

Our IT solutions
will delight you!



REFERENCES DELIVERY OF A COMPLEX DATA WAREHOUSE
INTEGRATING DOZENS OF INPUT SYSTEMS
– for client Pivovary Staropramen



TRANSFORMATION OF THE CLIENT'S DATA WAREHOUSE: MODERNISATION AND OPTIMISATION OF PROCESSES

1 | HISTORY AND TRANSITION TO NEW TECHNOLOGIES

The client's original data warehouse was designed primarily to calculate profitability based on data downloaded from SAP and stored in a MySQL database. This system was functional, but with the advent of the GEM DIS platform, new opportunities for innovation and improvement arose.

The transition to MSSQL and new tools

The implementation of the GEM DIS platform brought a change in technology with the migration to Microsoft SQL Server (MSSQL). This move enabled the use of OLAP cubes through Microsoft Analysis Services and the deployment of an advanced reporting tool, SSRS (Microsoft Reporting Services). These changes gave the client the ability to quickly and easily access the data they needed with just a few clicks.

2 | AUTOMATION AND INCREASED EFFICIENCY

The new system opened the way to automate many processes that were previously dependent on manual work by employees. The result was a real reduction in workload, saving several full-time equivalents (FTEs). Automation included:

- Sending important information and reports to hundreds of users daily.
- Integration of new components and systems into the data warehouse



3 | EXTENSION OF DATA WAREHOUSE FUNCTIONALITY

The gradual expansion of the scope of the data warehouse enabled the integration of various data sources and systems. The outputs from the data warehouse are now used for dozens of daily updated reports that serve different levels of the organization, from management to sales representatives.

Key functionalities include:

- Calculating the basis for bonus payouts
- Creation of exports for external partners
- Processing data from the telephone switchboard
- Generating call lists for the TeleSales department
- Data quality control in dozens of different areas

4 | USER ACCESS AND FLEXIBILITY

With automatically generated and maintained documentation and easily configurable access to selected parts of the data warehouse, as an alternative to OLAP cubes, users can directly connect to the database and retrieve data for ad-hoc analysis. This flexible approach enables fast and efficient retrieval of the information needed.

5 | MAPPING AND BUSINESS EFFICIENCY



The data warehouse also works with map data of the Czech Republic. This data is crucial for effective coverage of the region by sales representatives and for controlling their work.

6 | GEM DATA INTEGRATION SUITE

The GEM Data Integration Suite platform used allows for very agile development, which means that new client requirements are incorporated very quickly. This platform keeps

the data warehouse up-to-date and responsive to changing user needs.





Evaluation of the implemented solution

Today, the data warehouse is a key component that integrates many client departments. The system is used by hundreds of users daily and its benefits are evident across the entire organization. Modernizing and optimizing processes through new technologies and automation has brought the client significant improvements in efficiency and quality of data output.

Overall detailed overview of the solutions and technologies delivered

Details of our implementation of a modern IT infrastructure that we successfully delivered and for client Pivovary Staropramen. The delivered solution includes a comprehensive MSSQL platform and advanced data processing and analysis tools. The following overview highlights the key components and technologies we implemented.

SUPPLIED MSSQL PLATFORM COMPONENTS

- 1 Databases:** Our implementation includes an MSSQL database with more than 3000 tables and a capacity of over 1TB. This database provides robust storage for all client data and ensures efficient management.
- 2 Microsoft Analysis Services (MSAS):** This Online Analytical Processing (OLAP) tool supports complex queries and real-time analysis, giving the client deep insight into their data.
- 3 SQL Server Reporting Services (SSRS):** we implemented SSRS as a tool for creating, managing and distributing reports. Reports can be automatically distributed to users based on dynamically defined subscriptions as per the client's requirement.



ETL PROCESSES

To ensure efficient data processing, we have deployed the following tools:

GEM DIS: We used this tool as a basis for ETL (Extract, Transform, Load) processes. It allows extracting data from various sources, transforming it and then loading it into target databases.

Pentaho: For ETL processes we integrated Pentaho, which supports a wide range of data inputs and outputs. The tool allows communication over various protocols such as SFTP, WebAPI, File System (FS) and direct database connections. Pentaho handles formats such as CSV, XML and JSON.

ORCHESTRATION AND VERSIONING

Jenkins: We have implemented Jenkins for orchestration of daily data uploads. This tool allows automation and scheduling of data processes, ensuring efficient and error-free data upload.

GIT: We handled the versioning of the source code using GIT. This version management system allows the client to track code changes, collaborate on projects efficiently, and manage different versions of the software.

REPORTING AND DATA VISUALIZATION

We presented data outputs through the following tools:

Tableau: We use the We Tableau solution, which allows the client to create interactive and visually appealing dashboards and reports. Tableau is ideal for visualizing large datasets and providing detailed analysis.

Microsoft Power BI: We use the Power BI solution for data analysis and visualization. Power BI is a key tool that supports integration with various data sources to create complex reports and dashboards.

Microsoft Excel: Excel remains a key tool for ad-hoc analysis and reporting. It is ideal for fast and flexible data processing.

ADVANCED REPORTING

For reports that were too complex for standard reporting tools, we used Visual Basic for Applications (VBA). This language allowed us to create customized and advanced reports that met specific client needs.



The solutions and technologies were designed to meet the client's data processing and analysis needs. With GEM System's advanced tools and methods, we ensured efficient data management and analysis, allowing the client to make informed decisions and strengthen their competitiveness in the marketplace.