NEC

BUSINESS TRANSFORMATION
WITH SAP HANA

INTRODUCTION

No one likes infrastructure upgrades. Replacing new hardware is a costly, never-ending battle. But software upgrades, especially major ones, can entail even lengthier and more expensive projects.

When it comes to dealing with today's massive volumes of data—**processing** it, **analyzing** it **and reporting on it**—*not* upgrading can be even more expensive.

Often software upgrades introduce major changes. Whether by choice or due to changing technology, these changes affect not only existing features, but also the underlying data structures and platform. And almost certainly, the added features require newer, more efficient server hardware, memory and storage.

If you have an existing SAP implementation or are considering a new one, you probably know SAP has made radical (and necessary) changes to its underlying architecture. "Necessary" because the volume of data we collect—and process, analyze and store—is growing at an astronomical rate. Existing infrastructures and databases simply cannot handle the load.

For each company, the question of whether and when to migrate to SAP HANA is ultimately a business question based on expected ROI.

The result is SAP HANA, a cloud-based, in-memory application that can significantly simplify and replace complex IT infrastructures. SAP HANA *does* handle the load presented by today's big data.

So you're faced with a choice. You can update to the latest (and possibly last) version of SAP and hope for the best. Or you can give your company its own radical productivity bump by migrating to SAP HANA.

A successful migration is more involved than simply staging and testing an incremental update.

Before starting down that path, you have to ask the following questions:

- *WHY should you migrate to SAP HANA in the first place?*

- *HOW can you approach your migration strategy?*

- *WHAT critical choices can you make to ensure success?*

Read along and we'll explore and answer each one.

WHY MIGRATE TO SAP HANA?

It's almost become a universal problem in today's data centers. Reporting tools are inefficient and inflexible. Reporting windows lengthen with each passing day, with more and more data being sifted to yield the results. Yet the pressure to speed digital transformation—for using data as a competitive advantage—continues to mount. Real-time is the key.

When your business team needs a new data element on a report, the reporting staff can't do it in a timely fashion. Even standard operational reports take too long to generate.

Your users are beyond frustration. They can't do their jobs, which means your company is burning cash while they wait.

It's not their fault, nor yours. The technology that served well enough for business intelligence (BI) in the past simply can't keep up with the demand. The avalanche of data has strained your technology resources, beyond what they were designed to do even five years ago.

At the same time, it's hard to find budget to invest in new initiatives. A recent **Forrester Research** report bore this out. It showed as much as 73 percent of a typical corporate IT budget is devoted just to keeping the lights on.
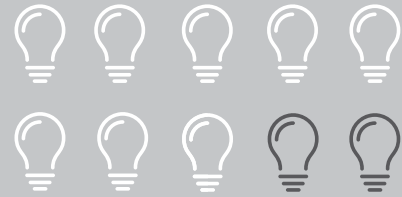
So, how do you justify, much less succeed at, an SAP HANA migration?

THE NEED FOR SPEED...
AND STAYING COMPETITIVE

Given such data reporting challenges, HANA's incredible speed of in-memory analytics alone is appealing. Shrinking reporting time windows from days to minutes or even seconds offers a compelling use case.

The business can't help but pressure you to address the problems with operational reporting. But at what cost? Perhaps a hardware refresh or the need to renew software or database licensing will drive your company to consider alternatives. In today's environment, whatever steps you take had better pay for themselves—fast.

Then there's the software maintenance issue. SAP will support companies running older versions of its products through 2025. Yet its latest and most innovative applications—including SAP Business Suite 4 SAP HANA (S/4HANA)—only runs on SAP HANA. So, in practical terms, your business could be left behind those competitors that do make SAP HANA migration a priority.

THE BUSINESS CASE, BY THE NUMBERS

Each organization is different, so each has to make its own business case for SAP HANA. But even a back-of-the-napkin calculation should spur discussions of the potential benefits of migrating to SAP HANA.

Based on in-memory speed alone, SAP HANA is transformative. It accelerates data transactions, processing and report generation, saving your users time—lots of time. For example, if each of 100 users saves just 20 minutes a day because of SAP HANA, the savings can add up to between $750,000 and $1 million per year.

Further, a recent Forrester report on HANA adoption highlighted the substantial total cost of ownership (TCO) savings as a result of deploying SAP HANA:
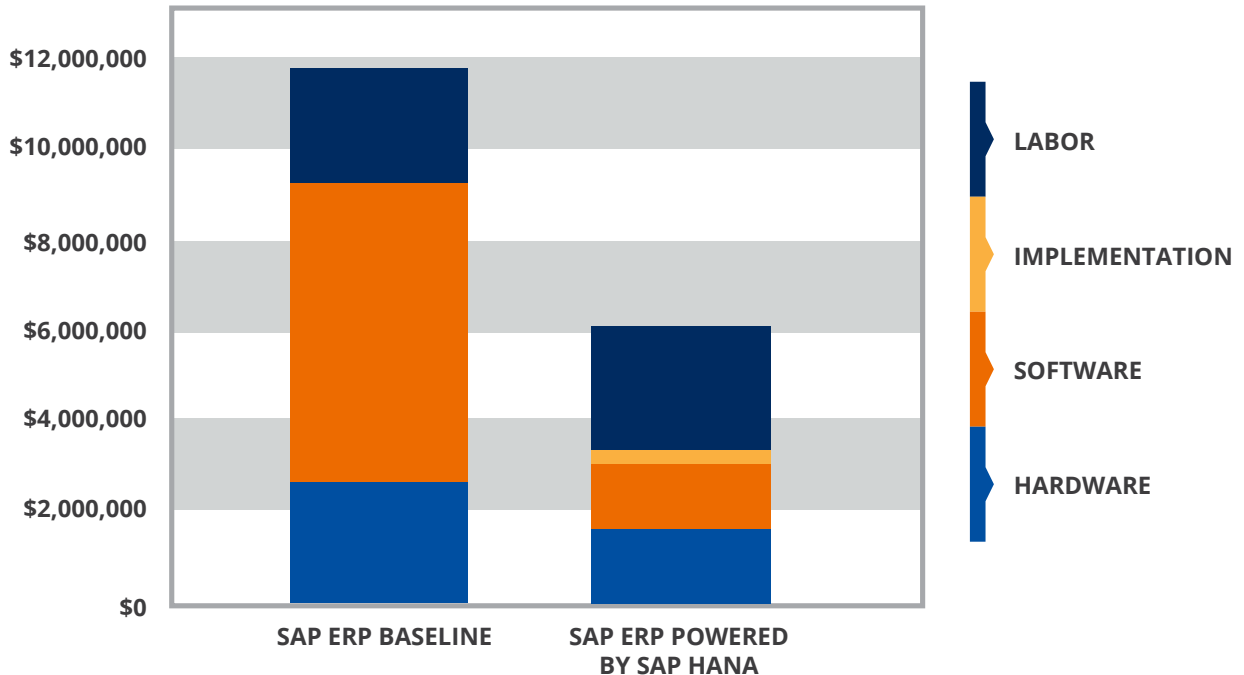
- *70% reduction in software costs*

- *15% reduction in hardware costs*

- *20% reduction in administration and development costs.*

100
USERS
x 20
minutes
per day

=$750,000 to $1 MILLION *in savings*

source: http://www.3vsolutions.com/HANA-ROI-Calculator.pdf

SAP ERP TOTAL COST OF OWNERSHIP SUMMARY

LABOR

IMPLEMENTATION

SOFTWARE

HARDWARE

SAP ERP BASELINE

SAP ERP POWERED BY SAP HANA

source: Forrester Research, Inc.

TO CLOUD OR NOT TO CLOUD?

Whether you're talking about an SAP application or a whole corporate infrastructure - everyone seems to be moving from on premise to the cloud.

But should you consider moving critical infrastructure to a private cloud?

Many advantages of the cloud over on premise infrastructure are well-documented: elasticity, scalability, cost savings and so on.

But here are just a few less-obvious reasons to consider the private cloud:

- *A private cloud keeps your data right where you (and only you) can see it.*

- *A cloud is naturally redundant—network, servers, data and more.*

- *The data security of a reputable cloud provider surpasses most well-funded private data centers.*

- *Some cloud providers are government-certified as compliant with regulations for multiple industries.*

In all these situations and more, the main point: Someone whose sole business is providing secure, reliable infrastructure takes care of it all. Not you.

THE CLOUDS HAVE IT

Finally, running SAP HANA in the cloud can help you achieve operational efficiencies. SAP HANA in the cloud is a repeatable solution that reduces risks and eliminates learning curves. And it saves money, too.

In a cloud environment, experienced SAP HANA administrators take care of all the daily ops tasks. That include provisioning, configuring, tweaking settings, not to mention backups and data protection. This frees your company's resources to focus on core business competencies, not infrastructure maintenance. This model also achieves IT organizational efficiencies, scalability, and better visibility into your operating environment.

Security is another strongpoint for cloud deployment. Cloud providers are certified against stringent security standards that few on-premise datacenters can match.

SAP HANA is more than an infrastructure upgrade. It's an upgrade in speed and efficiency, and a reduction in software, hardware, administrative and development costs.

SETTING UP FOR SUCCESS

Unless your company's economics are different than most, you can see WHY it's advantageous to migrate to SAP HANA. These advantages include:

- Speed of data storage, processing and retrieval
- Reduced time for report generation
- Cost savings realized from more efficient employees

- Reduced software, hardware, administrative and development costs
- Opportunities to move infrastructure to the cloud
- A competitive edge by truly leveraging all that data and the insights it brings

Now let's talk about HOW to realize those benefits—how to approach the migration itself.

1. HAVE A STRATEGY

First, it's critical to create a sound implementation or migration strategy. All the project budget in the world won't gain these benefits, without a winning strategy for implementing SAP HANA. This includes your methodology, your project staffing and—most importantly—the questions you have to ask yourself to assess the effort required.

2. HAVE A METHODOLOGY

To succeed in a new SAP HANA implementation or migration, you need a methodology based on a proven, structured approach:

Assess > Plan > Procure > Implement > Test > Iterate

Your corporate program office (if you have one) may be capable of planning the phases of such a multi-phased project. However, even a seasoned program office can lack technical expertise and experience with SAP HANA implementations.

The same is true of your IT and database staff. The technologies on which SAP HANA are built are solid, but they differ from what many it departments are used to.

With or without a program office, many companies wisely seek assistance from SAP HANA specialists. This avoids any unnecessary bumps in the migration path.

3. UNDERSTAND YOUR SITUATION

SAP HANA can benefit most any company in areas of database performance, analytics and reporting. But every company has its own unique challenges.

Many companies want to start by speeding up analytics. To do this, they deploy SAP Business Warehouse (BW) as the first application. Transactional applications like SAP ERP and SAP CRM follow later. A recent report by Forrester Research confirmed this accepted adoption pattern among SAP HANA users.

As expected, customers that implemented SAP BW on SAP HANA state that reports that took up to a day now run in minutes.

Even with general adoption patterns, each company's situation is unique, as are its goals in migrating to HANA.

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YOUR OWN GOALS AND NEEDS HELP MAP YOUR APPROACH

Despite the competitive edge SAP HANA can offer, the prospect of a major upgrade can be daunting. Midmarket companies may not feel they have the bandwidth or budget to approach an SAP HANA migration. **Not so fast.**

Before assuming SAP HANA is out of reach, answer the following questions. Your answers are essential, both to the overall decision to migrate and the approach your team of specialists will take. Let's start with your hardware and data center goals.

> • *Do you have your own corporate data center?*
>
> • *Have you gone virtual, in the cloud?*
>
> • *Or are you somewhere in between?*

Companies of all sizes and budgets are moving their applications and technology infrastructures to the cloud, including SAP HANA. To determine what's best for your SAP HANA migration, ask yourself:

> • *Are your security and compliance goals being met?*
>
> • *What deployment model should we choose? Should we buy an appliance or consider tailored data center integration?*
>
> • *Will we leverage our existing hardware for SAP HANA, or will we need to do a hardware refresh?*
>
> • *Do we have enough space in the data center for SAP HANA? What would it mean for my BASIS database admin team to support SAP HANA?*
>
> • *Should we consider a cloud deployment instead?*
>
> • *Who will help us with hardware, systems integration, decisions about operating system, and so on?*

Once you've determined your physical infrastructure goals, you can assess the application steps, transition plan and other details.

> • *How will we move SAP BW or other SAP applications to SAP HANA? What will we move first?*
>
> • *How do we address our security and regulatory compliance requirements?*
>
> • *How will we manage the transition from our current environment to SAP HANA with a minimum of disruption and downtime?*

Answering these and many similar questions can help you assess your unique situation and goals. But there are many additional considerations that go into the logistics of an SAP HANA migration. That's why many companies choose SAP HANA-knowledgeable consultants: to help them with a detailed assessment, planning and execution.

The real question is whether there is a comprehensive service offering that can make the move as manageable, inexpensive, and efficient as possible?

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WHAT CHOICES CAN YOU MAKE TO ENSURE SUCCESS?

Now you know WHY migrating to SAP HANA makes economic sense. And you've got a great start on HOW to assess and plan your approach to the migration.

What specific choices can you make to further ensure your program success?

It's no secret SAP HANA migrations can be complex projects. Large enterprises have the necessary human and financial resources required to successfully manage all of the components themselves. But that doesn't mean small and midsized companies can't successfully migrate to SAP HANA and reap the same benefits.

For midmarket companies, the key to success of SAP HANA adoption and migration is to partner with a team of technology service providers, one that will deliver a **seamless, comprehensive and affordable solution** that provides an ongoing competitive advantage.

WHAT SHOULD I LOOK FOR IN A MIGRATION PARTNER?

While the options you choose will vary according to your needs, let's discuss some of the qualities and services your migration partner should provide.

1. Secure, Reliable Data Centers
As a midsize company, chances are good you want to avoid building or refitting your data center to accommodate the SAP HANA migration. If you haven't already, it's the ideal time to look at using a third-party data center. Using a third-party data center can save you the expense of expansion and refit, not to mention ongoing costs of for facilities and personnel.

Look for a partner who only uses or owns data centers that are hardened, secure and redundant, preferably with 99.999% availability guarantees.

2. Private Cloud Expertise
Whether implementing SAP HANA on-premise or in a data center, a private cloud implementation is best at keeping your data under lock and key. Your SAP HANA migration partner should know the ins and outs of deploying a private cloud for your new HANA implementation.

Further, equipment quality can vary widely among data centers. Your partner and cloud provider should utilize only high-performance servers and storage, certified by SAP for use in HANA installations.

3. Compliance-readiness
Most every company these days has to adhere to compliance regulations that govern the use and privacy of sensitive customer data. In a high-volume data environment like SAP HANA, it's critical the partner, the implementation and the data center all be certified as "safe" from a compliance standpoint.

4. Turn-key "Migration as a Service"

As mentioned before, SAP HANA migrations are more than standard infrastructure upgrades. Even after the new infrastructure is deployed and ready, you have **real data and applications** to be migrated. Your partner should have the ability and resources to:

- *Migrate SAP applications running on any database to SAP HANA*

- *Stage the migration, in separate development, QA and production environments*

- *Help you broaden and secure existing SAP HANA deployments across more of your organization*

- *Assume (and protect you from) the risks associated with migration*

5. Disaster Recovery Services

An SAP HANA migration is a good time to revisit how you address disaster recovery (DR) and business continuity (BC) requirements. This is especially true if you intend to have an on-premise SAP HANA deployment. Small to midsize companies don't always have the resources for a full-blown DR environment.

When selecting a private cloud implementation, your SAP HANA partner should be able to ease the burden. The cloud makes affordable Disaster-Recovery-as-a-Service (DRaaS) possible. DRaaS allows for almost instantaneous failover and resumption of service in a secondary "virtual" environment.

That's why Enterprise Strategies Group says 39 percent of companies use the cloud for DR. Make sure your SAP HANA partner can provide it for you.

CHOOSE YOUR SAP HANA PARTNER WISELY

To get all these in a single SAP HANA partner is a tall order. Such a partner has to offer a comprehensive Infrastructure-as-a-Service (IaaS) platform. It's even better if the partner has its own partnerships with industry-leading providers of the various components. That helps keep your costs down, as compared to hiring and coordinating separate service providers on your own.

The key, then, is to look for a partner that...

- *Is a recognized and longstanding expert in SAP HANA for both cloud and on-premise deployments*

- *Has deep experience in IT technology integrations, communications and networking*

- *Has government-approved compliance and regulatory clearance for its solutions and facilities*

- *Is known for its award-winning project and program management skills*

- *Collaborates with other leading technology providers for:*

  - o *Converged infrastructure*
  - o *Secure, hardened and redundant data centers*
  - o *Secure, high-availability operating platforms*

- *Offers a complete open source ecosystem to encourage expansion*

A tall order to fill: A partner that can do all that has to offer a comprehensive Infrastructure-as-a-Service (IaaS) platform.

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ROCK ON: SAP HANA at Peavey Electronics

THE CHALLENGE:

Audio equipment manufacturer Peavey Electronics runs its business on SAP software. It SAP ERP reports are essential management tools for personnel throughout the company. But as new report request, users and mobile devices increased, the ERP team hit the limits of its existing business intelligence (BI) tools.

"Some reports have thousands of lines. With our old system, it could take 15 minutes or more to get a report," said Robert Muirhead, manager of ERP applications.

The team was running SAP BW on IBM DB2 an AIX machine. Peavey needed faster analytics performance as well as remote access from browsers and mobile devices.

THE SOLUTION:

Then the company's long-time partner, 3V Solutions, suggested an alternative to reduce risk while providing important benefits. SAP HANA comes with a free license for Sybase. Why not try SAP HANA for reporting and migrating the SAP Business Suite onto Sybase?

Peavey ditched its legacy platform and traditional database. It migrated its analytical platform to SAP BusinessObjects and its reporting database to SAP HANA. Working with NEC, 3V Solutions recommended a high performance NEC SAP appliance running Red Hat Enterprise Linux for SAP HANA. Based on the NEC Express5800 enterprise server, the appliance features a massive resource pool to support the compute, and memory intensive SAP applications.

THE RESULTS:

Reports that took 15 minutes now complete in seconds.

According to Muirhead, *"Additionally, information is continually updated, even after the report has begun, which allows our employees to see information in real time."*

The new BI platform also opens reporting access to mobile device users. Further, it eliminates the system constraints that had limited the ERP team's timely delivery of new business analytics.

Success breeds more success. Peavey now plans to migrate its entire SAP landscape in the next phase of the project.

CONCLUSION

For each company, the question of whether and when to migrate to SAP HANA is ultimately a business question based on expected ROI.

Migration projects may be spurred by reaching an inflection point that drives a need for change, such as a hardware refresh, database upgrade or the end of an application's natural lifecycle. Even when that's true, an SAP HANA migration is far more than just an infrastructure upgrade. And it should be treated as such.

The business case is simple. Infrastructure upgrades rarely pay for themselves. **SAP HANA, whether on premise or in the cloud, can offer ROI.**

SAP HANA's in-memory database processing alone is transformative. By reducing reporting windows for hundreds of users, a midsize company can save millions of dollars a year. Further, adopting SAP HANA reduces software costs by 70 percent, hardware costs by 15 percent and DevOps costs by 20 percent. And if you have a big data application, SAP HANA makes it work for you—instead of the other way around.

What's more, *not* migrating to SAP HANA can hand your competition an advantage.

While SAP HANA can save you big bucks, migration projects can be complex. It's a wise move to select a reputable migration partner who can deliver, from initial assessment to final rollout. Selecting a partner doesn't have to be difficult, but you do have to ask the right questions.

An SAP HANA migration is an ideal opportunity to move your SAP information assets to a private cloud in a secure, third-party data center. This move can save serious money, by reducing capital and maintenance expenses. Plus, you'll gain the flexibility and elasticity of the cloud.

Finally, you can simplify your choice of data centers by careful selection of your migration partner. Make sure they have firm partnerships with other technology leaders, so together they can provide a full-featured, end-to-end IaaS solution you can count on.

An Infrastructure upgrade, indeed.

The key to success of SAP HANA adoption and migration is to partner with a team of technology service providers, one that will deliver a seamless, comprehensive and affordable solution that provides ongoing competitive advantage.

NEC KNOWS SAP HANA

SAP HANA is transformative for business and offers substantial competitive advantage to companies that adopt the platform. But SAP HANA migrations are complex projects. Large enterprises have the necessary human and financial resources required to successfully manage all of the components themselves.

For midmarket companies, the key to success of SAP HANA adoption and migration is to partner with a team of technology service providers that can deliver a seamless, comprehensive and affordable solution that provides ongoing competitive advantage.

NEC's SAP HANA in Iron Mountain's National Data Center is that solution. Together, NEC, 3V Solutions and Iron Mountain work to create a one-stop shop for SAP HANA migration providing one contract for the entire effort. From building a business case, to financing, to all the migration and implementation details, to post-migration monitoring, this team of technology service providers ensures a migration in as little time as possible. In addition, affordable Disaster Recovery-as-a-Service and Iron Mountain's secure datacenter facilities ensure a well-protected, robust infrastructure that your business can rely on.

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