# From Zero to Risk Data Mart in 4 Months - Agile DWH Development in Banking



HAUCK
AUFHÄUSER
LAMPE

//
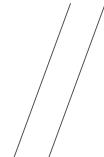
Datavault
BUILDER

# KEY TAKEAWAYS

- **Fast and Independent Rollout:** Within just two and a half months, Hauck Aufhäuser Lampe Privatbank AG (hereinafter HAL) implemented the "Risk Data Warehouse (RDW)" use case successfully.

- **User-Friendly Interface and Simplicity:** Datavault Builder's intuitive graphical user interface (GUI) and its high degree of automation—across development and lifecycle management—were critical success factors.

- **Expandability:** The new Enterprise Data Warehouse (EDW) is being expanded incrementally through parallel use case development. The legacy data warehouse was fully decommissioned within one year.

- **Full Auditability:** Built-in features, including data lineage and automated documentation, ensure complete traceability and transparency.

- **Regulatory Reporting Compliance:** Automated handling of bi- and tri-temporal timelines and SCD Type 2 outputs, utilizing Datavault Builder's standardized patterns, ensure compliance with complex reporting requirements.

# INITIAL SITUATION

HAL's primary goal was to build a robust, enterprise-wide, and easily extensible EDW. The EDW was designed to provide a flexible, comprehensive foundation for reporting, supporting tools such as SAP Business Objects and Tableau. A key requirement was the ability to operate the solution within the bank's own data center, utilizing an Oracle database.

The new EDW needed to accommodate a diverse and changing system landscape, to replace the existing Talend based data warehouse, which integrated data only from the core banking system (OBS).

As a first step, HAL conducted a proof of concept (PoC) to evaluate Data Vault modeling in combination with open-source ETL tools, such as dbtvault and Apache NiFi, using Docker, which took several months. However, these tools were eventually ruled out due to interface challenges, slow implementation, a lack of visual modeling support, and high manual coding efforts.

"With Datavault Builder, we have established a robust data integration platform that enables us to ensure data integrity while responding quickly and flexibly to changing business requirements."

**– Dr. Uwe Herzog**
Team Lead Business Intelligence

| OBS | ➤ | SQL | ➤ | Raw Vault | Business Vault | ➤ | SAP Business Objects |
| BAIS | ➤ | SQL | ➤ | | | ➤ | Tableau |
| Bloomberg | ➤ | JSON | ➤ | | | ➤ | Oracle APEX |
| Other | ➤ | JSON / CSV / XML | ➤ | | | ➤ | Files for System Deliveries |

**Datavault Builder Automation Layer**

Datavault BUILDER **on** ORACLE
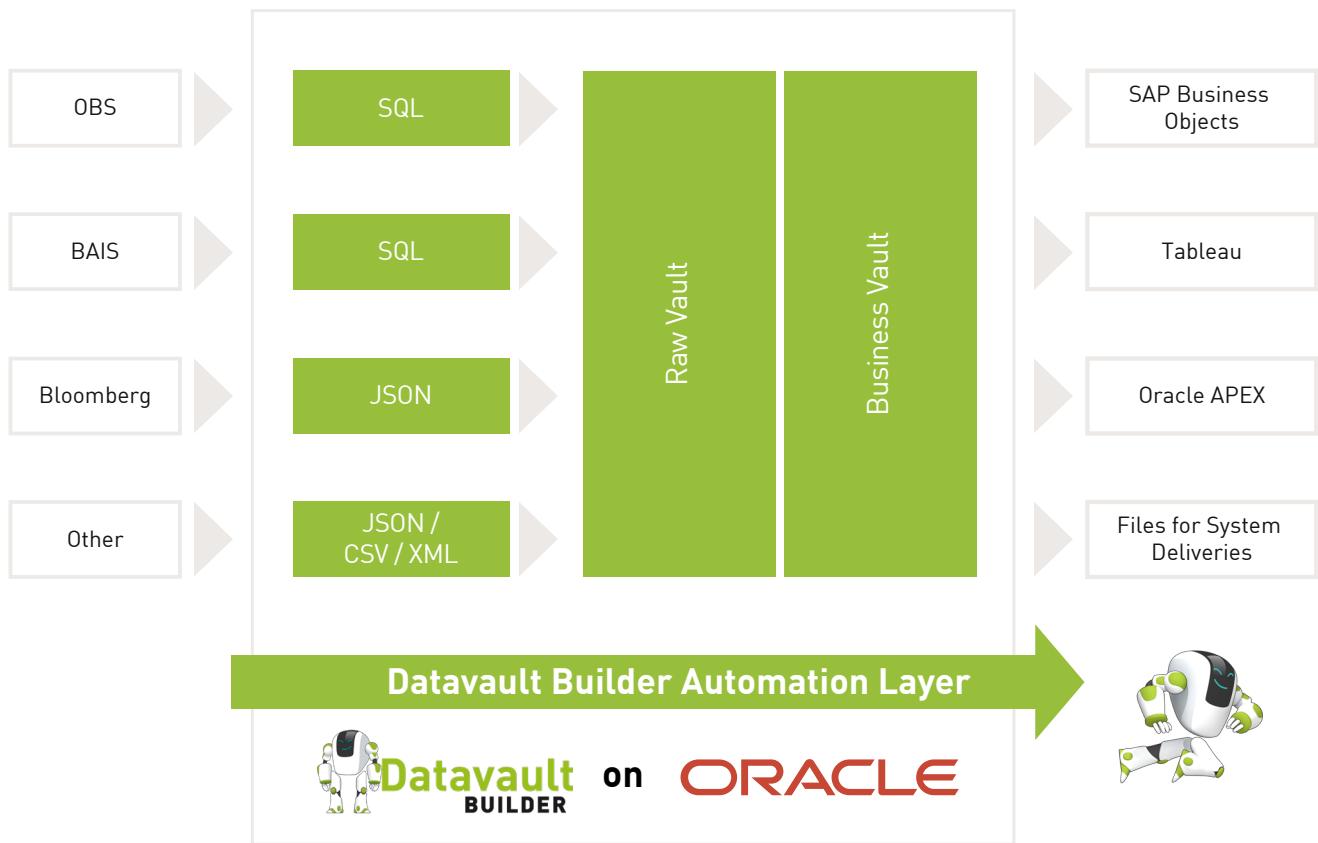
# SOLUTION

The PoC clearly demonstrated that the Data Vault methodology was a strong fit for HAL's future EDW.

During a series of workshops, HAL was able to complete the PoC with Datavault Builder in just two and a half days. Datavault Builder was pivotal in convincing the Business Intelligence team, thanks to its efficient and visual approach to data integration, which covers the entire process—from data source to presentation layer. The team quickly adapted to the no-code approach and the intuitive GUI, successfully implementing initial requirements during the PoC. This hands-on experience built confidence in the team's ability to implement the EDW independently and efficiently.

Furthermore, the excellent support provided by Datavault Builder during the PoC, with rapid and often same-day solutions, proved to be a significant advantage. The native Docker support of Datavault Builder also significantly simplified updates and upgrades.

# RESULT

After the PoC, HAL launched the "Risk Data Warehouse (RDW)" use case with a three-day Datavault Builder Enabler Training covering Data Vault modeling, Datavault Builder usage, and best practices. This enabled the first project phase: implementing the Raw Vault using data from the OBS core banking system and the BAIS regulatory reporting system. From the outset, the team followed an agile, sprint-based development approach. Within the first month, daily loads into the Raw Vault were running smoothly and exceeded expectations.

Next, the business logic was built in the Business Vault to create the data mart for risk control. Due to the virtualized Business Vault approach, the team was able to respond quickly and flexibly to changing requirements from business departments. Within four months, the risk data mart was delivered.

The new risk data mart serves as the foundation for the bank's regulatory risk reporting. By replacing the legacy system with a consistent and automated data foundation, the risk controlling team significantly streamlined its processes and met regulatory compliance expectations.

One of the Datavault Builder's key advantages is its native support for automatically building multi-temporal timelines, enabling bi- or multi-temporal reporting perspectives. Built-in data lineage and automated documentation features ensure traceability and transparency — essential for audits and regulatory compliance.

While implementing the RDW use case, HAL's five-member BI team simultaneously began developing additional use cases, including ESG reporting. The combination of the flexible Data Vault architecture and Datavault Builder's high level of automation enabled fast, parallel project execution.

Twelve months after kick-off, the legacy DWH was fully decommissioned. Since then, the new EDW has handled all required functionality. Business units now benefit from faster delivery of their requirements and integrated access across systems.

The next major milestone is the rollout of a self-service reporting solution for business users.

# COMPANY

HAL's origins go back to 1796. Following the merger of Hauck, Aufhäuser, and Lampe as well as the acquisition of Sal. Oppenheim in Luxembourg, the bank emerged in 2021 as one of Germany's largest private banks. In addition to its long-standing expertise in fund services, HAL's core competencies include private banking and investment banking.

---

Datavault Builder is an end-to-end data warehouse automation platform that covers all aspects and phases of a data warehouse, including design & development, lifecycle management and operations.

By using proven standards, users are enabled to start their agile data warehouse immediately, generating business value in the first sprint.