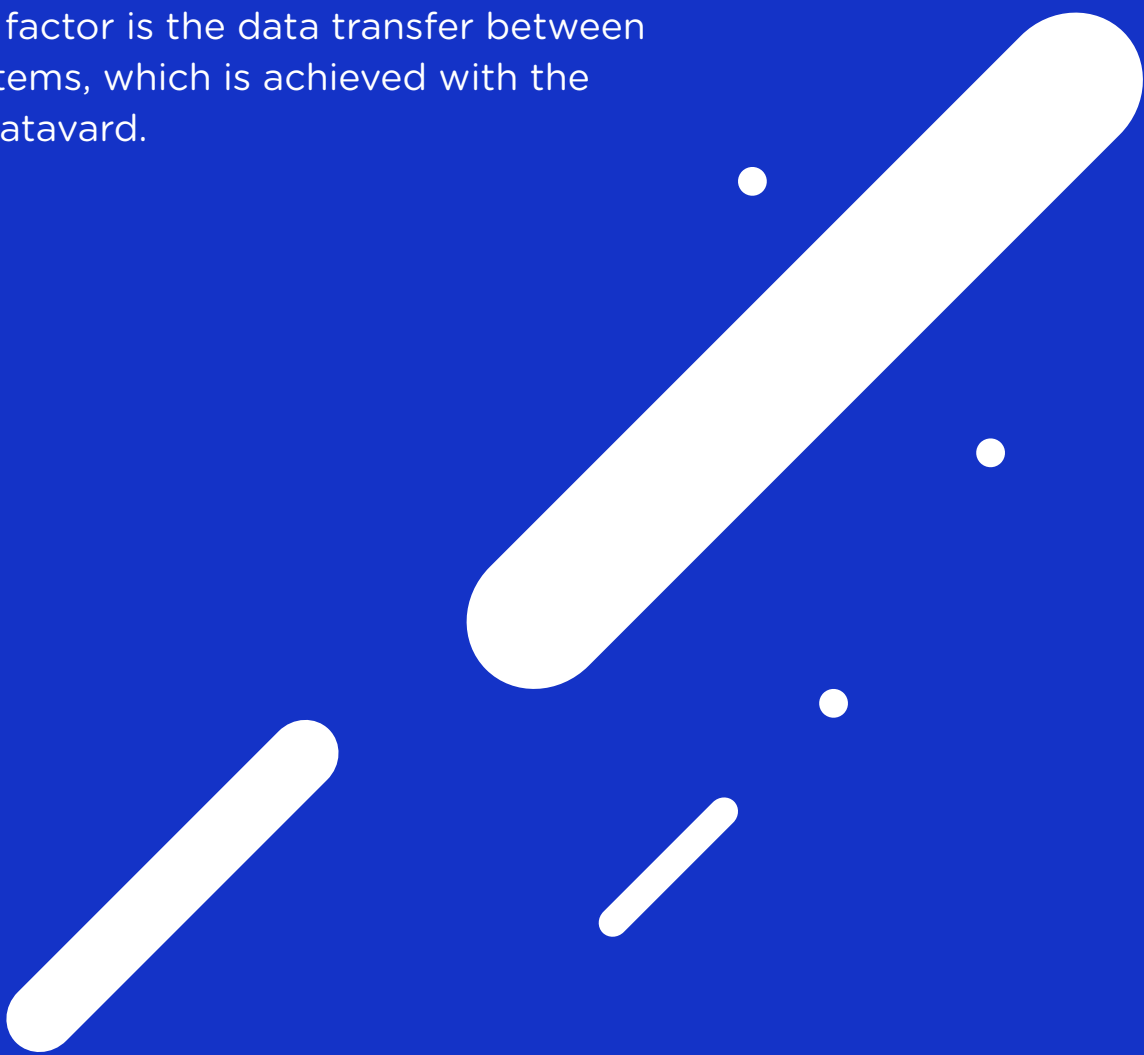


Success Story

SAP with a view of the lake: Data integration of SAP and Data Lake at badenova

IT provider badenIT creates a data lake for energy supplier badenova in addition to the SAP landscape. The decisive factor is the data transfer between different systems, which is achieved with the support of Datavard.



Data integration of SAP and Data Lake

Data science is sexy – not only at Harvard University in Cambridge, MA, but also, in Tullastraße in Freiburg. This is the location of badenIT, an IT service provider and Dr. Alexander Schätzle's employer. His task: to set up the Big Data and Data Services department for the service provider. "In essence, it is about modernizing our data platform and infrastructure so that it is optimally suited for customers' analytics projects," says Schätzle.

One customer is badenIT's parent company, the municipal utility badenova. Their initial IT situation can be quickly described as SAP - as is so often the case in the industry. But data science places other demands on IT. External data, new sources and huge volumes of data must all be integrated flexibly without costs and efforts exploding. Time is of the essence. "We quickly realized, that the relevance for the implementation of data analytics in the specialist departments of badenova was very high" recalls Schätzle.

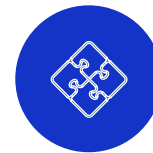
"If you want to generate added value from data, the first step is not about collecting large amounts of data, but simply about being able to do data science in the organisation in the first place."

Dr. Alexander Schätzle
Big Data Architect, badenIT



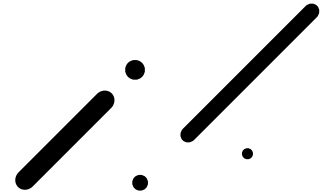
SAP DIRECTION DATA LAKE

- Reduce total cost of storage
- Streamline productive system
- Drive data integration
- Enabling Data Science for SAP Data



DATA LAKE IN THE DIRECTION OF SAP

- Preparing SAP for Big Data
- Enrich SAP data with external sources
- Enable faster ROI
- Involve departmental staff



Data integration of SAP and Data Lake

A concrete example: An infrastructure subsidiary of the utility wanted to transmit information about its network, such as meter readings and condition monitoring, wirelessly in the future. In addition to simplified billing, the measures are aimed at value-added services such as predictive maintenance. Thousands of individual values per wireless meter per year have to be transferred to a system in order to keep them for analysis, to form aggregations and to check plausibility. They then form the information basis for detailed analyses in water or energy management.

With these requirements, questions inevitably arose as to whether all data should be stored in the SAP environment.

“The TCO idea was the main trigger for the project that we approached with Datavard. “

Dr. Alexander Schätzle
Big Data Architect, badenIT



KEY BENEFITS

- Reduces storage space by up to 50 percent
- In line with current and future architectures
- One solution for all SAP systems
- Future-proof - ready for S/4HANA and BW/4HANA
- Easy migration from storage to storage
- Slows down data growth
- Improves system performance
- Return on investment in 6 to 18 months
- Datavard expertise for integration
- Datavard support for the project

“We now have HANA sitting under SAP, and we are on the development roadmap towards S/4,” explains the data expert. There is no doubt that HANA is a fast and high-performance database, says Schätzle, “but HANA is also expensive”. In addition, SAP IS-U essentially only needs the aggregated information, i.e., what has been consumed over the course of the month or the year. What is needed is a solution to store data in an economically sensible and technically optimal way. “The TCO idea was the main trigger for the project that we started with Datavard. “Ultimately, it was about saving storage space in HANA.

However, it was also clear that it does not pay off to store data away in a data lake merely for archiving purposes. “We also wanted to be able to process non-relational data that is much more event-based,” Schätzle explains the vision. In the IoT environment, this includes, for example, semi-structured data from sensors or meters as well as geo-information systems, which can also be purchased externally: “This flexibility was also important to us. “

The vision envisaged a “bimodal IT”, whereby the production landscape was oriented towards day-to-day business and was occupied with high operational requirements - SAP. In addition to this, a more flexible, dynamic platform was to be established on which badenova moved more strongly in the direction of data analytics - initially as a sandbox, and in the future as a data lake. This would create an IT in which the requirements for flexibility, performance, costs and future security would not block each other.

Data integration of SAP and Data Lake

The critical point was the connection between the productive SAP system and the data pool. It quickly became clear that a simple data export would not get them very far. According to Schätzle, a generic interface between the two worlds was needed, which could ideally be used bidirectionally. "If you look for our requirements and framework conditions, you quickly end up with Datavard. "According to Schätzle, the fact that the software company had already supported badenova in an SAP-BW migration finalized the decision. "It was important to the department that Datavard has proven expertise in the matter."

"The interface enables us to reduce storage space on the one hand and create added value from all available internal and external data on the other."

Dr. Alexander Schätzle
 Big Data Architect, badenIT

For example, Datavard's OutBoard tool transfers data from SAP to Hadoop (Data Offload: "cut & paste"), while Datavard Glue (also) aims in the other direction (Data Transform: "copy & paste"): "The interface will enable us to reduce storage space on the one hand and create added value from all available internal and external data on the other," explains Schätzle. According to the Big Data expert, one advantage of the Datavard solution is that the interface is implemented on ABAP and integrated into the SAP interface.

This allows the system to be controlled directly by SAP users and ABAP developers. "We were striving to ensure that not all requirements always had to go through IT, but that the business department could manage data itself in the familiar SAP interface. This is achieved with the native integration of Datavard in SAP."

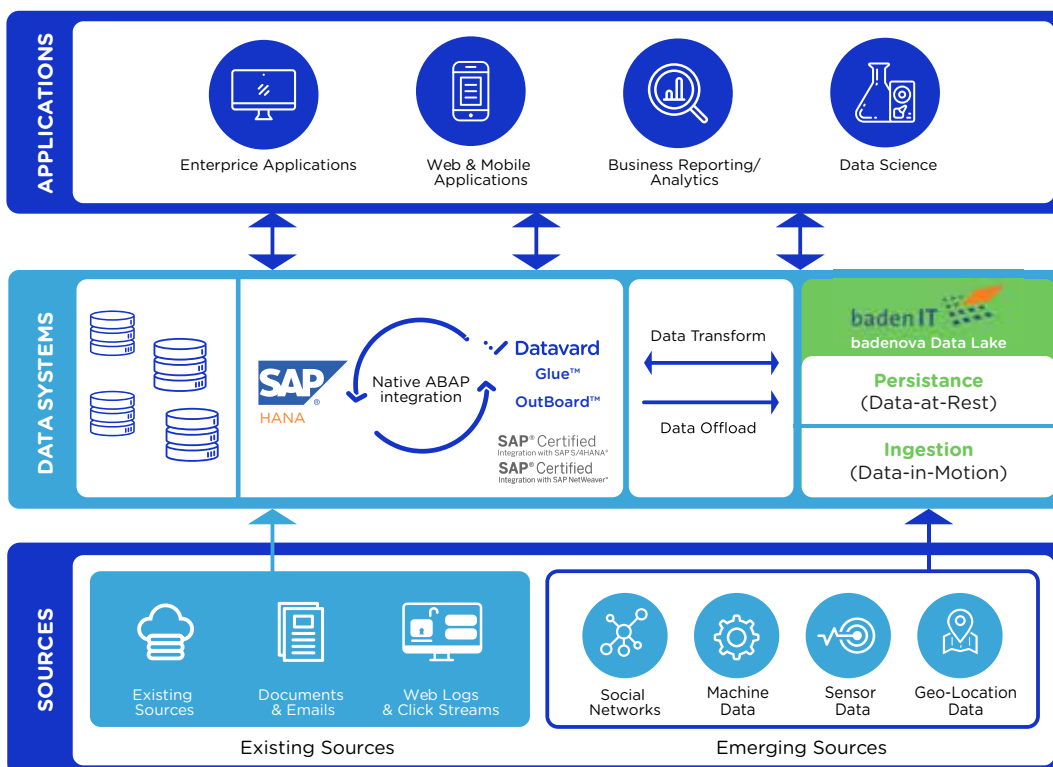


Fig.: Architecture Data Systems badenova

Data integration of SAP and Data Lake

Big data expert Schätzle also described the cooperation during the project with consultation and adherence to deadlines as excellent: "Datavard's competences in data management and in the SAP area were very high - we always dealt with experts who knew what they were talking about." Additionally, there was a hands-on mentality and a willingness to solve problems in the project team in order to come to a satisfactory result for all sides quickly and efficiently, even with complex challenges. It doesn't always have to be Big Data, summarizes badenIT expert Schätzle: "If you want to generate added value from data, the first step is not only to collect large amounts of data, but simply to be able to conduct data science in the organization in the first place."

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Dr. Alexander Schätzle
Big Data Architect, badenIT

About badenIT

badenIT GmbH is an IT service provider headquartered in Freiburg that operates on the free market and employs over 100 experts. The subsidiary of the municipal utility company badenova AG & Co KG offers its customers, among other things, managed services from its own data centers as well as services in the business field "Data Services". Together with DATAVARD, badenIT supports companies in easily integrating data from SAP systems into data lakes in order to evaluate them efficiently, derive economically sensible decisions and reduce the TCO.

About Datavard

Datavard is an innovative provider of smart software solutions and consulting for SAP data management, S/4HANA transformation, data warehouse modernization, reorganizational transformation, legacy system decommissioning, integration of SAP data into Big Data and managed services.

Datavard is headquartered in Heidelberg, Germany, with offices in EMEA, the US and Asia. More information about the project and the software used is available at www.datavard.com, via the chat or at info@datavard.com.

About the Software

OutBoard DataTiering combines offloading and archiving of data and is the only solution on the market that can map all SAP systems: SAP ECC, SAP S/4HANA, SAP BW, BW/4HANA, SAP CRM and even HANA native. It supports the SAP standard interfaces (ArchiveLink, NLS, SDA+ or DTO) and selects the right one depending on the use case.

Datavard OutBoard also supports various storage solutions such as traditional databases, big data technologies (HDFS, Hadoop Hive, Impala) as well as cloud solutions (S3, Redshift, Azure blob or AzureSQL). In practice, this can save up to 50 percent storage space. In the long term, OutBoard slows down data growth and improves system performance. ROI is usually achieved after 6 to 18 months.