

OPTIMIZATION THROUGH SYSTEM INTEGRATION

The Path from SAP BW to the SAP Datasphere



Content

4	What is the SAP Datasphere?	7	Migration paths
4	Benefits of the SAP Datasphere	8	Summary
6	The migration		
6	Other aspects of the BW that were considered in the SAP Datasphere		

Since SAP announced that mainstream maintenance will be offered for SAP BW 7.5 until 2027, and only extended maintenance until 2030, a large number of companies have been looking for a suitable successor. The SAP Datasphere and SAP BW/4HANA are successor candidates from the SAP portfolio, although the latter only has guaranteed support until 2040.

This paper will show what a migration from SAP BW to the cloud application - SAP Datasphere - can look like.

While the SAP Business Warehouse (BW) is an established on-premise solution, the SAP Datasphere is currently the most innovative cloud-based solution, to which numerous functions are added almost weekly. A clear advantage is that some of the data models already created in the BW can be reused.

What is the SAP Datasphere?

SAP released the Data Warehouse Cloud as the new cloud-based data warehouse in 2019. Since the renaming to SAP Datasphere in 2023, users have been offered a variety of tools. The aim is to use two-part data modeling to provide IT and business users with the opportunity to build data models with a short learning curve and to address topics such as data governance, data management, and data lifecycle management. This means that the Datasphere reaches beyond the functions of a normal data warehouse; that's why SAP calls it a business data fabric. SAP supports the import of both SAP and non-SAP data into

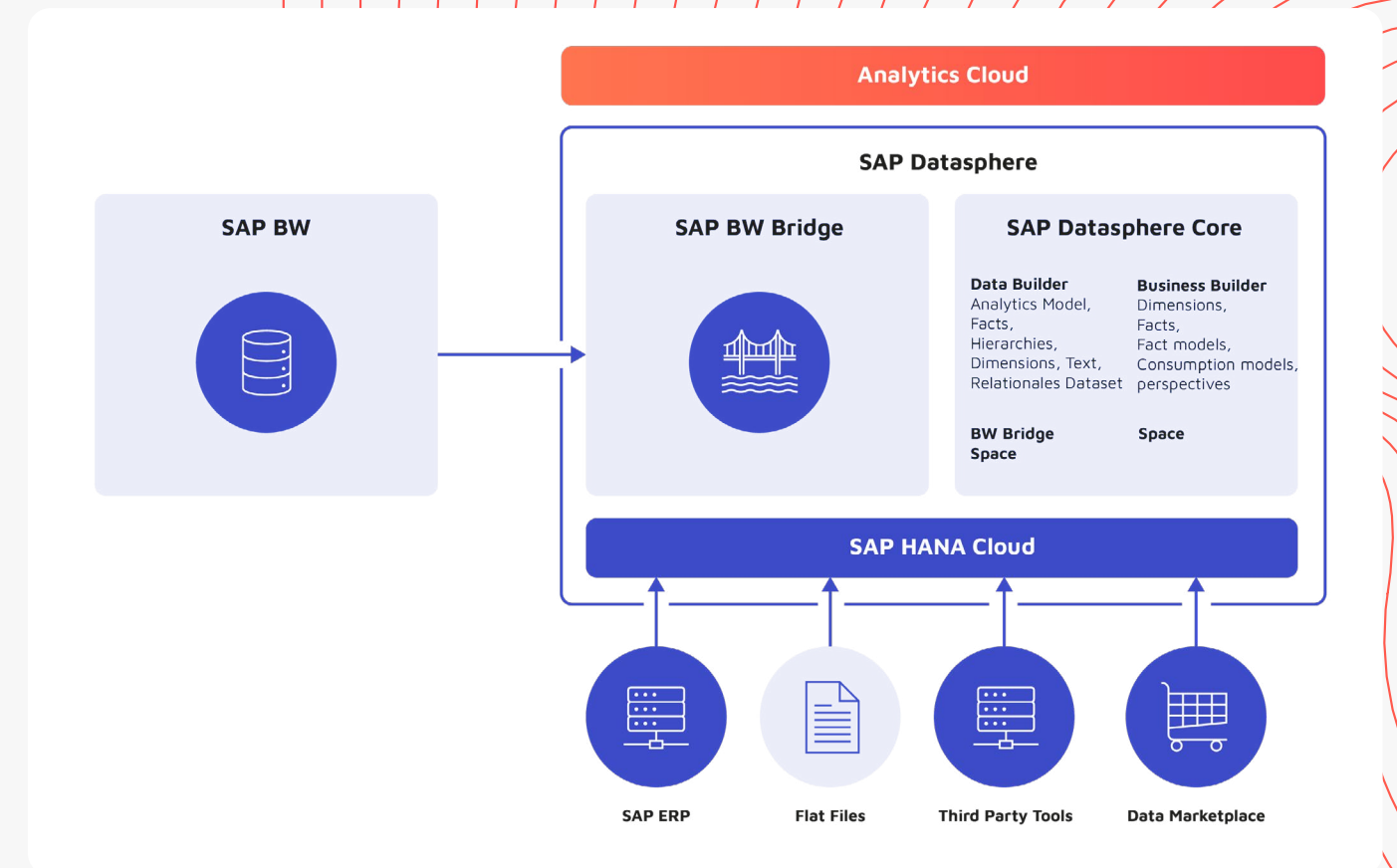
the Datasphere. Meanwhile, the SAP Datasphere is SAP's strategic software-as-a-service tool in the data warehouse sector, one that can shift the existing environment to the cloud.

The SAP Datasphere enables companies to make intelligent and data-driven decisions by leveraging the power of SAP HANA and advanced analytics. This means that use cases and data models can often be set up faster and more cheaply than in SAP BW and also made self-service.

Benefits of the SAP Datasphere

Moving from SAP BW to the SAP Datasphere can provide many benefits for companies looking to improve their data management and analytics capabilities. Here are a few reasons why such a change might make sense:

- Existing data structures, modifications, and capabilities of the SAP Business Warehouse (BW) can be integrated into the SAP Datasphere, which allows it to build on existing data and models.
- Given the existing data models, improvements to and extensions of the models can be implemented quickly and flexibly and large data volumes coordinated efficiently.
- A live connection to the SAP Analytics Cloud enables real-time use of data models from the SAP Datasphere and these can also be used in planning and reporting contexts.
- The migration from SAP BW to the SAP Datasphere can be made with the BW Bridge. The BW Bridge provides immediate access to data through a connection.
- The SAP Datasphere environment can vary depending on business needs since tenants exist to build a development and test environment and for physical data separation. Spaces can be used within a tenant; tenants can correspond to virtual departments or domains.
- Models are controlled by data access controls, so that even complex data governance requirements can be implemented.
- The pricing is flexible: You only pay for the services that you use.



CONNECTION TO SAP DATASPHERE



The migration

With the SAP BW Bridge, SAP provides a function that offers a smooth transition for SAP BW NetWeaver and SAP BW/4HANA customers. The SAP BW Bridge enables efficient and innovative use of SAP BW functionality and the import of SAP BW Bridge data models into the SAP Datasphere. In addition, the SAP BW Bridge can use connectivity and business content for data integration between the SAP Business Suite and S/4HANA, not to mention their semantic flexibility. For this, the data is loaded into the persistence layer of the BW Bridge and then it is possible to perform partitioning, monitoring,

and error handling. This data can be processed using the Datasphere and data from a variety of sources and assembled into a new data model.

In particular, business users have access to on-demand semantic business modeling that is completely separate from physical data storage. The SAP Analytics Cloud provides real-time access to data. You can then use charts, dashboards, and other analytical artifacts.

Other aspects of the BW that were considered in the SAP Datasphere

- Connectivity and transfer of business content for proven SAP BW-based data integration from SAP ECC and SAP S/4HANA
- To manage data loads, SAP BW provides enterprise-grade staging layers for partitioning, monitoring, and troubleshooting
- A tool-based move from SAP BW-based integration and staging is possible.

SAP BW uses the LSA layer architecture. Before integrating the SAP Datasphere, it is therefore advisable to categorize the data so that it is consistent with cost considerations and the company's overall data strategy. Depending on

the frequency of access to certain data, we do not recommend persisting certain data in the SAP Datasphere

In the SAP context, the data is divided into three classes: HOT, WARM, AND COLD. The HOT class typically corresponds to reporting data; WARM is data that is used frequently; and COLD is data that is seldom used. In particular, the data classified as COLD does not necessarily have to be persistent in the Datasphere and remote access is often sufficient.



Migration paths

SAP BW Version 7.3 or higher must be licensed in order to be able to migrate from SAP BW to the SAP Datasphere.

Basically, there are several options for combining SAP Datasphere and SAP BW:

1. SAP Datasphere - Core only: This option does not require any prerequisites because the intent of the business data fabric is not to implement older data models.

The focus is exclusively on a modern, simplified data landscape.

2. The SAP Datasphere with SAP BW Bridge (greenfield): As with the first approach, there are no prerequisites that need to be met. However, we start by developing a common data layer of legacy data in proven SAP BW technologies. The proven SAP BW technologies are combined with modern cloud architecture.

3. The SAP Datasphere with SAP BW/4HANA hybrid: This option takes a hybrid approach that focuses on connecting SAP BW/4HANA and the

SAP Datasphere; SAP BW/4HANA 2021 must be available as a prerequisite for this. This option makes it possible to combine existing data models from SAP BW/4HANA with SAP Datasphere and make a slow transition to the implementation of new use cases.

4. SAP Datasphere with SAP BW Bridge (Brownfield): In this case, SAP BW Version 7.3 up to SAP BW/4HANA 2021 must be used to allow a shell or remote conversion to take place. Under these circumstances, settings can be migrated to SAP BW models and queries using a tool-based conversion via the SAP BW Bridge. In addition, automatic generation of Datasphere artifacts happens with the entity import.

5. The SAP Datasphere with BW Bridge & SAP BW/ HANA: This approach also involves a shell or remote transformation, but only requires SAP BW/4HANA 202. The advantage is that SAP BW/4HANA can be used in hybrid mode with the SAP Datasphere. SAP BW Bridge loads data models so that both data models are synchronized. SAP BW/4HANA can then be switched off.

In practice, there are two process models for the transition from SAP BW to the SAP Datasphere – the Big Bang approach and gradual transition.

The **Big Bang approach** is a direct transfer of SAP BW-related data flows into the public cloud. Scopes are migrated from the SAP BW context using a shell conversion and all the data streams used are transported to the SAP BW Bridge. This way, the SAP BW Bridge serves as an inbound space for all SAP BW Bridge-related data models.

The **gradual transition** focuses on a shallower transition. It should be noted that in some cases, not all corporate data is stored in the public cloud.

In hybrid scenarios, data models are loaded into the Datasphere without the SAP BW Bridge. Basically, it is possible to synchronize metadata between SAP BW/4HANA and the SAP BW Bridge. Since SAP BW Bridge and SAP BW/4HANA are based on the same code guideline, they can be combined very well and data models gradually removed from SAP BW/4HANA and transferred to the SAP BW Bridge. If changes are made in the data flow, the data models in the target system can be overwritten several times. As soon as a data model has been adopted completely and is kept in synch, the original data flow in SAP BW/4HANA can be switched off.

Summary

The SAP Datasphere offers an optimal way to modernize based on an existing SAP BW without suffering a loss of the investments and expenses made in the BW. Basically, the SAP Datasphere supports bi-directional integrations with other SAP systems and data sources to optimize data exchange and business processes. One advantage of the SAP Datasphere is the transparent payment model and monthly updates, which always result in a significant increase in user-friendliness.

If you are considering migration, please do not hesitate to contact us. We will be happy to advise you on what is the best migration path for you or discuss the possible advantages and disadvantages of the various options.

The SAP Datasphere is suitable for anyone who wants to expand their system portfolio with an innovative and always up-to-date cloud-based business data fabric.

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For more information about moving from SAP Business Warehouse to the SAP Datasphere, click here!

