runs a full suite of SAP applications to manage the business, including the mission-critical SAP Customer Activity Repository application on the SAP HANA platform.

The total workload was becoming a real challenge for these systems, as Christoph Kalt comments: “In the past, we had to cut down the volume of data we used for SAP Customer Activity Repository analytics because of the limitations of the x86 infrastructure we were using. This made it difficult to gain a near real-time overview of inventory movement.”

Running SAP HANA on IBM Power Systems

Coop Group had successfully consolidated around 300 SAP application servers and databases on the IBM® Power Systems™ platform. The solutions include SAP for Retail, SAP ERP, SAP ERP Human Capital Management, SAP Supplier Relationship Management, SAP Customer Relationship Management, SAP Forecasting and Replenishment for Retail, and SAP Global Trade Services, as well as the SAP Hybris e-commerce solution.

“Based on this experience, Coop Group chose to migrate its SAP HANA systems to the IBM Power Systems platform, to improve capacity, scalability and performance.

Thomas Vielhauer remarks: “Knowing the reliability and low administration requirements of the IBM Power Systems platform from previous experience with our major SAP applications and databases, we were curious to see how SAP HANA would perform on high-performance POWER8® processor-based servers.”

Coop Group together with IBM and SAP implemented four IBM Power® System E880 servers running the optimized SUSE Linux Enterprise Server for SAP Applications operating system for its production, test and development SAP HANA databases.

“The IBM and SAP solutions allow us to offer customers complete flexibility and convenience, which increases satisfaction and gives us a real competitive advantage over other retailers.”

Christoph Kalt
Lead IT Architect
Coop Group
Coop Group worked closely with teams from IBM and SAP to migrate the company’s SAP Customer Activity Repository database from a complex eight-node x86 cluster to a single SAP HANA database on IBM Power Systems, with 70 percent fewer processor cores as well as more memory – achieving five times better performance.

Christoph Kalt remembers: “We were able to complete the implementation and migration phases extremely quickly, in less than two months. Everything went smoothly, and we were glad to have support from both IBM and SAP during the migration of such large, business-critical systems.” In addition to its existing four IBM Power System E880 servers with IBM AIX® for its application and traditional database workloads, Coop Group now also runs its SAP HANA systems in a fully virtualized environment with IBM PowerVM® on four additional IBM Power System E880 servers with SUSE Linux Enterprise Server for SAP Applications.

Thomas Vielhauer comments: “Having all of our SAP applications – those running on SAP HANA and those on traditional databases – on a single server platform has standardized our IT infrastructure. This helped to significantly reduce the time spent on management and maintenance.”

Christoph Kalt adds: “The easy scalability and advanced virtualization capabilities of the IBM Power Systems platform were key factors behind our decision to move our SAP HANA environment. Using IBM PowerVM functionality we have replaced a number of physical appliances with virtual servers. We’ve achieved high levels of consolidation, saving us a great deal of floor space as well as cutting energy costs.”

**Offering innovative new services that delight customers**

Running SAP HANA on IBM Power Systems, Coop Group has gained a high-performance, flexible and reliable platform that supports near real-time insight into inventory data – enabling the company to improve planning and distribution processes.

Thomas Vielhauer elaborates: “By migrating our SAP HANA environment from an eight-node scale-out server infrastructure to a single-node scale-up IBM Power Systems solution, we’ve seen performance improve considerably. Instead of running eight servers for one large SAP HANA database, we now just need a single instance. We can scale up flexibly if needed at the push of a button using Capacity on Demand to activate additional processors and memory exactly as needed.

“Additionally, thanks to the more-advanced processors in combination with higher throughput and memory bandwidth of the IBM POWER8 architecture, response times are now five times faster than before. Together with near real-time collection of inventory data, this means that we can run planning analytics much faster, so that we can be sure of reliably getting the right products to the right branches at the right time.”

Coop Group measured a 34-times better disk throughput, and saw disk latency cut by 50 percent using the SAP HANA Hardware Configuration Check Tool (HWCCT). These technical improvements help the company to use available bandwidth and computing capacities more efficiently.

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**Key components**

**Applications:** SAP® Business Warehouse powered by SAP HANA®, SAP Customer Activity Repository powered by SAP HANA, SAP Customer Relationship Management, SAP ERP, SAP ERP Human Capital Management, SAP for Retail, SAP Forecasting and Replenishment for Retail, SAP Global Trade Services, SAP HANA, SAP Hybris®, SAP Supplier Relationship Management.

**Software:** IBM® AIX®, IBM PowerVM®, SUSE Linux Enterprise Server for SAP Applications.

**Hardware:** IBM Power® System E880.
Running SAP HANA on IBM Power Systems also allows Coop Group to simplify and streamline its IT environment, and gives the company the ability to scale to meet growing demand more easily.

Christoph Kalt explains: “With IBM Power Systems and PowerVM virtualization, we can provide resources much more efficiently. In the past, if we needed to provision new large SAP HANA systems we would have had to buy, install and configure new physical appliances. Today, we can simply spin up new logical partitions as and when needed, making the process of provisioning new SAP HANA systems up to 20 times faster – a huge improvement. Being able to make resources available more quickly in this way enables us to react more rapidly to changing customer requirements and to new business demands. Delivering innovative new ideas like click-and-collect services is key to our strategy, and successfully expanding our retail business model.”

Coop Group is already planning the next steps it will take to transform its workflows and make more information instantly available across all business processes.

The IT team is currently migrating the company’s SAP Customer Relationship Management application to SAP HANA on IBM Power Systems. Moving its large SAP ERP application to SAP HANA on IBM Power Systems will provide even greater opportunities for near real-time integration. Thomas Vielhauer concludes: “Taking everything into consideration, from investment costs to operating costs, scalability and administration, IBM Power Systems was the best solution for our SAP HANA databases.”

Thomas Vielhauer confirms: “High performance is key in the retail industry. Using SAP HANA on IBM Power Systems enables us to deliver cutting-edge click-and-collect services with up-to-the-second inventory data that allow customers to pick up goods they’ve ordered online whenever and wherever they want. The IBM and SAP solutions allow us to offer customers complete flexibility and convenience, which increases satisfaction and gives us a real competitive advantage over other retailers.”

5x quicker analytics