

**INSIGHTS****Managing the HANA Hype:***Guidance for Consumer Products IT Leaders*

Consumer Products (CP) companies want to get at big, big data. They need large amounts of data delivered at high speed with real-time information, insights, and visualization. Operational and historical reporting are not enough to keep up with today's business demands. Instead, advanced analytical reporting, simulations and scenarios are required for rapid decision making.

Consumer Products decision makers have dreamed of a day when they could generate Profit & Loss statements by brand and by region or customer profitability in real-time. With in-memory computing and massive parallel processing (MPP), that day is here. Equipped with a strategic vision and a tactical implementation roadmap, IT teams can lead their companies to realize the game changing benefits of HANA.

**SAP HANA, It's a BIG Deal for IT**

One of the most time consuming tasks in an operational Business Warehouse (BW) or Decision Support System (DSS) is the nightly data load. IT works overnight shifts to monitor updates, and that, at best, provides internal customers a few hours for decision making, depending on the run time and time zone of the source system.

SAP HANA makes data available as soon as the transaction is completed in the SAP system. With in-memory computing, data updates happen in RAM and the action (write/delete) is simplified, reducing the 2-way round trip to the disc. Data in main memory (RAM) can be accessed significantly faster than from the disk. Also, MPP uses multiple processors or separate computers to perform computations in parallel.

As a result, critical reports that used to take several hundred seconds to run or that did not run at all can now return in as little as a sub-second – that's two orders of magnitude faster than today. Not only does this provide Consumer Products leaders more real-time reports, but it saves IT time and effort managing this process.

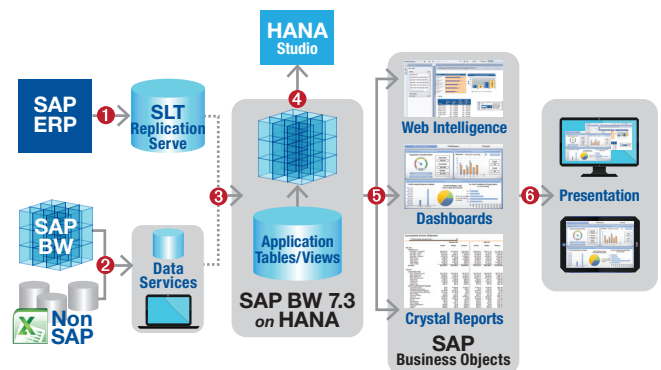
Some advantages to running HANA are:

- **Continuous Availability** – System is available 24x7
- **Operational Robustness** – Data is available directly from the operational system
- **Organizational Independence**—Each organization within the enterprise can maintain their own data capabilities
- **Scalability** –System can handle increasingly large amounts of data, and size can be increased by adding RAM
- **Maintainability** – Data models and feeds are adaptable to changing organizational requirements

### Approaches for Leveraging HANA

There are several ways that Consumer Products companies can leverage the power of HANA. To understand which approach will work most effectively, IT groups must understand the business drivers by functional area and consider the current systems landscape. Three distinct approaches have crystallized for organizations to take advantage of HANA: Implementing Business Warehouse (BW) Reporting on HANA, Selecting ECC Transaction Processing and Reporting on HANA or Building a HANA standalone environment. The various options are defined below, outlining the specific implementation considerations, benefits and challenges that accompany each.

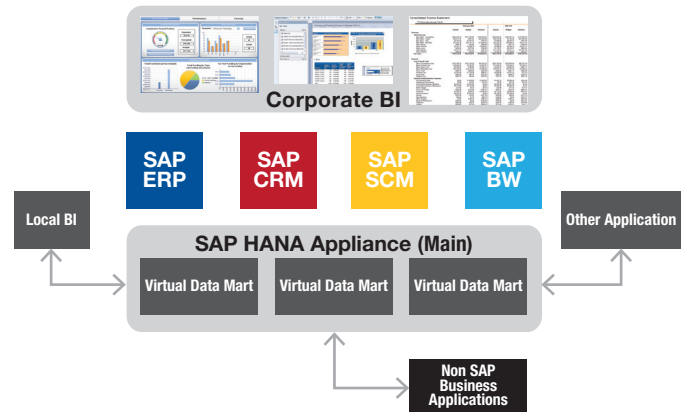
Option 1: Business Warehouse (BW) Reporting on HANA	
<b>Defined</b>	Migrate existing BW environment to HANA
<b>Considerations / Drivers</b>	Maturity of existing BW system
<b>Benefits</b>	<ul style="list-style-type: none"> <li>• Leverage existing BW investment</li> <li>• Use the same reporting format as the organization uses today</li> <li>• Simplify new &amp; existing physical BW data models</li> <li>• Reduce time to build &amp; maintain reports</li> <li>• Improve reporting times</li> <li>• Flatten data model with aggregation using in-memory- optimized InfoCubes &amp; Data Storage Objects (DSOs)</li> <li>• Improve load system times &amp; with less movement of data</li> <li>• Reduce necessity to replicate instances of BW or other systems strictly for data recency</li> </ul>
<b>Challenges</b>	<ul style="list-style-type: none"> <li>• Handle data updates through the delta mechanism in BW</li> <li>• Retrain BW staff to design reports using a less summarized data model</li> <li>• Validate/recreate BW extractors</li> <li>• Inaccessibility of key figures as they are not available in HANA</li> </ul>



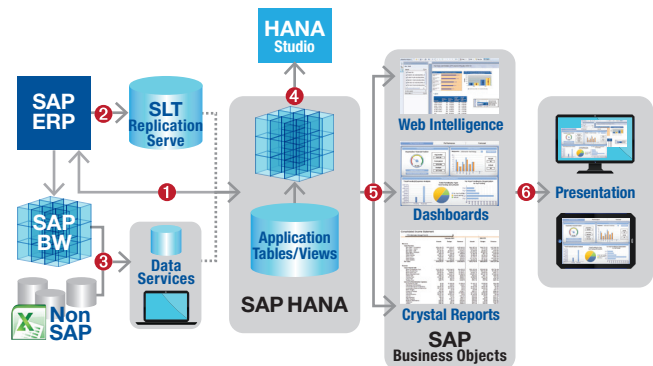
- 1 SLT (System Landscape Transformation) loads real-time from ERP
- 2 SAP Data Services can load (SAP BW) and non-SAP data
- 3 Data is loaded into SAP BW 7.3 using Extractors or SLT
- 4 Developers design and model analytical objects using HANA Studio
- 5 BI 4.0 or any other application can be used for presentation of data
- 6 Data can be rendered using mobile, tablet or any device using a browser

**Option 2: SAP ECC Transaction Processing and Reporting on HANA**

<b>Defined</b>	Migrate existing SAP ECC environment to HANA
<b>Considerations / Drivers</b>	HANA outages that could impact ERP business critical systems
<b>Benefits</b>	<ul style="list-style-type: none"> <li>• Leverage existing SAP ECC investment</li> <li>• Eliminate moving data to a data warehouse with OLTP reporting completed in ECC</li> <li>• Utilize speed of HANA for new SQL code</li> <li>• Greatly improved reporting times</li> <li>• Note: SAP's Business One solution for small &amp; medium sized enterprises runs with HANA &amp; has dashboards built in to transactional screens</li> </ul>
<b>Challenges</b>	<ul style="list-style-type: none"> <li>• Reprogram existing &amp; verified ABAP reports</li> <li>• Risk losing data without correct rollback procedures</li> </ul>

**Option 3: SAP ECC Transaction Processing and Reporting on HANA**

<b>Defined</b>	Run HANA in parallel with ERP/SAP/BW systems
<b>Considerations / Drivers</b>	Current analytics solution does not require HANA to be on SAP BW
<b>Benefits</b>	<ul style="list-style-type: none"> <li>• Extract data from Business Suite, BW, &amp; non-SAP data sources using a variety of Extraction Transformation Loading (ETL) tools</li> <li>• Utilize HANA while continuing ongoing operations in the transactional system</li> <li>• Reduce Storage Area Network (SAN) costs</li> <li>• Access to new software &amp; reporting tools that run only on HANA (e.g., Predictive Analysis)</li> <li>• Leverage reports based on pre-built SAP data models to avoid building a custom analytical solution (use SHAF, SAP HANA Analytics Foundation)</li> </ul>
<b>Challenges</b>	<ul style="list-style-type: none"> <li>• Build extractors</li> <li>• Lose some capabilities associated with SAP NetWeaver BW, like Standard Business Content</li> <li>• Retrain staff to use new tools of standalone HANA including Information Composer, HANA Studio, SQL, SQLSCRIPT, ETL tools, SAP Landscape Transformation</li> <li>• Address analytic modeling techniques &amp; data modeling with respect to normalized &amp; de-normalized data types</li> <li>• Employ data services to manage the process &amp; appropriate business rules</li> </ul>



- 1 Data can be directly pulled using DXC (Direct Extractor Checker)
- 2 SLT (System Landscape Transformation) loads data in real-time from ERP
- 3 SAP Data Services can load SAP BW and Non SAP Data
- 4 Developers design and model analytical objects using HANA Studio
- 5 BI 4.0 or any other application can be used for presentation of data
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## Implementation Approaches

After deciding on one of the previous strategic options for running HANA, a more tactical implementation approach needs to be defined. If companies choose to run BW or ECC on HANA (options 1 or 2), they will need to decide if a big bang or sidecar pilot is best. If companies choose to run HANA as a standalone, then they have the option to either build HANA from the ground-up or use SAP Rapid Deployment or SAP HANA Live solution to accelerate the implementation. Each approach comes with varying risks and rewards. IT groups should work collaboratively with functional areas to decide which approach will meet the needs of the business considering timelines, resources, skills and priorities.

### *BW/ECC on HANA: Big Bang versus Sidecar Pilot*

If companies choose to run BW or ECC on HANA (options 1 or 2), they can either use the big bang or the sidecar approach. If a company is comfortable with risk taking and has demonstrated historical aptitude to manage change, the big bang approach is a feasible option. IT groups, though, should consider their capabilities for this kind of change, which include managing a large scale implementation and ramping up on new skills required to support HANA on a large scale.

In contrast to big bang, the sidecar option is a phased approach. With a sidecar implementation, companies first build a specific business solution that needs the performance of HANA, and then they slowly migrate the BW or ECC platform to the HANA landscape over time. For example, a company looking to HANA to accelerate the budgeting, planning, and forecasting processes could use the sidecar for financial functions. SAP Business Planning and Consolidation (BPC) on HANA BW is an excellent candidate for a sidecar project.

A new variation of the sidecar approach is to use SAP HANA Live (i.e., HANA Analytic Foundation). HANA Live reduces the time for deployment and leverages predefined tables and virtual data models. A variety of data sources can also be used in addition to SAP Business Suite to create real-time reports without data replication, latency or redundancy.

### *HANA Lessons Learned from Charmer*

*Charmer-Sunbelt was one of the first companies to go live with HANA, enabling SAP Landscape Transformation (SLT) replication from their ECC and disparate systems. This HANA data replication of 1.9M records translates into 120GB of data on a 7:1 compression ratio and allowed Business Objects to display real time information to end users on top of the HANA database.*

*Charmer-Sunbelt successfully implemented a Business Intelligence (BI) tool for warehouse operations analysis and display, reducing the need to access specific SAP transactions to produce the desired results from the system.*

*Charmer's lessons learned include:*

- *Identify the right implementation team*
- *Develop use cases that are focused and limited in scope*
- *Develop HANA SLT replication skills including ABAP, BI and SQLSCRIPT*
- *Employ a train the trainer approach*
- *Select a consulting partner that is focused on delivering business value*

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Whether selecting a specific business solution or HANA Live, the sidecar approach is the least invasive to ongoing operations as it allows existing ECC or BW environments to remain unaffected. It enables the enterprise to gain specific HANA knowledge and experience without the potential disruption of a big bang approach.

#### *HANA Standalone Option: Ground up, SAP HANA Live or Rapid Deployment*

If companies choose HANA standalone (option 3), there are several options to approach the implementation. Companies can either use SAP HANA Live, HANA Rapid Deployment solutions or build the HANA environment from the ground up. As discussed above, SAP HANA Live reduces deployment time using predefined tables and virtual data models while providing the opportunity to use additional data sources.

SAP Rapid Deployment solutions combine preconfigured software and best-practices content with pre-built reports. These solutions minimize risk through defined timelines and costs and integrate HANA with existing SAP on-premise and cloud solutions. However, they provide minimal functionality and act primarily as a Proof of Concept (POC) pilot to install HANA quickly. Companies using this approach should consider it entry-level as it does not provide a long-term solution for modeling a company's business. A robust solution will typically require extensive enhancements beyond this type of pilot.

Companies can also use pre-built solutions like Rapid Marts and Accelerators to support a standalone HANA implementation. Rapid Marts are very similar to BW Standard Content, but require additional licensing. Accelerators are standard solutions that enhance the functionality and speed of SAP ECC modules for HANA users. Controlling-profitability and finance-controlling accelerators are also available for companies looking for functional specific tools.

If building HANA from the ground-up, Clarkston recommends companies start with a non-critical POC pilot project. Companies should think about starting with a manually intensive process that has never been considered feasible on the existing platforms. A good project candidate is one with information that does not require tight integration with existing systems – thus reducing the Extraction Transformation Loading (ETL) and complex data modeling within HANA.

Although standard content solutions like Rapid Deployment or SAP HANA Live typically do not meet all of a company's needs without additional customization, they can provide companies a tangible representation of HANA capabilities. This is especially important for those companies with smaller IT functions. After completing a POC pilot, IT organizations will be more prepared to build HANA ground-up for a broader organizational rollout. Deciding how to best deploy HANA and then executing this decision is complex. Clarkston Deployment Solutions can walk companies through the decision process and provide end-to-end development of these choices.

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## Wrap-Up

IT leaders have a critical role to ensure their companies do not fall prey to the HANA hype. Before pursuing a HANA solution, companies must first clearly understand the specific business benefits and return on investment that in-memory computing will create for their organization. Based on the company's reporting goals, IT organizations should guide the business on how to best leverage HANA and suggest the most appropriate architecture and implementation approach.

Despite how HANA is leveraged in the long run, learning to walk before starting to run is recommended. Beginning the HANA journey with a pilot mitigates risks and prepares IT and the enterprise to support the change. For BW and ECC options, a sidecar approach allows companies to build specific business solutions that need the performance of HANA while slowly migrating the existing BW landscape or ECC platform to HANA over time. For HANA standalone, choosing a focused, big data solution with the least number of interfaces can give organizations a feel for the benefits of HANA before investing in a full-scale customized build out.

HANA is a platform that can transform Consumer Products companies. With the many ways it can be leveraged and the different implementation approaches, IT leaders need to be at the forefront of HANA discussions, leading their organizations down a profitable path with in-memory computing.

Have questions about how HANA can support your Consumer Products company? Discuss more with one of our HANA experts by contacting us at [info@clarkstonconsulting.com](mailto:info@clarkstonconsulting.com).



### About the Author

Frank Ritter, former Director of Business Intelligence at Clarkston, has almost 30 years of project management and business transformation expertise in Accounting, Sales, Marketing, Manufacturing and Manufacturing Planning, and Logistics. His project experience spans IT, enterprise applications, master data strategy, business intelligence and analytics.



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