

MODERNIZE YOUR SAP IMPLEMENTATION — MAKE REAL-TIME BUSINESS A REALITY

Game-changing business intelligence could be
closer than you think.

THE CHALLENGES OF A TRADITIONAL SAP INFRASTRUCTURE, THE BENEFITS OF AN SAP HANA IMPLEMENTATION, AND WHAT LIES BETWEEN

For most enterprises, 60 to 73 percent of enterprise data goes unused for business-intelligence (BI) and analytics efforts, according to Forrester.¹

Data that is out of sight or out of date creates a competitive blind spot for businesses today. With customer demands, economic changes, and new trends and technologies evolving at a dizzying pace, staying relevant — not to mention competitive — requires that businesses access all available BI to be flexible and agile. Businesses must have quick access to data that is comprehensive, accurate, current, and consumable in real time. A traditional infrastructure, where the online analytical processing (OLAP) platform and the online transaction processing (OLTP) platform are separate, makes flexibility and agility difficult to achieve.

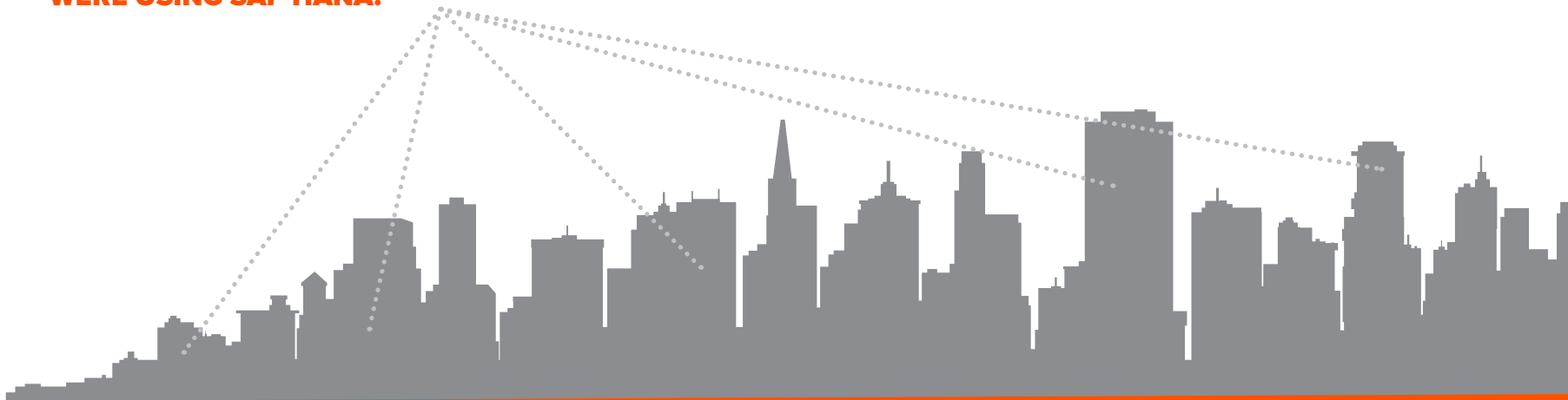
When a business has accurate, current data in hand, it can make real-time data-driven business decisions so that it can stay relevant and competitive, or even be a disruptor in its industry. One way that a business can get real-time business insights is by using SAP HANA, an in-memory database platform from SAP that empowers real-time analytics at a massive scale and provides a real-time foundation for running core business applications on a single platform.

However, migrating to SAP HANA from a traditional SAP environment can be a large, risky undertaking. It can be costly and take years, factors that can make justifying the effort internally difficult. There are solutions on the market, however, that can make migration easier. These solutions can fill the gap before migrating to SAP HANA and allow a business to realize the benefits of SAP HANA before or during migration. This paper outlines:

- The reality of managing traditional mission-critical SAP systems and the challenges that reality creates when merging data from OLTP and OLAP platforms
- Common barriers to migrating to SAP HANA
- A solution that can allow a business to realize the benefits of an SAP HANA implementation simply and cost-effectively — even before or during the migration process

IN JUNE OF 2015, SAP REPORTED THAT MORE THAN

6,400 BUSINESSES
WERE USING SAP HANA.²



THE HISTORIC DIVIDE BETWEEN BUSINESS PROCESSES AND DATA ANALYSIS

In a traditional SAP infrastructure, mission-critical IT systems are run in silos, including those for SAP enterprise-resource-planning (ERP), customer-relationship-management (CRM), and supply-chain-management (SCM) systems. This separation helps ensure that the performance of non-mission-critical systems or processes does not disrupt the performance of mission-critical ones, which is common in traditional disk-based deployments.

To avoid performance impacts, traditional SAP infrastructures run mission-critical systems, including the OLAP platform used to analyze business data and the OLTP platform, on different, dedicated hardware or even in dedicated data centers. Data is then protected by features such as high availability (HA), disaster recovery (DR), or even backup and restore, which can help further minimize the loss of critical data during a disruption — whether planned or unplanned. The separation of mission-critical IT systems also helps ensure that the critical processes that manage, monitor, and execute all business-critical and revenue-generating activities, such as customer service and order-to-cash, remain available and run as quickly and efficiently as possible.

With the OLTP and OLAP systems operated in different silos, a business can confront delays and challenges when it needs to extract usable BI from its mission-critical OLTP platforms.

To pull BI out of traditional mission-critical SAP ERP, CRM, and SCM systems — without affecting their performance — and into a format that a business manager can use can be time-consuming and resource intensive, and it can result in data that is anything but real-time. The extraction, transformation, and loading of data into the OLAP system can take several hours or days, depending on the amount of data being extracted.

Keeping the hardware and software for both SAP OLTP and OLAP platforms separate can also increase cost and complexity for the business and its IT team. Businesses tend to oversize traditional SAP systems to accommodate for peak loads, which lets them avoid business disruptions during peak times, but which can mean that these platforms are idle and their capacities largely unused for long periods of time. This can leave a business with expensive hardware and software that erodes the business's return on investment (ROI).

DATA ANALYSIS IS MISSION-CRITICAL TOO

The new digital age makes data access and analysis as mission critical as ERP and CRM. Today, business managers must marry real customer data from the business with external business-related data in real-time to make data-driven decisions that give the business a competitive advantage. For example, a business manager needs specific information about a customer when determining whether to offer that customer a discount. This information can include purchase history, credit viability, and social-media activity.

The business manager might pull this information from data in the customer's customer-service history, social-media comments, the point-of-purchase terminal or web session, or elsewhere. Regardless of the source, the business manager needs this information fast in order to make quick, impactful business decisions.

With access to the right data in real-time, business managers can integrate customers' social-media and browsing histories with company product-purchase histories to increase revenue and improve the customer experience through targeting with real-time product recommendations and promotions.

REAL-TIME IN THE FOOD RETAIL WORLD: PICARD

For Picard, a leading frozen-food retailer, user experience is paramount. Picard has used Pure Storage flash storage to accelerate business intelligence across its 920 stores for 4,500 staff members. As a result, Picard has experienced quicker insights that haven't just improved the responsiveness of the company's supply chain and helped its product managers quickly identify which products are trending — they have let Picard use the same system to gain more insight into critical areas of the business.³

ELIMINATE THE DIVIDE BETWEEN BUSINESS PROCESSES AND DATA ANALYSIS

The traditional need for separate OLTP and OLAP systems for business processes and analytics no longer exists. Today, OLTP and OLAP can run on the same infrastructure without disrupting mission-critical applications and without performance issues. Businesses can now extract data directly from SAP ERP, CRM, and SCM systems and analyze that data in real-time, which enables business managers to make real-time, data-driven decisions.

SAP HANA, an in-memory database platform, makes it possible to run both OLTP and OLAP together. SAP HANA removes the challenges and delays created by maintaining separate legacy systems and data siloes by eliminating the need to read and write from a disk and avoiding the traditional disk latency that results.

A business can gain significant benefits by migrating its traditional SAP landscape, with transactional and analytical siloes, to a single SAP HANA in-memory data platform, regardless of the underlying storage infrastructure. However, migration from traditional SAP systems to SAP HANA is not without obstacles and challenges, and it can be a lengthy process.

REAL-TIME, DATA-DRIVEN INSIGHTS AT ENTERPRISE SCALE

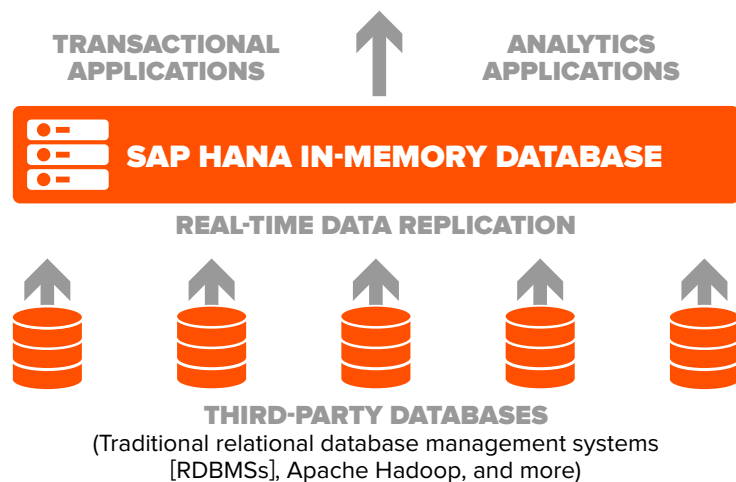


FIGURE 1. SAP HANA is an in-memory database that allows businesses to do real-time analytics at massive scale. It also serves as a real-time foundation for all core business applications, including transactional and analytical systems.

CONSIDERATIONS WHEN MIGRATING TO SAP HANA

Cost is an important consideration when migrating to SAP HANA. Businesses with SAP investments are concerned about losing the investments they have made in traditional SAP environments. Those investments are top of mind when businesses look at the costs of new technologies and the resources needed for migrating. Businesses might see a distant ROI when comparing immediate technology purchases to the potential future gains of real-time access to data, which is harder to quantify and not necessarily a line item on a budget.

It can be difficult for a business to overcome its concerns around investing in new data-center technology today, because the technology might not actually be in use during the several years that the migration might take to complete. Additionally, that technology might be obsolete once the migration is finished. By the time the business has completed its migration and is realizing business value, the initial hardware might be several years old, and newer, more powerful, and more efficient technology might be available, which could make yet another investment necessary. Total cost of ownership (TCO) and ROI can become hard to envision.

ONE IS BETTER THAN TWO

While cost and time are important considerations for SAP HANA migrations, it does not have to be costly or time-consuming for a business to realize the benefits of SAP HANA. In fact, a business can start using SAP HANA without migrating or while it migrates. Solutions are available that enable businesses to run transactional and analytics systems on a single platform using SAP HANA almost immediately, without having to fully migrate to SAP HANA, without migrating data to SAP HANA, and without requiring the businesses to abandon their investments in traditional SAP systems.

The Pure Storage all-flash platform is one such solution. Pure Storage all-flash is available as point storage — called FlashArray//m — and as part of a full converged-infrastructure solution — called FlashStack — that adds best-of-breed Cisco server and networking components, preconfigured and optimized for SAP environments, to Pure Storage FlashArray//m.

Pure Storage enables businesses to run OLTP and OLAP solutions in parallel on the same all-flash storage platform, even with underlying disk-based deployments. This can help companies accelerate SAP software running on traditional relational databases by as much as 10x; and the same certified arrays can be used when businesses make the transition to SAP HANA.⁴

FASTER APPLICATIONS, BETTER PRODUCTIVITY

Kraton Performance Polymers, a leading global producer of engineered polymers, hosts all its critical SAP applications with Secure-24, an industry leader in enterprise IT-operations application hosting and managed cloud services.

When Kraton Performance Polymers started experiencing performance lag with its SAP Business Warehouse application, and its internal businesses were complaining about the impact on productivity, the company evaluated moving to Pure Storage all-flash storage.

Kraton Performance Polymers' testing of SAP Business Warehouse on Pure Storage technology showed that immediate improvements could be achieved. After implementing the solution, the results were significant enough that Kraton is considering moving all of its SAP applications to Pure Storage all-flash arrays.

Pure Storage all-flash arrays provide scalable and predictable performance regardless of application or process. They make it easy to consolidate various SAP environments and applications onto the same platform simply by re-platforming onto all-flash technology.

Pure Storage solutions handle read/write operations and various block sizes while delivering predictable data processing performance. The platforms do this efficiently and automatically — all without time-intensive tuning that requires specific knowledge and skill sets.

A business can be up and running with Pure Storage solutions and SAP HANA in just a few hours by deploying FlashStack.⁵ Running traditional SAP workloads and SAP HANA workloads on the same Pure Storage solution does not require a business to migrate its data or its platform. The business can use SAP HANA today without the investment required for a full internal migration. The business can then take advantage of the cost savings and ROI realized with Pure Storage to invest in an internal migration to SAP HANA when ready.

All-flash storage from Pure Storage can reduce time-to-deployment and investment risk. Pure Storage offers a unique Right-Size Guarantee to ensure that businesses benefit 100 percent from Pure Storage's leading data reduction without risk.⁶ A FlashStack converged-infrastructure solution further helps protect businesses' investments during the migration to SAP HANA because the same infrastructure is used to run all SAP systems, whether on SAP HANA or traditional databases.

Pure Storage also offers the Evergreen™ Storage model by Pure Storage, which is a purpose-built business model that can simplify storage ownership and lifecycles. Evergreen Storage allows businesses to routinely upgrade Pure Storage hardware to the latest controller or solid-state drive (SSD) technology, even across generations, and with standard maintenance and support. Businesses can deploy once and keep expanding and improving for 10 years or more — with no downtime, no disruption, and no data migrations, and knowing that their investments are protected along the way.⁷ With Evergreen Storage, customers never need to re-purchase a terabyte (TB) of storage that they already own. Businesses get what they need to run SAP most efficiently and without the risk of undersizing.



FIGURE 2. With Evergreen™ Storage by Pure Storage, businesses have access to the latest, most efficient, and most modern hardware and software for their single data platforms for transactional/analytical SAP landscapes with no downtime, no disruption, and no data migrations.⁷

Pure Storage provides inline deduplication and compression to drive down costs. Instantaneous, zero-performance-loss snapshot technology lets a business simply create clones of its entire SAP landscape to protect data.

Additional benefits with Pure Storage all-flash technology include:

- **SAP CERTIFICATION** — FlashArray//m is certified as an enterprise storage solution for SAP HANA.
- **INVESTMENT PROTECTION** — Pure Storage participates in the SAP HANA Tailored Datacenter Integration (TDI) option to help customers use existing compute, networking, and storage components for SAP HANA.

- **3X FASTER DEPLOYMENT** — Businesses can deploy 3x faster, get consistent, sub-millisecond latency with greater than 99.999 percent availability, and upgrade and expand easily, without disruption, by using Pure Storage.
- **LOWER COSTS** — Pure Storage all-flash technology helps reduce power, cooling, management, and space expenses.
- **DATA REDUCTION** — Businesses can buy less storage and experience a dramatically lower TCO.

IT IS TIME TO LET GO OF TRADITION — AND IT IS EASY!

SAP HANA can help a business quickly realize true business value from transactional SAP software and transform raw data into value through analytics — without the time or cost needed to migrate a traditional SAP environment to SAP HANA.

Pure Storage all-flash storage provides the infrastructure that can transform business into a real-time, fact-based enterprise.

It is a platform that can:

- Lower cost and complexity
- Protect investments during the migration from traditional SAP environments to SAP HANA
- Minimize the risk of failed business modernization
- Provide businesses with the data value needed to make data-driven decisions in real-time

Pure Storage can help your business access business data in real-time by modernizing your SAP infrastructure while protecting your investments and minimizing your risk. To learn how, contact your local Pure Storage SAP specialist, or visit **WWW.PURESTORAGE.COM/SAP**.

- ¹ Forrester. “The Forrester Wave™: Big Data Hadoop Distributions, Q1 2016.” January 2016. <https://www.forrester.com/report/The+Forrester+Wave+Big+Data+Hadoop+Distributions+Q1+2016/-/E-RES121574>.
- ² SAP News. “SAP Delivers Next Release of SAP HANA.” June 2015. <http://news.sap.com/sap-delivers-next-release-of-sap-hana/>.
- ³ Pure Storage. “Picard Caters to Data-Hungry Users with Pure Storage FlashArray: Case Study.” <https://www.purestorage.com/customers/picard.html>.
- ⁴ Pure Storage. “SAP: Pure Storage® SAP solutions deliver transformational performance and simplicity for SAP and SAP HANA deployments.” <https://www.purestorage.com/company/technology-partners/sap.html>.
- ⁵ Based on customer feedback provided to Pure Storage from actual customers.
- ⁶ Pure Storage. “Introducing the Newly Expanded Evergreen Storage – Guaranteed Capacity That Stays Modern and Dense.” June 2016 <http://blog.purestorage.com/introducing-the-newly-expanded-evergreen-storage-guaranteed-capacity-that-stays-modern-and-dense/>.
- ⁷ Pure Storage. “Evergreen™ Storage. A Perfect 10.” <https://www.purestorage.com/why-pure/evergreen-storage.html>.



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