Customer Insights into Modern Data Warehousing with SAP BW/4HANA

Authors: Brian Wood and Timm Grosser

THERE’S GOOD NEWS FOR SAP BW CUSTOMERS who might be looking for a next-generation data warehouse: SAP’s BW/4HANA gives new life to its long-time data warehousing product.

SAP BW/4HANA is a completely revamped version of SAP BW that runs on the SAP HANA in-memory database. The new product improves performance and scalability, simplifies operation and development, and supports a variety of in-database analytic functions. It is designed to support multiple analytic use cases, ranging from standard reporting and dashboarding to real-time analytics and machine learning. Although it’s not without challenges, the platform supports an array of functionality (see Figure 1):

- **Data integration** to combine data from dozens of data sources and data types.
- **Data quality** to ensure clean, consistent data is delivered to business users.
- **Stream processing**, which, along with HANA’s in-memory architecture, provides the foundation for real-time analytics.
- **Spatial functionality**, which is essential for the location analytics that are at the heart of so many applications from mobile advertising and e-commerce to the Internet of things (IoT).
- **Graph functionality**, which captures relationships among data to uncover unique analytic insights.
- **Text analytics**, which enables semantic and sentiment analysis and can support artificial intelligence applications such as natural language processing, understanding, and generation (NLP, NLU, and NLG).
Predictive analytics, which is fast becoming the killer app across the enterprise, supports everything from executive decision making to IoT-driven predictive maintenance on manufacturing assembly lines.

Customer Perspectives

This report examines the impact of SAP BW/4HANA at four SAP customers who have implemented the solution or are in the process of doing so.

Drivers. In general, customers chose SAP BW/4HANA to serve as an enterprise data warehouse (EDW) to support all their business users and analytic needs, from reporting to prediction. Most use it to consolidate large volumes of data from both SAP and non-SAP data sources, often in near real time.

All the customers we interviewed were existing SAP customers, and all but one were SAP BW customers. Most said their decision was influenced by the desire to standardize on the new SAP S/4HANA application platform; they felt compelled to add the companion data warehousing product (SAP BW/4HANA) to ensure support for end-to-end SAP processes. The SAP BW customers were also eager to upgrade to a more modern, open, and faster data warehousing platform. Finally, many decided to implement SAP BW/4HANA to obtain its packaged content.
**Benefits.** The customers we interviewed say that BW/4HANA provides greater flexibility in modeling and loading data, better performance, and lower data latency (near-real-time analytics) than previous versions of BW. The new modeling options, including field-based modeling and open operational data store (OODS) views, make it easier to add non-SAP data. And real-time replication and the new composite provider reduce or eliminate data latency, providing near-real-time delivery of data to business users.

**Challenges.** As a relatively new product, BW/4HANA is still maturing. Most customers needed support from SAP to implement the product and migrate processes, data, and content from SAP BW and competing products. Some mentioned incompatibilities between SAP BW and SAP BW/4HANA, making it harder than expected to migrate between platforms. Some also mentioned that managing the movement of data between hot-warm-cold storage layers is complex and that there are few experts in these systems outside of SAP.

Although some customers have implemented SAP BW/4HANA in the cloud, they are running it in a hosted environment. SAP has yet to convert the product into a data-warehouse-as-a-service (DWAAS) that eliminates the need for customers to configure, manage, and tune hardware and software resources. SAP has additional cloud capabilities on its road map, and customers are excited about this.
SAP BW/4HANA in Action: Customer Case Studies

The following customer case study snapshots (from a leading utilities company, Katerra, Swisscom, and Frankonia) illustrate how a broad cross-section of the market is implementing SAP BW/4HANA and the impacts of those implementations.

Leading Utilities Company

Based in Melbourne, this leading utilities company is a $10 billion distributor of gas and electricity. It delivers gas to more than 1.3 million homes and businesses, and electricity to more than 350,000 homes and businesses.

Why the Company Chose SAP

The serious business and technology challenges the company faced with its existing data management system were a study in irony, as users pulled data out of a “data management system” that would not support their needs and created their own new data sets in Excel.

The company’s legacy Oracle data warehouse provided no single source of truth. It was known to have issues with data transformation and offered a low level of system maturity in terms of BI and analytics. As a result, it was difficult for teams to obtain the insights they needed—and what insights they did obtain, they did not trust. This lack of trust created yet another issue: business users requested raw data extracts in order to manipulate the data themselves in Excel, resulting in many different versions of the same data. Self-service reporting was non-existent. Compliance reporting was developed and delivered via Excel; it took a team of four up to a month to source and compile data from multiple systems, then complete the monthly compliance KPI dashboard.

The Solution

The company chose SAP to implement a database consolidation strategy that would create a single source of truth and meet demands from business users for self-service reporting, thereby optimizing customer experience, cost, and operations. The SAP BW/4HANA system ingests 45 to 50 billion data records every day from various SAP and
non-SAP systems and devices, including meters and other customer-facing touchpoints. The company did not consider any other vendor for its new solution because so many of its existing systems were from SAP. Replacing Oracle with SAP BW/4HANA provided the missing piece.

The SAP BW/4HANA system supports the company’s employee base of approximately 1,700 people, 1,200 of whom use the system for basic housekeeping such as timesheets and 500 of whom are heavy system users, performing a variety of tasks such as work orders and billing. Figure 2 shows one of the seven dashboards the customer service team uses to measure and ensure KPIs such as compliance. Finance and asset management are the next teams coming online to support day-to-day operations and in particular to meet upcoming regulatory reporting requirements.

**Impact and Benefits**

On a scale of 1 (least satisfied) to 10 (most satisfied), the company rates its satisfaction with SAP BW/4HANA as a solid 7–8 out of 10, with beneficial outcomes as described below.

**TECHNICAL**

The company has realized substantial performance and flexibility gains from its SAP BW/4HANA deployment. The energy company ingests two to three years’ worth of data from multiple SAP and non-SAP systems into its dashboard, yet the new system manages all of that data, so people can obtain the analytic insights they need to do their jobs in a minute or so compared to the hours, days, or weeks it took using the previous system. Real-time data replication in HANA means less reliance on complex and slow extractors, and the company now has an array of options for data mash-up and reporting. Users can process year-to-date and month-to-date volumes from multiple SAP and non-SAP sources in seconds. These data volumes are significant and previously could not be supported in real time. Users can also analyze annual and monthly usage and performance trends.

**BUSINESS**

The company has not quantified ROI, TCO, or other metrics, and it believes the assessment of ROI is at least a year away. But one thing is certain: deploying SAP BW/4HANA is the cornerstone of its journey to becoming an insights-driven business as it assesses customer needs and its own capabilities to market and sell new products and services across its energy distribution network. One easily quantifiable result is the ability to track and ensure compliance. Once the system detects
issues that may lead to breaches in compliance, the company can now proactively respond to specific steps within the process. The old system served data that was up to a month old, which made it impossible to detect current issues and respond accordingly. That led to breaches in compliance and subsequent fines, which the company is confident it will no longer incur with the new system in place.

IMPROVEMENTS AND FUTURE
The company started its SAP BW/4HANA deployment in late 2016 and went live December 2017, and as with virtually every technology implementation, the process was not without its challenges. In the early stages, product stability was an issue, including when deploying patch upgrades and bug fixes. Early support package (SP) versions caused some headaches, especially in the AMDP (HANA pushdown) transformations space. It was a struggle to deal with transport issues, and the company had to worry about and pay more attention to both HANA-native and BW-interrelated dependencies.

One of the major areas of concern has been moving data between hot and cold storage. The company would like to see a smoother transition between the two. They have mentioned this to SAP, and the situation has been improving. Lower-region refreshes, such as copying data from production back to quality assurance, are not as smooth as the legacy BW process and involve more moving parts (e.g., IQ, SLT, HANA schema remapping, and SAPI/ODP source systems). One of the data flows relies on the BW app server for exception aggregation. The company also experienced issues with differences between SAP BW/4HANA and SAP BW. Data tiering optimization (DTO) and data temperature management have not been as seamless as it would like, but the company reported that the recent SP8 features list looked promising.

On the people side of the deployment, the company found that experienced BW/4HANA resources were not always readily available, but because they are part of SAP’s early adopter program, the project team was able to escalate issues.

Conclusion
The company chose SAP to implement its database consolidation strategy, to provide a single source of truth, and provide a user-friendly, feature-rich environment for its people. To a great extent it appears that SAP has delivered. Users can now obtain the analytic insights they need to do their jobs in minutes where getting the same results used to take hours, days, or weeks.
Things are less clear on the implementation and usage sides. The company continues to experience a few technical issues, including its backward compatibility between BW/4HANA and plain-vanilla BW. SAP messaging around HANA is that all data is in memory, which avoids data movement and is a major ingredient in its high performance. The company, however, uses hot and cold storage, which is an optional feature that requires moving data in and out of SAP HANA.

Nevertheless, the companies are working closely to resolve issues, and that process will continue. Although the company has yet to calculate ROI and similar metrics, it likes the initial results, and if the system helps the company avoid costly fines due to noncompliance, that will add to the benefit. The company has SAP on its ongoing product road map for future deployments, which speaks for itself.

**KATERRA**

Located in the U.S., Katerra innovates in all aspects of architecture and construction, including design, building, renewable energy, and supply chain. Using SAP S/4HANA and SAP BW/4HANA to support its end-to-end business processes, Katerra is creating a new business model that is designed to revolutionize the industry.

**Why Katerra Chose SAP**

The decision had already been made to go with SAP S/4HANA and either BW 7.X on HANA or BW/4HANA when our contact started on the project. Katerra was aware that they would still need an enterprise data warehouse even after implementing the new SAP S/4HANA system. They thought the SAP BW/4HANA product, while still quite new, would give them better reliability and ease of use, especially because SAP’s early adopter program would provide them a “development angel” who could help resolve any issues they encountered quickly, and give them good advice on the implementation as they progressed.

The decision mainly came down to either the traditional BW 7.X on SAP HANA or SAP BW/4HANA. Katerra also considered using Amazon Redshift but decided to go with BW/4HANA running on the Amazon Web Services (AWS) cloud. AWS hosts the SAP BW/4HANA system but does not do any of the maintenance or upgrades, which are handled by the Katerra team.
The Solution
Kattrera planned to use the BW/4HANA system as its single enterprise data warehouse (EDW) for the organization. Previous versions of BW on HANA had been used mainly for higher-level management reporting, but they planned to use the capabilities of the new system for more detailed operational reporting and analytics that were needed across the organization. The plan was to get a quick return on their investment by leveraging the business content delivered with BW/4HANA, and to quickly integrate the data from non-SAP systems, leveraging the new modeling options.

Impact and Benefits
TECHNICAL
Kattrera found that the BW/4HANA system provided them with much more flexibility in modeling, and particularly liked its “field-based modeling” and the traditional “InfoObject based modeling,” as well as hybrids of these two approaches. Kattrera also found that their data load and activation operations ran much faster with BW/4HANA, reducing latency and getting them closer to real time. They are able to run some load jobs every 30 minutes.

Finally, Kattrera’s experience with traditional BW systems was that the integration of third-party BI tools (Tableau Software and Power BI) was not easy or well supported. But with BW/4HANA, BI tools connect easily to HANA views based on the “InfoProviders” and queries.

BUSINESS
An important factor in Kattrera’s decision was the short time-to-value that SAP BW/4HANA made possible. This is thanks largely to the BW/4HANA packaged content that allowed them to go live with functionality very quickly.

BW/4HANA allowed Kattrera to move most (and soon all) operational reporting to BW/4HANA, whereas its traditional BW system was not set up for this and focused more on higher-level management reporting. This gives Kattrera a single source of data for both strategic and operational management cycles. Kattrera anticipates integrating all enterprise data into the BW/4HANA EDW system in the near term.

IMPROVEMENTS AND FUTURE
The implementation was fairly smooth. There were some issues, but with the assistance of a dedicated “development angel” from SAP, Kattrera was able to resolve them quickly and easily.
Although the team of four developers were experienced with older versions of BW, there was a learning curve to overcome with the new BW/4HANA tools.

They also had issues with the sparsity of content available (new HANA Optimized Business Content specifically for BW/4HANA) compared with what was available for BW 7.X and earlier versions. In addition, they found the documentation for the content to be lacking in detail and process definitions.

Almost everyone in the organization uses the system. Everyone who wants data from ERP uses it. Where older versions of BW were typically used for higher level reports, the BW/4HANA system and content provide a full range of management and operational reporting. All types of users from finance to data science are able to leverage the interfaces to the BW/4HANA system, either directly or through downloads from the generated views.

Katerra considers the BW/4HANA system to be its enterprise data warehouse and uses it to integrate their many acquisitions. Without quantifying the value, they simply say that it is valuable. In terms of operating costs, they feel that the costs are low or at least reasonable.

In the future, Katerra would like to see support for more modern cloud interfaces like JSON and XML, as well as the integration with SAP Data Hub that is on the road map. They also expect greater stability and maturity for Analysis Office on BW/4HANA, as they do not find it as robust as BEX Analyzer was.

BW/4HANA is the enterprise data warehouse for Katerra; that decision is made. The use and scope will increase as more acquisitions and third-party systems are added, including HR data from Workday. Katerra is running BPC 11.0 on BW/4HANA for consolidations and will go live with planning shortly.

**Conclusion**

Katerra’s EDW based on SAP BW/4HANA provides a solid base for their innovative organization, with the agility to quickly and reliably integrate data from new acquisitions and respond to rapid changes in their business. Katerra is an innovative and acquisitive company, so they value the agility that the solution provides when integrating new data and additional users and stakeholders. They acknowledge that the EDW will continue to evolve over time and believe that they are well situated...
to respond efficiently and effectively to changes in the business and technical architecture.

**SWISSCOM**

Swisscom, founded in 1998, is headquartered near Bern and is one of the leading Swiss telecommunications and IT companies. The company serves around 8 million customers with its 20,000 employees. Swisscom offers business and private customers mobile, fixed network, Internet, and digital TV. In addition, it is among the largest IT service providers in Switzerland, responsible for the construction and maintenance of mobile and fixed-network infrastructure and broadcasting signals. Swisscom also operates in the banking, energy, entertainment, advertising, and healthcare sectors.

**Why Swisscom Chose SAP**

Swisscom has been a long-standing SAP customer and relies on SAP systems for its reporting and analysis infrastructure. Before the conversion from SAP BW on HANA to SAP BW/4HANA, Swisscom had merged its SAP BW on Oracle systems into one data management platform on SAP HANA with two SAP BW on HANA tenants. The reasons for merging and upgrading these on a new SAP BW/4HANA system were strategic—to prepare for the upcoming move to SAP S/4HANA—and driven by the technical and functional challenges posed by the existing setup. In particular, the development of SAP processes based on non-SAP technology was seen as unsustainable and provided a convincing argument.

**The Solution**

Swisscom worked with SAP to design its modern, simpler data warehouse as a single source of truth for finance and controlling; to standardize business reporting processes, making them faster and more flexible; to give its staff self-service capabilities; and to enable the company to react faster to market developments.

SAP BW/4HANA supports reporting and analyzes SAP ERP data for finance and logistics, FI/CO, purchasing, sales, and HR. It is Swisscom’s strategic data warehouse in finance and controlling—its “single point of truth.” The company also has a telecommunication-market-specific DWH for private household customers and small businesses.
on a Teradata database (which allows analysis on telecommunication lines such as broadband, television, or mobile devices), and Microsoft SQL Server, which supports product configurations and services for large customers. SAP BW/4HANA benefits from SAP HANA openness to easily move data between BW/4HANA and the Teradata and Microsoft databases. BW/4HANA currently serves around 15,000 information consumers, 2,000 power users with more complex analysis requirements, and 150 experts who have their own environment in which to perform advanced analytics. A total of three instances primarily answer cross-functional questions for the parent company. At Swisscom, SAP BusinessObjects, Tableau Software, and MicroStrategy are used for reporting and analysis, as well as IBM TM1 for planning. SAP Analytics Cloud is currently being introduced as a self-service analytic user tool for SAP-supported business processes and the successor of the SAP BusinessObjects platform. On the back end, in addition to SAP BW, a Hortonworks Hadoop cluster is operated with Spark and Hive.

**Impact and Benefits**

Swisscom is very satisfied with the system change, citing improvements on its previous SAP BW on HANA installations. The product was introduced in August 2018 and offers to Swisscom the implementation of new (predictive) analytical use cases such as fraud detection or incident prevention/automation.

**TECHNICAL**

Several technical challenges were addressed and solved with the new system. Swisscom’s high daily data volumes are better supported by SAP BW/4HANA’s data management, particularly as it works with Hadoop to implement a hot-warm-cold storage concept for data, as well as multi-tenant control options. The development and administration of the SAP BW/4HANA landscape has also become much easier thanks to the new Eclipse-based modeling and the web-based administration tools. ETL processes can now be created more easily without having to jump back and forth between tools and interfaces. Overview and transparency are essential when dealing with large amounts of data. SAP BW/4HANA offers better support for analyzing and depicting dependencies than did the previous version. To support self-service requirements, SAP BW/4HANA offers its own tool support as well as a greater openness in terms of connectivity with third-party tools. Finally, SAP BW/4HANA works better for managing Swisscom’s 150 inbound and outbound interfaces.

SAP BW/4HANA offers better support for analyzing and depicting dependencies than did the previous version.
BUSINESS
Above all, the solution offers the potential to deal more efficiently with data and processes. Information consumers have a single point of access to data with SAP BW/4HANA, and there are more options for self-service. It also brings advantages for the developers, who can work more efficiently with fewer tools. In addition, SAP BW itself has become more efficient and manageable. Today, virtualization options support redundancy-free data storage and enable new near/real-time use cases. There is new potential for predictive analysis, such as credit checks, and predictive maintenance. Furthermore, Swisscom’s processes are adapted faster with the new architecture, and changes can be incorporated more quickly. Swisscom sees tremendous added value in the combination of classic reporting with advanced analytics. (As a pure report engine, the additional value would not be as significant.)

IMPROVEMENTS FOR THE FUTURE
Swisscom encountered challenges, especially in the migration phase. Structural changes between the source system and the target system meant that new code had to be generated. Swisscom would like to see better metadata management support in the documentation and traceability of data processes (where does the data come from?), and improved analysis of connections between BW content and native elements. And like many other companies, Swisscom faces data quality challenges and wishes to be able to solve them more quickly.

Conclusion
As a long-standing SAP customer, Swisscom has successfully taken the step from several SAP BW systems to one SAP BW/4HANA implementation. The reason for this move was to create a sustainable, strategic data warehouse for an analysis landscape from which applications—ranging from standard reporting to advanced analytics—could be implemented. The rapid adaptation of the SAP processes would not have been sustainable with non-SAP technologies. Improvements with SAP BW/4HANA can already be seen in the form of more efficient data management, better options for self-service, and the possibility of implementing new use cases in the area of near/real-time analytics and (especially) advanced analytics. SAP BW/4HANA is still in its first year of use at Swisscom, so it is too early to give a full appraisal of the transition. However, initial feedback confirms that the company is very satisfied with the solution in comparison with its previous SAP BW on HANA scenario.
FRANKONIA

Frankonia, a hunting and sport equipment company headquartered since 1908 in Rottendorf near Würzburg in Germany, joined the Otto Group in 2001. It is now a wholly owned subsidiary. With its catalog business, 23 branches, and online operation, Frankonia is a specialist in the B2C and B2B market. With approximately 650 employees, Frankonia serves around 2 million customers, mainly in Germany, Austria, Switzerland, England, and France.

Why Frankonia Chose SAP

As a long-time SAP customer, Frankonia was already running SAP BW 7.0. Its data warehouse had evolved over time, and unclear structures made the BW system too complex to the point that it was underperforming, data could no longer be trusted, and any experts who were very familiar with the system had moved on. As part of an initiative from marketing to build a target group-specific customer approach, the existing BW system was called into question.

Although the Otto Group provided cost-effective options for migrating to the HANA database, because of its bad experience with SAP BW 7.0, Frankonia performed a detailed software comparison between SAP BW/4HANA in combination with SAP BusinessObjects user tools and Microsoft SQL Server with Power BI. Major factors in the decision to choose SAP BW/4HANA included the existing knowledge of SAP systems within the company, its good connectivity to SAP source systems, and available standard SAP BW content. In addition, the implementation costs of MS SQL Server and user tools were estimated to be higher than the costs of implementing the SAP stack. The move to the new SAP BW/4HANA system is still ongoing and necessitates something of a greenfield approach.

The Solution

The solution is to provide SAP BW/4HANA as the only source for reporting and analysis and to serve the existing 50 BW users as a first step. Over the next three to four years, SAP BW/4HANA will provide centralized data management for BI and analytics. Above all, Frankonia is hoping for a more efficient and smarter system based on the data model. The system should provide a reliable, qualified database and offer the user a unified view of both SAP and non-SAP data. This holistic solution will provide for the use of SAP BusinessObjects user tools.
on SAP BW/4HANA. Direct access to the HANA database for further exploratory analyses or near/real-time analyses is currently not planned but may be addressed soon.

Impact and Benefits

On a scale of 1 to 10, Frankonia currently rates its satisfaction with the new SAP BW/4HANA implementation at 7 or 8, even though it is in its early stages and its users are still relatively inexperienced. Great hope is placed on improved performance as well as the possibility to integrate non-SAP data. The main reasons for not scoring it higher include the unexpectedly high level of complexity from the point of view of project management, performance limitations, and issues with the stability of the SAP Business Objects tools in conjunction with SAP BW/4HANA. From Frankonia’s point of view, the most time-consuming challenge is the migration to the new system. The large amount of custom code in the old BW means that SAP migration agents cannot be used, and nearly everything has to be rebuilt.

TECHNICAL

The SAP BW/4HANA system has met expectations so far, and Frankonia is confident it will be able to address the challenges just described. The company sees great benefit in its new ability to combine SAP data such as financial, revenue, and inventory data with non-SAP data such as shop data, which in turn opens up new use cases.

BUSINESS

From a technical and commercial point of view, the old SAP BW system was no longer sustainable, and the step toward modernization was seen as imperative. Improvements in performance as well as the access possibilities for standard reporting are already delivering major added value. Frankonia anticipates even greater value when all financial, revenue, and inventory data is available in the BW system and can be analyzed in combination.

IMPROVEMENTS FOR THE FUTURE

With the implementation still in its infancy, Frankonia’s main challenges now lies in its own operational source systems and the old SAP BW. These include a lack of data quality and the issue of self-developed code complicating the migration and rebuilding of the data warehouse. A lack of experience in dealing with the SAP BW/4HANA means Frankonia has only been able to make selective technical recommendations for improvement, such as the complete abandonment of ABAP code. In the next step, Frankonia, with SAP as its technology partner, will begin...
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explorative analysis to identify new use cases and take advantage of the tremendous opportunities of using data in a multi-channel business. In addition to SAP BW/4HANA, stable, user-friendly, and high-performance user tools are among the components of a holistic solution. Challenges remain, in particular with the BI front-end tools.

Conclusion

After a detailed software evaluation, Frankonia—a long-standing SAP customer—opted for SAP BW/4HANA in order to restore and modernize its information landscape. Its goal is to build a central, reliable, and consistent database for BI, and to address advanced analytics and near/real-time analyses further down the line. New technological possibilities such as more efficient querying and the combination of SAP data with non-SAP data open up opportunities for Frankonia to optimize existing use cases and develop new ones, such as a targeted, cross-channel customer approach. Although its users are still learning and gaining experience, Frankonia believes the investment has already paid off, with the caveat that there is still room for improvement. In particular, improved query performance (which is currently problematic) and greater stability of SAP BusinessObjects tools such as Analysis for Microsoft Office and Web Intelligence in combination with SAP BW/4HANA would provide further added value. Frankonia regards SAP as a suitable partner and is already evaluating analytical use cases with SAP HANA in addition to SAP BW/4HANA.
Summary and Recommendation

Although SAP’s solution is not a magic bullet, it does seem to address many of the requirements of a new, modern data warehouse. The combination of the capabilities baked into the HANA platform and the EDW services provided by BW/4HANA should minimize the need for additional tools and technologies as the EDW evolves. Integration with typical big data or data lake technologies allows traditional reporting and analytics to coexist with advanced analytics and data science projects. It also enhances them with the advanced capabilities of the HANA platform, including the predictive application library, geospatial capabilities, and graph database capabilities. SAP does not make it easy to get the most out of the platform with its complex and opaque pricing and licensing (not new to SAP), and the advice you get is inconsistent and depends very much on who you talk to.

SAP BW/4HANA is a first and important step in the direction of a modern data warehouse. The system serves as a basis for fully serving current analytical requirements through SAP front-end tools. The positioning of SAP BW/4HANA remains to be seen as SAP continues to expand its cloud story and provides the already existing SAP Analytics Cloud with a data-warehouse-as-a-service.

Our recommendation is that SAP customers and prospects who need to modernize their EDW create a list of the capabilities they need/want, prioritize the list, and then consider BW/4HANA in combination with native HANA development as a solution. Evaluate the existing functionality against your prioritized list, and study the SAP road map to understand how future releases will attempt to address any gaps.
About the Authors

Mr. Brian Wood received a BS in Finance, and MBA in International Business from the University of Rhode Island. He lives in Hope Valley Rhode Island, and has lived and worked in over 50 countries.

He is a Senior Enterprise Data Architect at a premier management consulting firm. He was previously a Product Strategist/Expert and part of the team responsible for SAP’s Enterprise Data Warehouse (EDW) strategy. He also led one of the development work streams for the initial SAP HANA development project. He joined SAP from Gartner where he was an Analyst and Research Director responsible for Corporate Performance Management (CPM), Business Intelligence (BI), corporate governance and compliance, and Customer Relationship Management (CRM). Prior to working at Gartner he spend over 20 years in consulting, systems integration and development roles at IBM, KPMG, Cap Gemini, and Answerthink. In his spare time he enjoys mountain and road biking, body surfing and wine, and is a consummate technology geek.

Timm Grosser has been working in the BI and data management area for more than 10 years. He works as a Senior Analyst and Consultant at the Business Application Research Center (BARC) focusing on BI, data management and big data. His core competencies are decision supporting information systems with a special focus on strategic topics in data management and big data. During his time as a consultant, he designed numerous solutions in BI/big data strategy, organization, architecture and tool selection with customers or in the BARC test lab. He is a frequent speaker at conferences and seminars as well as the author of numerous industry articles and market studies.
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