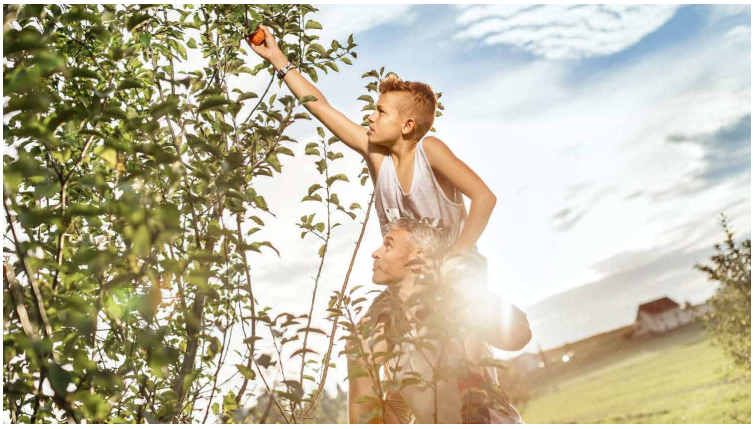
From Data Warehouse Testing to Data Quality Management at Helsana Health Insurance

V 1.6

SUCCESS STORY

When the health insurance company Helsana chose to implement the BiG EVAL data quality suite, their objective was to adopt a standardized product offering long-term maintenance and versatile data warehouse quality assurance capabilities. This decision marked a significant transition from their custom in-house solutions to a robust system featuring standardized test cases and quality checks. Today, thousands of fully automated test cases continuously monitor Helsana's data quality, promptly triggering processes to address any detected issues.



Standardizing an in-house developed solution

Prior to adopting BiG EVAL, Helsana depended on custom-built methods to monitor key indicators and dimensions within its data warehouse. However, these in-house solutions soon proved challenging to maintain and cumbersome when introducing new test cases.

Upon evaluating BiG EVAL, Helsana was impressed by its straightforward and robust system architecture, user-friendly interface, and exceptional scalability.

With support from the manufacturer and a BiG EVAL partner, Helsana swiftly transitioned to BiG EVAL, flawlessly standardizing their in-house-built solution. All test cases were recreated within the new system, centralizing and streamlining administration, performance, and documentation.

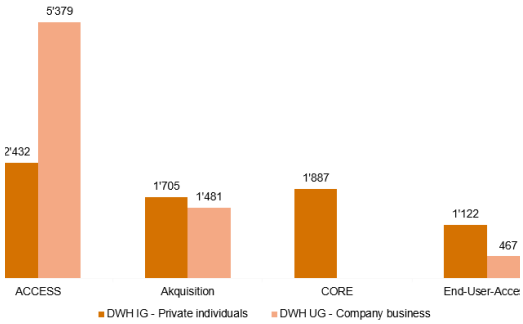


Fig1: Number of test cases running regularily.

From technical testing to automation in the business departments

Initially, BiG EVAL was employed solely for testing data warehouses related to Helsana's outward-facing operations which was then based on Teradata and nowadays on Exasol. However, its effectiveness quickly led to its adoption in internal business areas as well. The implementation was subsequently tested and extended to additional technical and industry-specific processes, enabling comprehensive data quality checks and verification of key indicators during a migration project. Furthermore, BiG EVAL replaced an Excel-based solution in the accounting department's internal control system, aiming to enhance the quantity and quality of existing tests.

Helsana

The Helsana Group is a trustworthy health and accident insurance company based in Switzerland, and works to provide for the healthcare of companies and private individuals. Helsana Group is an unlisted public limited company organized as a holding company. Under the holding umbrella, Helsana and Progrés are the operating insurance companies. Helsana employs over 3,000 people across Switzerland and has a leading position in the Swiss insurance market with over six billion Francs in premiums. Helsana protects 1.9 million people from the financial consequences of illness, accidents, pregnancy and elderly care. With a wide selection of basic, supplementary, and accident insurance, Helsana works for the life of every individual.

„BiG EVAL helped us stabilize the quality of our data. They met all of our requirements in full: an uncomplicated and reasonably-priced introduction and a high level of integration in our DQM processes and infrastructure."

Günther Engeler
QA-Manager BICC

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V 1.4

SUCCESS STORY

Advancing Data Quality Culture

Helsana views their data warehouse as a pivotal system essential for the company's strategic direction. Consequently, they have adopted a clear strategy to cultivate and professionalize their data quality management. This strategy includes establishing robust processes and fostering a strong awareness of data quality among employees. A critical component of this approach is the utilization of advanced tools like BiG EVAL. These tools enable Helsana to identify and address quality issues comprehensively and implement sustainable solutions.

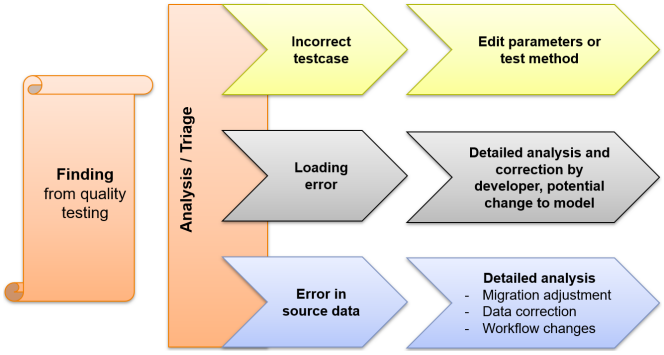

Fig2: Processing and Rectifying Test Findings.

Operating seamlessly in the background, BiG EVAL continuously and automatically checks Helsana's various quality criteria. When anomalies or rule violations are detected, it highlights these issues, directing the data management department to the problem areas. The subsequent step involves a detailed technical or business analysis to resolve the issue and modify workflows to prevent future occurrences.

These are the Tests and Quality Checks Helsana is Running

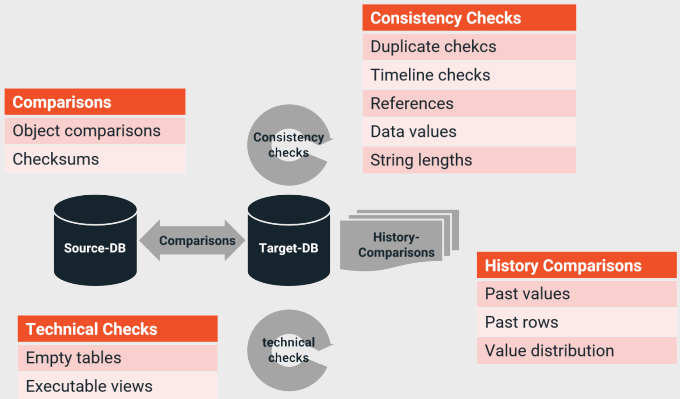

Fig3: Comprehensive Test Scenarios.

Helsana is running a few very efficient test cases across the board, as shown in Fig. 3.

These tests include comparisons between data from source and target systems as well as consistency and technical checks. Complex tests are run on historical data, ensuring data historization without gaps and correct temporal references. Concrete values are additionally checked for plausibility in categorized distribution.

Specific test cases and quality checks are run for certain particular scenarios.

Technological Details

The data checked by BiG EVAL stems from various different data sources. Adcubum Syrius, an ERP system common among insurance companies, uses Oracle technology to process operative data. Helsana's data warehouse system is based on Exasol to which BiG EVAL has connectors. This means that test cases can be defined directly in BiG EVAL, and test data can be taken from the data warehouse without difficulty. This optimal system performance is essential for complex test case scenarios such as time series checks. Data from CSV and Excel files is also used.

Leveraging Automation for Massive Data Quality Scaling

Helsana achieved massive scaling by leveraging BiG EVAL's advanced capabilities during implementation. The flexible integration of scripting, code snippets, and parameter lists enabled them to conduct extensive and efficient testing of company data. This approach allowed for the creation of various test cases that, once implemented, were automatically applied across all relevant data. As a result, a small number of test cases are now executed approximately 17,000 times daily on different entities and tables, ensuring thorough and consistent data quality checks across thousands of entities with minimal effort because just a handful of test cases need to be maintained.