Strategic Briefing
Optimizing SAP® Infrastructures

shaping tomorrow with you
“The future is now. SAP is revolutionizing the world of business applications with SAP HANA and SAP Real-Time Data Platform. In-memory computing is based on a new generation of infrastructures, software and services which enable business enterprises to act with flexibility and agility. It is important for enterprises to employ this new technology intelligently in order to be competitive in global markets, without losing sight of the efficiency and effectiveness of their IT landscape operations. We at Fujitsu have integrated the required intelligence in the design of our SAP solutions, and that makes a difference for you and your business.”

Thomas Pickel, Head of SAP Solutions, Fujitsu
SAP AG promises that enterprises using SAP in-memory technology will become faster, slimmer and more clever. With the SAP Real-Time Data Platform, they have direct access to current data, which they can analyze in an instant when making key business forecasts. The announcement led to high expectations – and unleashed a remarkable boost in development, which has made the dream of real-time enterprise management a reality in many businesses today.

Fujitsu also wants to help your enterprise in successfully making this transition to new technology. Fujitsu solutions like FlexFrame for SAP and FlexFrame Orchestrator and the Fujitsu Power Appliance for the SAP HANA® platform, along with Fujitsu’s proven consulting, implementation, integration, and operational services, can help optimize the overall operations of your SAP software. Your decisive benefit: Fujitsu solutions reflect the direction taken by SAP embodied in such products as SAP Real-Time Data Platform and delivery of SAP solutions from the cloud.
The SAP real-time data platform is revolutionizing SAP landscapes

OLTP and OLAP databases are merging

The SAP Real-Time Data Platform paves the way for real-time enterprise management based on a paradigm shift: the merging of OLTP and OLAP databases in one database based on in-memory computing technology. This means that consolidated data from the data warehouse and in-the-moment data from the ERP system can be used simultaneously in decision-making processes – and enterprises also have the ability to analyze huge volumes of data themselves, within seconds.

The in-memory database, containing all current and historical data, is a powerful tool for business enterprises. For example, enterprises can drive innovations based on information gained from real-time analysis, and they speed up business processes by integrating transaction and decision support systems on one platform. Collaboration among material and production planning units, finance, sales and other departments can be simplified.

Mission-critical factor: the in-memory database

Thus the in-memory database is becoming a mission-critical factor in every enterprise. It makes high demands in terms of performance and security in the hardware infrastructure, and also requires professional and efficient management.

New trends in provisioning models

The paradigm shift in the solution architecture is also accompanied by new concepts for solutions provisioning and delivery. Among these is the delivery of SAP solutions from the cloud, a trend that is growing in importance.
SAP HANA optimizes enterprise management

The innovative real-time database platform SAP HANA employs a massive parallel architecture to end bottlenecks that occur when extremely huge volumes of data are processed. This technology helps business enterprises to drastically speed up analyses, planning and simulation. SAP HANA opens up completely new possibilities for improving processes and business management in real time.
Enterprises manage their business more efficiently with real-time analysis and real-time applications

The business world is becoming more and more dynamic, decision cycles are much shorter, and the complexity of vital business data is growing. Accurate, immediately available data thus plays a key role in enterprise business management. And this is where SAP HANA can help. It enables enterprises to speed up and improve their business processes. Here are some examples:

In research and development, the instant analysis of huge data streams can lead to early detection of symptoms and support improvements in medical treatment. Another option is the correlation of historical data from therapy schedules and current patient data like blood counts in order to define specific medication dosages or individual treatment plans.

When it comes to production and logistics, many businesses face the daily challenge of managing the procurement and storage of hundreds or thousands of items efficiently, ensuring that the cash flow is optimized while fully utilizing manufacturing capacity. Only the real-time analysis of material flows can create complete transparency and effectively support investment optimization.

Sales departments can achieve better turnover forecasts with the real-time analysis of transactional and historical mass data. This approach is also helpful when optimizing portfolio or inventory planning and the deployment of human resources in retail stores. Real-time analysis also fits well with the business model of online gaming enterprises. Depending on the course of play, for example, customers can be offered optional virtual items which they can purchase to gain specific advantages in the game they are currently playing. To do this, thousands of events involving a large number of players must be analyzed to discover specific patterns for each player. Such complex analyses of this kind are only possible with in-memory technology.

During online operations, real-time analyses serve as a basis for ongoing improvements. Energy providers, for example, benefit from the complex analysis of data from several sources, such as meters, historical patterns, service data and weather data, both current and historical – this enables them to plan investments in network maintenance and expansion with more accuracy and efficiency.

Controlling in large organizations or for major projects can also be optimized with continuous comparison of actual vs. target data and figures in real time. Comprehensive analyses of various factors such as materials, orders, bills, contracts and suppliers support immediate reaction whenever issues or deviations arise. This keeps projects on schedule and prevents exceeding project budgets so that target margins can be reached.

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How Fujitsu sets the foundation for business innovations:

Fujitsu is one of the leading global providers of IT infrastructures and the third-largest IT service provider worldwide. And there is good reason for this. Our philosophy is that innovation alone cannot be an end in itself – it must lead to genuine improvements that result in more customer satisfaction, promotion of change, plus increased efficiency and performance.

With this philosophy in mind, we establish partnerships with our customers and develop solutions that will help them boost their business success. We invest in trusted and successful partnerships by approaching the challenges of our customers with enthusiasm, and by staying focused on what matters as we strive to provide the right solutions to meet these challenges.

To ensure that improvements can be quickly and smoothly implemented, we offer in-depth technology expertise and extensive experience in realizing consistent processes, along with proven methods for deploying infrastructure solutions that perfectly match the needs of our customers.

When implementing new infrastructure solutions, our experienced SAP consultants focus their attention on the following aspects:

- Ascertaining requirements and ensuring consistency (high availability, disaster recovery, backup).
- Analysis of existing systems with extremely efficient tools such as Fujitsu’s SystemInspection Service for SAP software environments to discover bottlenecks and determine the degree of optimization required.
- Combining preliminary information to build a basis for creating a customized concept that precisely addresses requirements.

To make sure that the success of a project is on sure footing from the very start, we also stress the importance of a very active feedback cycle:

- Project experience and customer feedback is actively included in the ongoing process of infrastructure solution development.
- An extensive pool of verified data from hundreds of projects is available to support the optimal design and dimensioning of new customer projects.

An additional aspect: The development processes are certified according to ISO 9001 Quality Management and ISO 14001 Environmental Management.
Fujitsu, your partner for SAP HANA projects

SAP HANA is becoming a central, mission-critical component in SAP landscapes because of the many options it offers for improving business processes. That’s why the deployment and operation of this solution should be on a solid basis from the very beginning. In its role as a pioneering SAP HANA partner, Fujitsu offers you solutions and services that address your specific enterprise needs and deliver optimal support on your way to the SAP Real-Time Data Platform.

Proven experience and innovation for your project
SAP HANA originated in the Hasso Plattner Institute (HPI). The technological parameters were defined in the HPI Future SOC Lab – and Fujitsu was involved in the development from the start as a founding member of the lab. Today our customers benefit from our advanced experience:

■ End-to-end services from a single source: Take advantage of the bundled competence of Fujitsu, not to mention the know-how of experts specialized in SAP BusinessObjects™ business intelligence (BI) solutions and SAP HANA from our subsidiary TDS AG and other partners we highly recommend for delivering our services to you. The offering covers all project phases, from an introduction to SAP HANA to solution design and smooth, efficient operation.

■ Innovation at its best: Fujitsu works very closely with SAP and quickly adopts developments that are then transformed into viable solution offerings; for example, certified multiple node configurations, high availability/disaster recovery, backup and restore, integration of VMware vSphere®, SAP CRM powered by SAP HANA; and SAP ERP powered by SAP HANA.

■ Comprehensive decision support: Are you interested in exploring SAP HANA and discussing possible application scenarios for your enterprise? The Fujitsu Global Demo Center in support of SAP HANA, located at our subsidiary TDS, is equipped with system landscape for applications running on SAP HANA. It is maintained by a competent team of developers and consultants who are ready to assist you in matters concerning solutions, databases, BI, and business processes.

■ Tailor-made solutions: You can count on our certified infrastructure solutions, optimized for in-memory computing technology. Thanks to various configuration options, the Fujitsu Power Appliance for SAP HANA adapts to your specific enterprise requirements.
Unique offering
of extremely efficient infrastructure solutions

For every requirement: infrastructure solutions from Fujitsu

When it comes to SAP HANA offerings, Fujitsu is always a leader: for example, with special configurations for customers with SAP Business One who want the benefits of SAP HANA, or with certifications of scale solutions to meet very demanding business requirements. In recognition of this dedication and close collaboration in development, services, adaptation and operation of SAP solutions, Fujitsu received the Pinnacle Award 2012 in the category “Technology Innovator of the Year.”

To enable customers to effectively leverage the benefits of in-memory technology for their business, Fujitsu and SAP look forward to collaborating on innovative solutions in the future. As a global SAP technology, hosting and services partner, Fujitsu offers complete service packages as well as a wide range of optimized infrastructure solutions, from affordable entry-level offerings to scale out environments. Since the solutions are preinstalled and pre-tested when delivered, and implemented with proven integration as well, this groundbreaking in-memory technology can be installed within just a few days. Because the configurations have been thoroughly tested and the integration with SAP applications certified by SAP, you do not have to deal with infrastructure details. This is also true when the requirements for high availability and reliability are extremely high: The “building block” concept can satisfy such high demands at all times and optimize the SAP HANA infrastructure solution from Fujitsu in terms of high availability, disaster resilience or backup and restore.

Fujitsu infrastructure solutions are optimized for SAP HANA and certified by SAP. Thanks to its flexibility, the Fujitsu Power Appliance for SAP HANA adapts to every kind of application scenario in enterprises of any size. From affordable offerings with one compute node to extremely scalable, disaster-tolerant infrastructures with several nodes, the solutions satisfy all requirements in terms of performance, reliability and efficiency.

http://www.fujitsu.com/fts/hana
http://www.tds.fujitsu.com/saphana
Real-time management in business enterprises, both large and small

Domani Business Solutions, an SAP Channel Gold Partner, implemented SAP Business One analytics powered by SAP HANA at the A.vd. Broek agricultural and livestock breeding company. The solution was comprised of a preinstalled environment with the Fujitsu PRIMERGY TX300 server.

“The project with SAP Business One Analytics, powered by SAP HANA, shows that benefits can be achieved even with a relatively small database of 2.5 gigabytes and nine SAP system users. The professional preinstallation carried out by Fujitsu contributed to smooth deployment.”

Luc van Alphen
Co-owner
Domani Business Solutions B.V.

Publiacqua optimizes reporting with SAP HANA

This Italian water supplier wanted to streamline daily reports, management reports and strategic planning in order to become faster and more flexible while collecting information with more details. Using the he Fujitsu Power Appliance for SAP HANA software, Publiacqua can now compile data distributed across several systems for analysis in real time.

“Thanks to improved reporting processes and management reporting with SAP HANA, we can optimize our business performance. What’s more, we can also minimize development time and considerably reduce infrastructure costs.”

Luciano Caroti
Head of IT Systems
Publiacqua S.p.A.
End-to-end services from a single source

Off to a good start: SmartStart Toolbox
How can SAP HANA contribute to solving specific problems in my business enterprise? How can we migrate existing data securely? How much will SAP HANA actually cost? SmartStart Toolbox offers you the services needed to answer all of your questions about SAP HANA. It includes demos and test offerings, professional database optimization and migration, along with decision-making support based on cost estimates and financing options.

For maximum efficiency and reliability during operation
Different kinds of enterprises have various requirements to fulfill when it comes to their IT infrastructure operations. That’s why Fujitsu offers a variety of operational models, from traditional operations at the customer’s site to managed SAP IT or even SAP hosting. Fujitsu infrastructure solutions that are run in the customer’s own data center can be supported with the Fujitsu Solution Contract service offering. This special maintenance and support service even covers IT components from various vendors that are typically found in IT infrastructures today. Fujitsu acts as the central contact for all components and, with an intelligent mix of proactive and reactive services, makes sure that any eventual disruptions in infrastructure functions do not impact operations. Individual customer requirements are also governed by various service level options.

For high productivity from the very beginning: implementation and infrastructure services
Fujitsu services are based on proven and standardized approaches. Services are available for every project phase, from the initial solution concept and individual specifications to on-site integration. That guarantees a high level of quality during implementation and fast integration and initial start-up on-site.

Our services for SAP HANA

- **SmartStart Toolbox**
  - SAP HANA demos
  - SAP HANA test offers (on-site and in the Fujitsu SAP HANA Global Demo Center)
  - SAP HAN playgrounds
  - Database assessment, optimization and migration
  - TCO analysis
  - Financial services offers

- **Infrastructure Services**
  - Consulting and infrastructure specification
  - Operations concepts
  - Implementation and integration
  - SAP HANA Deployment Service

- **Maintenance, Support and Management**
  - Solution Contract
  - Remote Support
  - Remote Operations
  - Managed SAP IT Infrastructure
  - SAP Hosting

http://www.fujitsu.com/fts/hana
http://www.tds.fujitsu.com/saphana
FlexFrame for SAP holistically optimizes SAP operations

Easier, faster, better and at lower cost: Those are the reasons why enterprises of all sizes and in diverse industries run their SAP applications with FlexFrame for SAP. The preconfigured and pretested infrastructure solution is designed around a unique, holistic concept that optimizes planning, operation and change management in SAP environments and reduces overall costs by some 50%.

For ten years now FlexFrame for SAP has proven its value in hundreds of business enterprises and in every kind of provisioning model: in a company’s own data center, as a managed service, as a hosting service from a service provider and as a cloud service.
## FlexFrame for SAP: easier, faster, better, lower in cost

### Easier
- SAP operations without the complexity of virtualization and cluster technologies
- SAP running for various customers with one IT infrastructure
- Lighter workloads thanks to automation

### Faster
- Provisioning of applications and servers within minutes
- Switching applications between physical and virtual servers without modifications
- Responding to new requirements flexibly

### Better
- Integrated high availability and automated management
- High operational reliability even with updates and further developments
- Better SLAs than possible with conventional SAP solutions
- High level of transparency for SAP performance

### Lower in cost
- Consolidate and utilize IT infrastructure optimally
- Minimize administration and maintenance work
- Reduce costs by scaling performance
- Implement energy-efficient green IT
- Achieve high availability without expensive cluster technology
- Reduce TCO by 50% or more

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**REHAU profits from FlexFrame for SAP worldwide**

“FlexFrame for SAP is the perfect platform for hosting SAP systems. We have achieved our targets in terms of savings, and we are able to meet even higher operational demands with the same number of employees.”

*Thomas Schott*
CIO, REHAU AG
Future-proof computing with FlexFrame for SAP

Complete solution for SAP operations
FlexFrame for SAP is a complete solution that integrates all infrastructure components and offers end-to-end virtualization. Based on PRIMERGY industry-standard servers, central storage and a high-performance network, this IT infrastructure solution provides for a pool of physical and virtual resources. All of the software (operating system, applications, database systems) resides in the central NetApp storage in FlexFrame for SAP. Applications are dynamically deployed across physical and virtual resources, and the entire solution, from the hardware layer to the application layer, is managed consistently with an integrated administration tool.

Complete optimization of SAP operations
For example, FlexFrame for SAP is ideal for consolidating SAP applications. This, combined with automated administration tasks, makes managing SAP environments much easier. The automatic high availability of SAP and database services improves service quality at the same time. And since IT resources can be allocated flexibly, requirements can be satisfied very quickly, and SAP services are always provided at performance levels that precisely match the actual needs of an enterprise. Advantages like these pay off in terms of lower Total Cost of Ownership (TCO) – depending on the environment, savings of more than 50% are possible.

Ready for the future
Thanks to its architecture, FlexFrame for SAP is ideal for all application scenarios in SAP environments. That is also true if enterprises want to deploy SAP HANA – a simple upgrade of the management software to FlexFrame Orchestrator is all that is required. What’s more, the solution is also ready for use in private clouds or as a hosting platform because customers are securely separated within the IT infrastructure.

Low-cost, entry-level variant
Comprehensive optimization of SAP operations is not just a privilege reserved for large corporations. For example, FlexFrame Compact for SAP is a low-cost solution that is specially designed for enterprises with 100 to 1,000 users. It is configured for all application scenarios ranging up to 10,000 SAPS (SAP Application Performance Standard).
FlexFrame Orchestrator: innovative IT management for real-time enterprises

When it comes to new products, faster business processes or better decision-making based on fast real-time analyses: Many enterprises want to boost their business with in-memory technology. To do this, however, they also need IT infrastructure management that can keep up the pace. FlexFrame Orchestrator from Fujitsu is the management platform that delivers ample resources to your applications, including SAP HANA, in a smart, fast and secure manner – in real time, as demanded by enterprise business management.
FlexFrame Orchestrator enables enterprises to implement innovations from SAP much faster, making the operation of their SAP environments simpler, more efficient and less expensive. This also applies to SAP HANA. Enterprises can also securely manage the in-memory database, which is a mission-critical factor. In FlexFrame Orchestrator this is accomplished through central and transparent management of the SAP platform, including HANA infrastructures. Customer benefits include high operational security for the entire SAP environment, consistently optimized processes and considerable cost savings.

**High performance and availability for HANA environments**

FlexFrame Orchestrator can be integrated in heterogeneous data center environments without interrupting live operations. FlexFrame Orchestrator provides highly developed, integrated management functions for setting up and running an SAP HANA-optimized infrastructure. Implementation, operation and enhancements have high levels of automation. To ensure efficient provisioning of optimal performance, system resources can be allocated dynamically, and workloads can be distributed with flexibility. And that is not all: FlexFrame Orchestrator is a unique high-availability solution for infrastructures running SAP HANA. For example, mission-critical applications can be backed up by several failover servers, and fewer critical services need to share one failover server. Disaster recovery installed at two different sites can also be realized without needing to take additional steps.

**FlexFrame Orchestrator is open to third-party providers**

For the first time, Fujitsu offers FlexFrame Orchestrator as an open solution by lifting the restrictions that had applied to certain hardware and software components – the solution is now available purely as a software appliance. Thus even more users can take advantage of the benefits offered by FlexFrame technology. A certification program ensures that FlexFrame Orchestrator functions smoothly and seamlessly with data center components from third-party suppliers.
Fujitsu and SAP: a global partnership for more innovation

The global partnership between Fujitsu and SAP has been a driver of innovation for our customers for more than 40 years. Working together at all levels, we constantly develop offerings that enable enterprises to maximize the value of their investments in SAP. The complete SAP HANA offering is the latest example of our successful collaboration.
As a result of the long-term partnership with SAP, Fujitsu developed a mature portfolio, which supports the use of SAP applications. The range of proven solutions for optimizing the service quality, adaptiveness and efficiency of SAP environments includes technology products and solutions as well as services for the entire life cycle. From the front end to the data center, from application services to optimization services – all available from a single source. What’s more, all IT provisioning models for SAP are supported: in the customer’s own data center, as a managed service or hosting service, as provided by our subsidiary TDS on request, and as a cloud service.

And with our Global Enterprise Management Service for SAP, we also offer standardized support for SAP operations worldwide. This enables international customers to react to market and organizational changes faster and with more flexibility, while improving business performance and cutting costs at the same time.

Extensive experience as an SAP user
Fujitsu itself has relied on SAP solutions for many years at sites around the globe. We run more than 50 SAP installations to support our own business needs. More than 40,000 employees use more than 21 SAP modules at Fujitsu. We have developed and tested methods for improving the deployment of SAP software, for daily operations and for updates or enhancements – one prime example is the new SAP GTS Module, which was realized within just three months. Fujitsu is also an SAP HANA customer.

Global performance for your business
To help you achieve your goals, we offer our experience in collaborating with more than 8,000 SAP customers worldwide, based on the expertise of 2,400 SAP application architects and more than 500 SAP infrastructure and solution architects. If you opt for our dynamic IT infrastructure solutions, our proven approaches to production, implementation and management are automatically available for application in your project. Our services will also support operational excellence in your SAP environment – these services are delivered worldwide by 80 Fujitsu data centers within the scope of our global hosting and global cloud partnership with SAP.
Optimization of SAP environments with Fujitsu

No matter whether you are innovating existing applications or deploying additional SAP applications, optimizing IT infrastructures, striving to achieve more operational efficiency and faster processing of enterprise data with less complexity, or developing steps for launching enterprise business management in real time: Fujitsu supports you in all matters related to SAP – worldwide. Profit from our SAP expertise, innovative complete solutions, comprehensive services and proven processes. Take the first step toward optimizing SAP in your business enterprise: Talk to us about those items listed on your SAP agenda. We look forward to hearing from you!

Our partnership with SAP at a glance

**SAP HANA**
- Complete offering from consulting, infrastructure solutions and services

**FlexFrame for SAP/FlexFrame Orchestrator**
- Unique management solution for complete SAP infrastructures, including SAP HANA analytics

**Analytics**
- Implementation and optimization of SAP BusinessObjects BI solutions through Fujitsu BI services, including the optimization of existing SAP NetWeaver Business Warehouses and professional migration to SAP HANA

**Mobility**
- Comprehensive portfolio of mobile systems – notebooks, workstations and tablet PCs
- Support for enterprise mobility strategies with concepts such as virtual client computing and services, and managed workplace

**Cloud**
- Fujitsu offers its FlexFrame solutions as an optimized platform for establishing and running private clouds efficiently

**Hosting und Managed Services**
- Offerings ranging from classical SAP hosting to managed SAP IT infrastructures at customer sites or in Fujitsu data centers
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