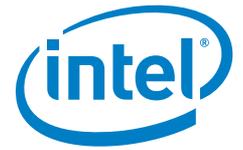


## SOLUTION BRIEF

Retail, Hospitality & Consumer Goods  
Data-Driven Retail



# Accelerate Time to Insights and Enable the Ultimate Shopping Experience

**A holistic, real-time view of customers, supply chain and channel partners equips retailers to deliver a compelling shopping experience efficiently.**

“We get a better customer experience, better information about the consumer, more tailored products, and more tailored offerings...and because we optimize operational costs we get better processes, better stocks, and better fulfillment, which will reduce our operational costs<sup>1</sup>.”

**Werner Kraus**  
Enterprise Architect,  
SPAR Business Services

### Rethinking Retail Strategy

In today's data-driven retail world, speed matters. Quickly understanding the patterns hidden among millions of daily transactions across many channels makes it possible to give shoppers what they want, when and where they want it—ultimately improving the bottom line. Real-time business requires real-time data and analytics, but many retailers lack the technology that can deliver.

### Drivers Reshaping the Landscape

Modern retailers rely on the data they collect to help them manage customer relationships and make sound business decisions. They know that having real-time access to insights from that data can speed and strengthen their ability to do both. But getting there can be challenging—it depends on being able to invest in the latest advances in analytics technology. The promise, for those who are able to take advantage of real-time analytics, is the power to take business capability to new heights. By consolidating data analysis efforts onto a single, real-time analytics platform, retailers can obtain a 360-degree view of customers, supply chain and channel partners. This holistic view equips them with the timely insights they need to deliver a simple, compelling shopping experience. At the

same time, it enables efficient, integrated planning and streamlined operations.

### Transforming and Innovating Effectively in a Dynamic Industry

Replacing traditional batch processing with real-time analytics on one platform can help retailers obtain mission-critical insights about all aspects of the business faster and at lower cost. Making the switch can supply the capacity and performance needed to align planning, segmentation and execution based on each customer's historical behavior and purchase patterns.

SAP HANA\*, a single platform that combines a database with advanced data processing, application services and flexible data integration services, can help retailers achieve these goals. It provides a way to accelerate the journey to business value via real-time understanding of data. Now available with the Intel® Xeon® processor E7 v2 and v3 families, the platform's in-memory database software can process even more data in less time, yielding greater efficiency with less hardware. In addition, a choice of over 600 SAP HANA appliances certified to run on Intel Xeon processors allows retailers to offer their customers a digital, real-time experience across all channels.



For retailers already using the SAP HANA\* platform with the previous generation Intel® Xeon® processor E7 family, upgrading to servers with the Intel Xeon processor E7 v3 family can deliver exceptional performance improvements. With up to 20% more cores and threads, servers with the Intel Xeon processor E7 v3 family running the SAP HANA platform can support transaction processing and data analysis to act upon nearly as fast as users and devices generate that data.<sup>3</sup>

**Tackling out-of-stock issues by using the SAP Customer Activity Repository application:** “If we can combine all this data and provide it to our shop assistants in real time, they can guide customers as soon as they enter the store, they can answer questions quickly and accurately, and they can suggest other products and services that match the customer’s needs.<sup>1</sup>”

**Thomas Thalhammer**  
Enterprise Architect,  
SPAR Business Services

In the current fast-paced, data-intensive retail environment, SAP HANA can quickly separate the trends from the noise to highlight actionable intelligence that can help retailers improve the customer experience and increase operational efficiency.

**Enabling Transformation**

Advanced analytics are at the core of a successful transformation from brick and mortar to omni-channel retailing. Together, SAP and Intel are supporting this transformation, collaborating to drive big data innovation, either on premises or in the cloud, so that retailers can easily integrate data-driven intelligence throughout the business.

**Solution Overview**

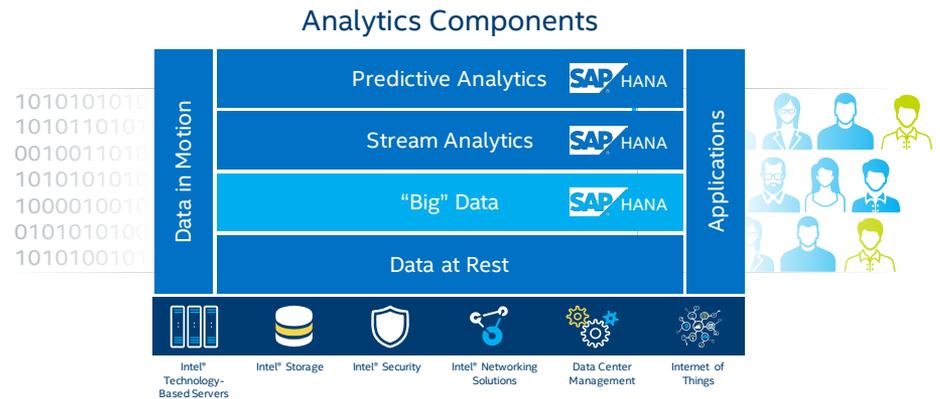
The unified, yet open, SAP HANA applications and analytics platform simplifies the IT environment, making it possible to do more with fewer systems and to design and deploy intuitive applications to deliver the right information to the right decision makers at the right time. Co-engineered by SAP and Intel for enterprise-class data integrity, the flexible, reliable solution extends scalability and improves uptime.

**Respond Quickly, Plan Proactively**

By allowing retailers to query transactional and online data to shed light on patterns and trends in real time, SAP HANA makes it possible for them to transform data-driven insights into immediate action in key focus areas:

- Customer Relationship Management** – Understand the customer better to provide more personalized service.
- Marketing** – Use real-time, targeted marketing for more effective campaigns.
- In the Store** – Redesign stores, based on the movement of customers, to improve top and bottom lines.
- Supply Chain** – Optimize inventory management and eliminate out-of-stock events.

For example, accelerating customer lookup across an aggregate view of multiple customer data sources provides an immediate, deeper insight into an online customer’s profile.



<sup>3</sup> Tests document performance of components on a particular test, in specific systems. Differences in hardware, software, or configuration will affect actual performance. Consult other sources of information to evaluate performance as you consider your purchase. For more complete information about performance and benchmark results, visit <http://www.intel.com/performance>.

Up to 6x performance improvement for transactional workloads with new Intel® Transactional Synchronization Extensions (Intel® TSX) claim based on SAP OLTP\* internal insert and select tests measuring transactions per minute (tpm) on SuSE Linux Enterprise Server 11 SP3\*.

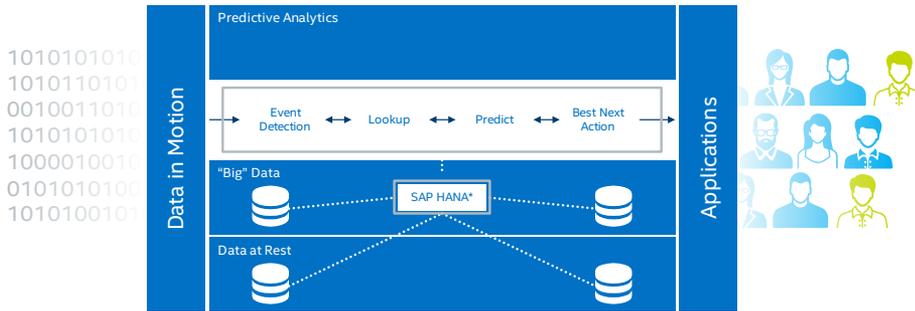
Configurations:

- a. Baseline 1.0: 4S Intel® Xeon® processor E7-4890 v2, 512 GB memory, SuSE Linux Enterprise Server 11 SP3\*, SAP HANA\* 1 SP8 scoring 14,237 tpm.
- b. Up to 1.8x more tpm: 4S Intel Xeon processor E7-4890 v2, 512 GB memory, SuSE Linux Enterprise Server 11 SP3, SAP HANA 1 SP9 scoring 26,139 tpm.
- c. Up to 2.7x more tpm: Intel® Xeon® processor E7-8890 v3, 512 GB memory, SuSE Linux Enterprise Server 11 SP3, SAP HANA 1 SP9 – Intel TSX disabled scoring 39,330 tpm.
- d. Up to 6x more tpm: 4S Intel Xeon processor E7-8890 v3, 512 GB memory, SuSE Linux Enterprise Server 11 SP3, SAP HANA 1 SP9 – Intel TSX enabled scoring 89,619 tpm

For more complete information visit <http://www.intel.com/performance/datacenter>.

Accelerating predictive model execution enables rapid, accurate predictions of customer preferences based on current online activity. The results derived from these queries can help determine the best, next marketing action to take, whether that be making an immediate online offer or some other, tailored marketing tactic.

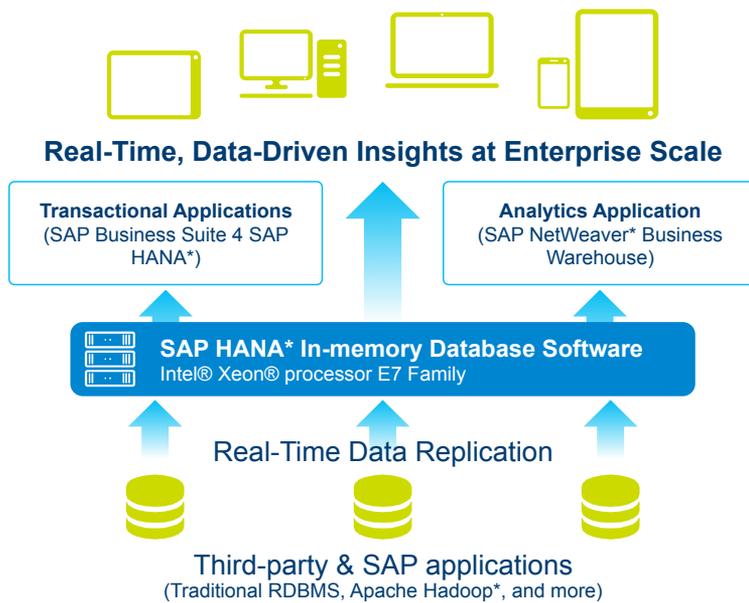
### Transforming Data-Driven Insights Into Real-Time Targeted Marketing



Similarly, integrating anticipated consumer behavior and market conditions into ecommerce and physical inventory processes can help reduce return rates and out-of-stock events—both longstanding problems for retailers.

### Solution Architecture

By replicating essential data from diverse data sources into a high-performance, in-memory database, SAP HANA provides the levels of performance required for real-time applications—whether transaction queries or analytics support. SAP HANA’s internal data structure, consisting of column-wise and row-wise storage, provides for flexible data access with extremes of performance across both types of applications. The result is a way to deliver enterprise-scale, real-time, data-driven insights for a wide range of business needs.



SAP HANA can be used with existing database systems or as the underlying database for SAP applications such as SAP Customer Relationship Management\*, SAP Supply Chain Management\* and SAP Customer Activity Repository\* which captures and manages detailed retail transaction information. Deployed on top of SAP HANA, these applications introduce new speed and intelligence into core business applications.

### Deliver the Ultimate Shopping Experience Across Channels

SAP and Intel are providing a single-platform, real-time analytics solution with the performance necessary to process and analyze massive volumes of data quickly. With the comprehensive view of shoppers, supply chain and channel partners that SAP HANA delivers, retailers can easily identify trends and patterns and can use this information to provide customers with the ultimate shopping experience across all channels. Affordable and flexible enough to deploy on premise, virtualized, in the cloud or in hybrid environments, SAP HANA allows retailers to maximize the business value of the data they collect.

### Reducing returns improves the bottom line:

HSE24, Germany’s teleshopping pioneer, ships more than 11.5 million parcels every year. By leveraging the SAP HANA\* platform, HSE24 is now harnessing real-time data to create offers that are more meaningful to customers and meet their specific needs with the goal of decreasing its return rate. A decrease as low as 1% could yield a seven-digit Euro savings.<sup>2</sup>

Intel and SAP have been working together since 2005 to deliver better performance for SAP applications running on Intel® architecture. Intel Xeon processors are tuned for SAP workloads, and the Intel Xeon processor E7 family is certified for use with the SAP HANA platform. The Intel Xeon processor E7 family provides a combination of hardware capabilities not available in any other industry-standard server platform, including large-memory capacity, a large and efficient cache hierarchy, high-core counts, multi-threading, and advanced reliability, availability and serviceability features for better results.

### Solution Stack

SAP HANA*	SAP Customer Activity Repository*
SAP Customer Relationship Management*	SAP Business Suite 4 SAP HANA*
SAP Supply Chain Management*	SAP NetWeaver*

### Intel Technology Foundation

Intel® Xeon® Processors	Intel® Storage
Intel® Solid State Drives	Intel® Security
Intel® Technology-Based Servers	Intel® Networking Solutions

### Where to Get More Information

For more information about SAP HANA powered by Intel® processors, please visit [Intel.com/retail](http://Intel.com/retail).



<sup>1</sup> David Trites, "SPAR Austria Group Goes for Real-Time Retail," SAP News Center, August 20, 2014. <http://news.sap.com/spar-austria-group-goes-real-time-retail/>.

<sup>2</sup> "Pioneering Modern Home Shopping Experiences and User-Oriented Digital Commerce," SAP.com, accessed March 10, 2016, <http://www.sap.com/customer-testimonials/retail/hse24.html>.

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