

Speeding Up Data for Business in the Now

About the Power of a Real-Time Data Platform for Business Processes and Decisions

Management Summary

The new connected era, determined by big data, cloud-computing, social media and mobility, is transforming traditional business relationships and paradigms. Based on five use cases for SAP HANA®, this white paper shows why companies should be rethinking business now and consider the powerful capabilities of in-memory technology to set up a real-time data platform for future-oriented business processes, innovative services, and improved decision making. Or in other words: why companies should get prepared for tomorrow's business, and how they can start tomorrow's business, business in the now, today.

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Rethinking Business

The connected era, determined by Big Data, cloud-computing, social media, and mobility, is transforming traditional business relationships and paradigms. What has changed?

On the one hand, companies, customers, machines and transactional systems are generating more data than ever before. On the other hand, social media and mobile technologies have shifted the balance of power and influence toward the consumer. Also, employees can instantly share their views online and rapidly strengthen or weaken a corporate (employer) brand. This new balance of power is urging companies to rethink their positions and strategies. But the rapid growth of data doesn't make it easier to develop a clear picture of customer demands and opportunities.

A New Set of Questions

As a result of these major environmental changes, business strategy and innovation have to start with a different set of questions. It is no longer just about process automation. It is about how companies can regain control, develop new strategies to meet all future needs, get ready for business immediately; in other words, how to address the opportunities that big data, cloud data, mobile and social networks currently offer.

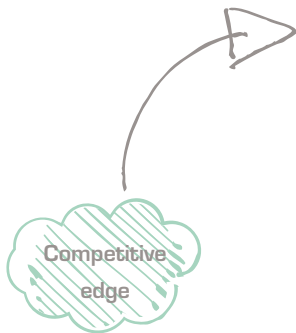
The main new questions are, for example: How can we better offer new products and services to our customers? How can we go after adjacent markets? How can we gain new knowledge and important insights before our competitors?

» The big question is: **How can we speed up business data in the now?** «

The basic answer to all these questions is actually simple: You must accelerate your data. In the connected era, an organization's ability to create added value through real-time data analysis and decisions is crucial. To stay on top of the game, one must make relevant data available in context, on-demand, seamlessly, securely and efficiently. Real-time data and immediate insights can reflect changing demands and trends quickly enough to get prepared. So the next big question is: How can we speed up business data in the now?

Hence, IT needs to develop the relevant capabilities not only to deal with mass data, but make it accessible for analytics, predictive, and new business use cases as quickly as possible. The additional challenge is to provide new scalability and at the same time avoid isolated data silos and soaring data maintenance costs.

Once again, there is a relatively simple answer: Profiting from the speed and declining cost of memory, organizations can now perform data management and analysis in real-time. By deploying innovative in-memory computing (such as that provided by SAP HANA®), they can lay a foundation for a real-time data platform that fits both today's and future needs of the connected era. They can move business to the next level to find the best answers to urgent questions faster and smarter than ever before.



The Benefits of Working on a Real-Time Data Platform

In-memory computing and SAP HANA (see explanation on page 6) provide organizations with the core components for a real-time data platform that will enable extensive capabilities to transact, move, store, process and analyze big data for more accurate planning processes, decisions, and execution. It will become the key solution to turn data into a competitive edge and run business smarter than ever before. With highly accessible data, improved analytics capabilities and real-time information, organizations can speed up business tremendously and improve the decision-making processes. For example, within seconds they'll be able to identify the right customers from thousands of profiles and place tailor-made product offers. Ideally, they will be able to segment customers down to an audience of one as rapidly as possible.

Supported by a real-time platform, companies can:

- **Acquire and retain customers in highly competitive markets, because they**
 - know preferences and performance exactly.
 - can easily choose which customer profiles are suitable for offers or loyalty rewards.
 - can follow a dynamic customer segmentation strategy.
- **Deliver innovation before others do, because they**
 - know exactly how their products/services are doing against competition.
 - can track call-center complaints and monitor social media feedback in real-time.
 - know exactly where products or parts are being used in their company.
- **Drive excellence, as**
 - IT can support and assist business driven innovation faster.
 - supply chain disruptions can be more easily identified and addressed.
 - they can evaluate suppliers by cost, quality and timeliness more easily and in a more sophisticated way.
 - they exactly know their current ontime/infull delivery rate in near real-time by customer.

Excursus

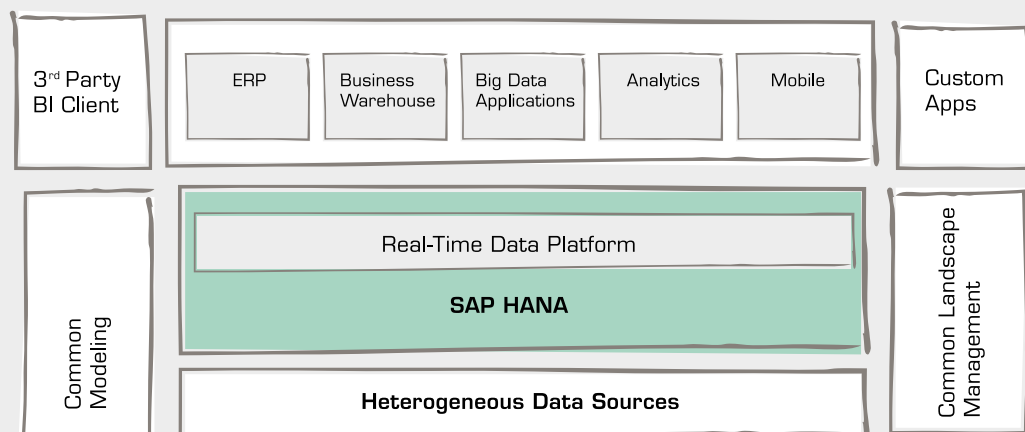
What is SAP HANA?

SAP HANA is a groundbreaking solution for real-time products and applications using in-memory computing technology. It offers extreme performance, which allows organizations to:

- Transform business faster: enable product and service innovations
- Reach peak performance: make the right decisions and react faster on changing customer demands
- Operate more efficiently: do current things faster, better and at less cost

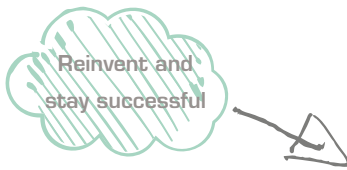
It also provides a solid foundation for accelerated additional databases (transactional, analytics, mobile and embedded) and thus groundbreaking opportunities for a holistic, most efficient enterprise information management.

- Business analytics based on real-time data will help organizations to become real-time businesses.
- Improved process control and easy access to relevant information enable business users to think, plan and operate smarter.
- New strategies based on granular, up-to-date data enable to maximize market opportunities, foster growth through innovative products and services, and at the same time minimize risks, e.g. because of more personalized services and predictable changes in customer behavior/demand.
- Improved IT efficiency: a secure management of big data and complexity with reduced TCO.



Profiting from Real-Time Speed and Intelligence

Let us take a further look at how in-memory computing, data-driven analytics and decision processes can improve and/or transform an organization's business model. Here are some use case examples from different industry areas and lines of business.



Use Case 1: Improved Stock Control and Planning

Challenge

Most retailers today are facing increased competition from an ever more diverse and multi-channelled marketplace. Overall sales at physical stores for consumer electronics and household appliances are declining steadily. Retailers that want to stay successful have to reinvent themselves with better services and additional e-commerce offers, but above all they have to do everything possible to become more cost competitive by gaining efficiency and reducing operating costs through optimized stock control and planning.

Retail sales also face multiple other influences. For example, unexpected local changes in the weather might lead to a rise in demand for heaters or fridges. The information required for detailed stock and demand analysis and planning is available: point-of-sale (POS) data from stores, demographics, weather, stock, product details, orders and supplier notifications. The problem is, it takes an enormous amount of time to aggregate this kind of big data on short notice for up-to-date reports and efficient planning – simply because it is stored in different conventional databases or info cubes of data warehouses such as SAP NetWeaver® Business Warehouse.

Solution

A leading East European consumer electronics and household appliance retailer has expanded its target market to include premium formats and Internet retailing. It still operates primarily through branded stores nationwide in more than 450 cities with 16,000 employees – including franchises, the organization totals to about 700 stores.

Because of market pressure, additional sales channels, and the increasing organizational complexity for the retailer, planning has become even more important. Therefore, a flexible and integrated stock control and planning system is essential.

The retailer decided for SAP HANA. The core in-memory computing component for a real-time data platform enables aggregating real-time POS data to replicate customer, product, supplier and stock records from ERP systems or other transactional systems, and to analyze this information much faster.

Supported by its new data environment, the organization can now run its most important reports on average 167 times faster. It can also extract data from the profitability analysis (SAP® ERP CO-PA) into Business Warehouse for further analysis within only 6.5 hours – 15 times faster than before with conventional databases (more than 96 hours).

The retailer now profits from comprehensive real-time performance metrics and improved planning and simulation capabilities. Continuous real-time data exchange between planning and reporting on different company levels and the inclusion of factors from different business areas make it possible to analyze the current situation of the company's overall stock and demand situation, which enables better planning and decisions. The data can also be put in the hands of store managers using tablet-PCs or smart phones, so they can receive alerts or notices on products performing exceptionally well (or poorly) and make better decisions based on this real-time information.

» The organization can now run its most important reports on average 167 times faster. «



Accelerated data access puts the East European company in an ideal position to reduce overstocks, avoid bottlenecks, maximize profits and adapt quickly to changing customer demands. In the future, the real-time

data platform will enable the retailer to extend the planning process beyond the four key areas (strategic, location, merchandise and assortment planning). It will integrate with markdown planning, shelf optimization, style management, purchasing and allocation functions.

Business Benefits

- Analysis of POS sales and stock data at the item level in real-time
- Release of working capital through improved stock control and planning
- Better sales through more effective promotions

Use Case 2: Fraud Detection – Tracking Suspicious Activities in Real-Time

Challenge

Whether in the branch or on the Web, retail banks and financial services have to focus more on the client: “How to keep the good customers” is one of the main questions. And as fraud and cyber crime on the Internet and at automated teller machines (ATMs) has become an urgent topic, banks are beefing up their security.

The keys to success for both customer-centricity and security are faster systems and accelerated data access for analytics. In-memory computing technology such as SAP HANA can be a major driver for business and IT transformation. By combining an in-memory computing engine with a range of certified hardware systems, massive quantities of real-time data can be processed within seconds; immediate results for multi-dimensional analyses will be available at the click of a button.

As banks transfer their application infrastructures onto a real-time data platform, a new banking architecture will arise, step-by-step, that integrates customer-centric and transactional banking processes with capabilities for analytical banking. This will result in a significantly better understanding of customers and improve the ability to create custom-made banking products and services that foster long-term loyalty.

» The processing of end-of-day reporting can be accelerated, providing more flexibility in working hours and availability of services. «

The real-time data platform will include applications that handle information on business partners, market opportunities and product-related master data. Within this framework, data replication among transactional and customer-centric banking applications will no longer be necessary. The processing of end-of-day reporting can be accelerated, providing more flexibility in working hours and availability of services. As a result, banks can identify money-laundering activities in real-time and reduce losses in these areas significantly.

Solution

Fraud – virtual fraud in particular – is an ever increasing, world-wide threat to banking and financial services. The rapid growth of incidents signals how difficult it is to detect and prevent fraudulent activity. When a credit card is stolen, the account number and the PIN can be distributed via the Web in seconds.

While the monetary loss is significant, the overall impact of fraud can be far worse. Loss of reputation and trust in the market and sustainable damage for individual customer relations can be substantial. That is why banks have to speed up to near real-time in detecting and inspecting potential fraudulent behavior.

In-memory computing and SAP HANA can help banks and other financial institutions to track customer behavior and identify suspicious transactions in real-time. Protection comes with the recognition and continuous monitoring of user behavior patterns to spot suspicious transactions immediately and correlate them with possible risks.

Only on a real-time data platform it is possible to boost transactional data processing, connect data with analytics and automate immediate follow-up processes. Bringing together data from various technologies – including mobile and transactional systems – will help banks to run their fraud management faster and smarter, making their whole business faster, smarter and more profitable.

Business Benefits

- Analyze big data, that is, a massive number of transactions “as they happen”
- Detect exceptional behavior and compare with known patterns
- React immediately on fraudulent issues with automated alerts to customers and investigation staff, and trigger account interventions.

Use Case 3: Timely, Solid and Compliant Closes for Accounting and Financial Departments

Challenge

Today's financial organizations are committed to continuously improving results, optimizing costs and supporting strategic and operational decision making. They have to make sure that all internal stakeholders receive their figures on time. Extra pressures also arise from external stakeholders as financial markets, investors and tax authorities demand tighter filing deadlines, improved integrity and more transparency about the business.

» A combination of SAP HANA and ERP systems can pave the way to accelerated data access and consolidation, and increased finance and controlling effectiveness – from source transactions to digital disclosure. «

Efficient closing processes are vital to ensure sustainable confidence in their figures and to comply with regulations and timelines. But figures on income statements, balance sheets and

cash flows are not enough. Detailed information on executive compensation, energy usage, environmental issues, corporate social responsibility ... there is no end to what the stakeholders want to know. So how can in-memory computing and SAP HANA help?



Accelerate
data access!

Solution

Companies trying to streamline, automate and accelerate their financial closing and reporting capabilities first need to centralize and structure the closing cycle into repeatable steps that follow schedules. Second, but no less importantly, they need to accelerate access to their vast quantity of general ledger, cost and material ledger data, as well as support easy exploration of trusted and detailed data.

A combination of SAP HANA and SAP ERP systems can pave the way to accelerated data access and consolidation, and increased finance and controlling effectiveness – from source transactions to digital disclosure. In-memory technology enables business users to easily query multiple types of data sources, helping to drive closing and business decisions in real-time. Instead of starting multiple background jobs, it becomes possible to instantly analyze millions of records and check details in real-time to verify balances and figures.

Business Benefits

- Real-time reporting and analysis down to line-item detail
- Fast access to trusted data
- Accelerated closing cycles
- Improved data quality through speeding up data reconciliation
- Minimized efforts and optimized control for closing cycles
- Sound decisions that comply with regulatory standards and filing deadlines
- Reduced time and cost of finance and compliance, regulatory disclosures and electronic filings

Use Case 4: Accelerated Analytics for a Changing World of Energy and Transport

Challenge

In the wake of the Japanese nuclear power disaster of March 2011, energy production in many countries underwent dramatic changes. The integration of regenerative energies will transform the traditional power-plant ecosystem from a single, relatively small structure of large, easy-to-manage production units to a fragmented network of large, medium and small production units for different energy sources. This will require much more management on an overall, regional and local level.

Within this new setup, efficient production, intelligent energy storage and sustainable load balancing will require sophisticated analyses of large volumes of energy consumption data. Also the electrification of transportation will play an important role. It offers the opportunity to become more independent of fossil fuels, minimize emissions, and facilitate the integration of electric vehicles into a future-oriented, sustainable transport system.

To deal with the new energy reality and to push the transition towards new efficiency technologies, the German government has launched the “National Development Plan for Electric Mobility”. It aims at advanced research and development, market preparation for battery-powered vehicles (“eCars”), and their accelerated introduction in Germany. The Federal Government aims at having one million electric vehicles on German roads by 2020.

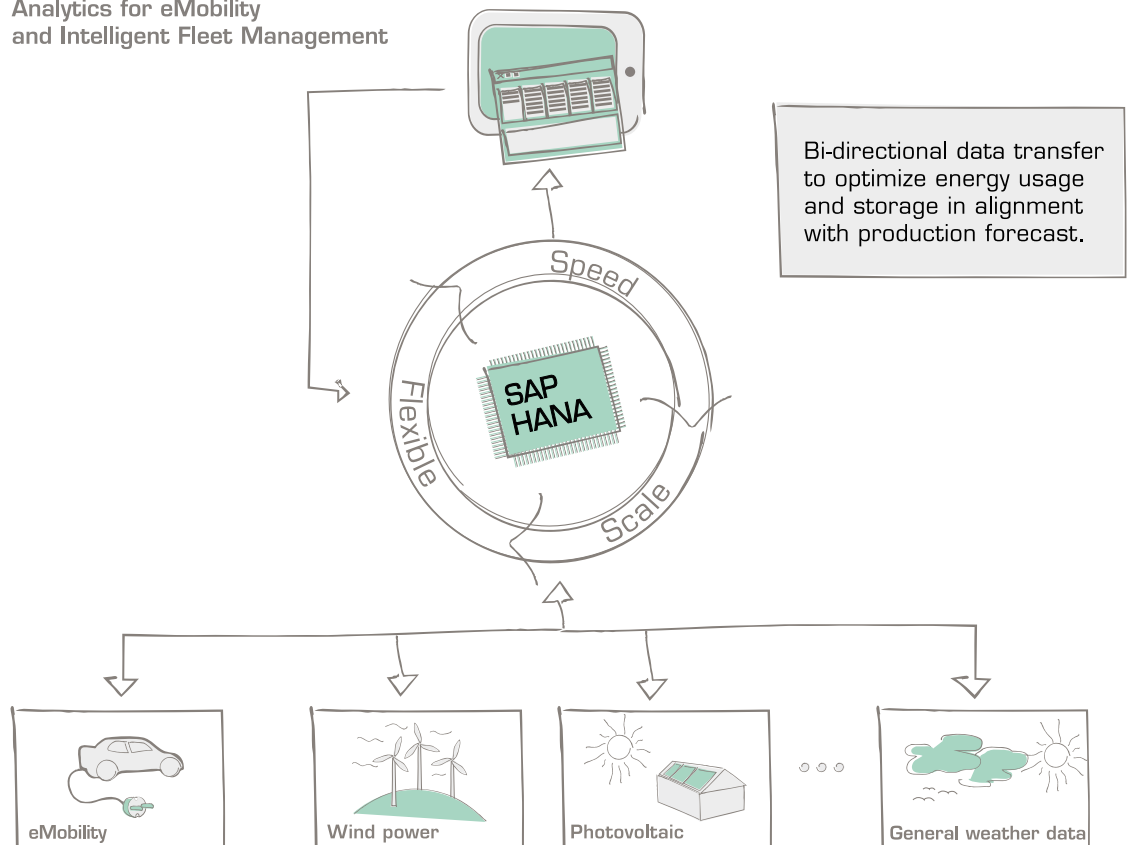
Consequently, alternative transportation concepts and technologies play a major role within the program’s strategy. Equally important is the use of renewable energies, such as solar and wind, to greatly and rapidly reduce the overall emission of CO₂.

Solution

Technically optimized electric mobility solutions customized for rural areas are an important area of research work.

Here, itelligence uses the potential of SAP HANA for joint innovation projects with leading industry partners. The focus is fleet management of electric vehicles within companies based entirely on renewable energies. The partners involved are jointly developing a highly-accessible, intelligent mobility system supporting roaming or comprehensive car-sharing for larger companies or company groups.

In-memory technology facilitates the efficient comparison of data from vehicles, company demands, existing renewable energy and general additional data (such as weather forecasts). On this basis, companies can set up and share their own local energy micro-grids or purchase them from a regional energy provider. In the ideal case, a highly accessible fleet can be operated entirely on the basis of renewable energies.

Analytics for eMobility
and Intelligent Fleet Management

Additional key elements are a “renewable charging point”, which acts as a charging interface for vehicles and takes all necessary records, safety mechanisms, information to be exchanged and marginal conditions for efficient roaming into account. Another component of this research project is the development of an “energy carport” for vehicles, which generates and stores the necessary electricity per photovoltaics and feeds it into the network. The “eCarports” work without plugs via induction plates on the floor. In the ideal scenario, they enable generation of the entire business mobility energy via an independent, scalable micro-grid from carport areas. Particularly in rural areas this is a tremendous advantage.

itelligence is developing the corresponding fleet and mobility management system on the basis of SAP HANA. As a type of “control room”, it supports analyses, fleet and energy management in accordance with the mobility requirements of all parties involved and addresses the topic of roaming and charging requirements, including vehicle reservation, billing and resource-optimum mobility planning.

Business Benefits

- Sustainable and cost-efficient e-fleet management of the future in the company
- Pioneering solution for the use of renewable energies for highly accessible electric mobility in rural areas
- Improved grid-load management and well balanced, gradually growing integration of renewable energies into the overall energy mix
- Enhanced insights for energy consumers, producers, the automotive sector and related supplier industries

Use Case 5: Better Personal Price Promotions

Challenge



With the triumph of social media, consumers have become significantly more powerful and demanding. They have learned how to compare prices and share their experiences through Web-wide communities. Logging on to Facebook, Twitter and other social media channels, they interact and share with anyone online who is willing to listen or respond. Even when in-store, shoppers are going mobile to share details on current prices or special offers. And since price is without a doubt the greatest determining factor, after “show-rooming” a desired item in a brick-and-mortar retail store, an increasing number of those shoppers will then purchase the desired goods online at a lower price.

Considering this development, retailers (as well as consumer brands) must be prepared to

- do everything possible to become more cost competitive: gain efficiency and reduce operating costs.
- identify consumer reactions to new products, bundles, prices and promotions as early as possible.
- receive early warning of product defects, shortfalls and price reductions by competitors.
- listen to channel and market-specific concerns and delights.
- improve their ability to create personal price promotions, or offer incentives that will immediately convince customers.

Solution

Supported by real-time data and a mobile analytics app, a sales representative can gain real-time insight into market and price trends and customer perception of the brand and products. The representative can combine structured data – like campaigns residing in a marketing or CRM application – with unstructured data from online channels like social media, wikis and more.

An in-store sales associate armed with a mobile device and a mobile analytics app can connect to the organization’s in-memory data platform and access real-time POS, ERP and CRM data. The associate can also access individual customer profiles to check and analyze past buying behavior and favorite products.

Based on an immediate analysis, the associate can then offer a reduction or incentive (such as match an online price, waive shipping costs or bundle product offerings). He or she can also take the order, check stock availability and confirm the transaction and the timeline for the delivery on the spot.

Leveraging the advantage of personal attention, the pull of immediacy, and the power of real-time analysis, the sales associate makes the deal, strengthens the customer relationship and captures additional data for future use.

Business Benefits

- Monitoring consumer reaction to promotions in real time and the ability to take corrective action if needed
- Immediate evaluation of the impact of marketing campaigns and events
- Better understanding of personal/local demand for products and services
- Intelligence about new product development, design, and introduction
- Ability to create more effective personal price promotions

Smarter, Faster, in the Now – Summary

In today's hyper-connected world, data is increasing in volume and complexity almost as fast as customers' demands and preferences are changing. Sustainable competitiveness requires the ability to access and analyze big data on a granular level – instantly, wherever and whenever necessary.

Remember the questions: How can we better offer new products and services to our customers? How can we go after adjacent markets? How can we gain new knowledge and important insights before our competitors? How can we speed up data for business in the now?

In-memory technology and tailor-made analytics software is crucial to answering all of these questions and many more. Numerous business scenarios and use cases for SAP HANA have already proven the value of the technologies at work.

Being able to load, adjust and access great volumes of data vastly faster will prepare companies for tomorrow's business today. Supported by a real-time platform based on SAP HANA, they can innovate and transform business. They can streamline transactions, analytics, planning, forecasting, and customer-response data processing, so they can decide, act, react and operate smarter, faster and with full control.

And the best news is, with rapid deployment solutions for SAP HANA, short cuts can enable companies to rapidly get their business up and running smarter, faster, and in the now. Package by package, companies get everything they need – with a clearly defined scope and a predictable cost, including preconfigured software and implementation services. The time is now to get prepared for tomorrow's business. And it might take only a few weeks.

Read more ...

... about future-oriented software in our upcoming white paper on SAP® Rapid Deployment Solutions. If you want to know more about “business in the now” and SAP HANA®, please contact the authors or visit us online at: www.itelligence.info

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About itelligence

itelligence is one of the leading international full-service providers in support of SAP® solutions, employing about 2,700 highly qualified employees in 21 countries and in five regions (America, Asia, Western Europe, Eastern Europe and Germany/Austria/Switzerland). As a frequently awarded SAP partner, among others a global value-added reseller, SAP Certified in Cloud Services and SAP Gold Partner Business ByDesign®, itelligence realizes complex projects in the SAP solution-based environment for over 4,000 customers worldwide. In 2006, itelligence obtained gold-level status as an SAP channel partner as part of the SAP® PartnerEdge® program. The company's services in support of SAP solutions range from consulting and licensing to outsourcing and services to proprietary industry-specific SAP. In 2011, itelligence generated total sales of EUR 342.4 million. itelligence is “Top Consultant” 2012.





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