Warta

OpenText™ Vertica™ revolutionizes insurance pricing with 25x improved performance to boost decision making with sophisticated data analytics.

Who Is Warta?

Warta is a leading insurance group in Poland, offering life and non-life insurance and is in a leader position in terms of customer service quality. Annual revenues exceed €2 billion and it employs 3,000 staff in addition to their strong nationwide distribution channel covering thousands more direct and indirect staff. Warta operates as a subsidiary of HDI International AG, focusing on the Retail International Division within the Talanx Group.

Challenge

Complex and Competitive Insurance Pricing Demands New Approach

Warta's department of insurance pricing has key responsibilities to ensure business success. It

needs to update, verify, and tune customer data for business use, as good data is essential. It is also responsible for segmentation analysis. This includes micro-scale analysis, using decision trees, and macro-scale analysis, looking for micro-segments that behave in a nonstandard way. The department also manages ongoing reporting and ad hoc analysis. Speed and data quality are key to this function.

"Our department is basically responsible for making the best use of the data that we have to optimize our pricing policy," explains Michal Dorosz, Coordinator of the Analysis and Data Mining Team within Warta's Department of Tariff. "The level of analytical sophistication in the insurance market has significantly increased over the last couple of years and good risk segmentation is now a key competitive advantage. To prepare personalized insurance offers for our customers, we needed a solution to analyze large volumes of data in real-time."

Arriving at the optimum insurance quote involves many challenges, such as the need to consider potentially thousands of variables, work within a short time window, as yesterday's price may not be current today, and differentiate pricing based on current market situation or customer parameters, such as age. Advanced analytics and machine learning are essential, which led Warta to build its skills in data science and work on an innovative approach that

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MICHAL DOROSZ
Coordinator Analysis and Data Mining Team
Warta

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At a Glance

■ **Industry**
Insurance

■ **Location**
Poland

■ **Challenge**
Modernize insurance pricing for real-time tailored quotes, using advanced analytics with OpenText Vertica

■ **Products and Services**
OpenText™ Vertica™

■ **Success Highlights**
+ 25x faster performance compared to previous solution
+ Substantial cost savings through 5% insurance claims reduction
+ 12 month ROI

would include new solutions to support process automation.

Solution
Unlocking Warta's potential with OpenText Vertica: real-time analytics customized quotes, and significant cost savings.

Immediate AI Productivity Benefits from Vertica Implementation
Making fundamental changes to technology and processes that have served the company for many years is always delicate, but it was clear that the previous approach and technology were limiting innovation with significant performance constraints. Vertica was one of the analytics solutions put through its paces in a proof-of-concept (POC) by the team. Dorosz comments: "During rather extensive POCs, we tested our selected solutions for speed of operation based on a wide range of our typical database queries, volumes of data supported, and the ability to automate work. Vertica as a whole best met our expectations."

Vertica is optimized for query performance, providing fast query execution and data retrieval. The integration of AI algorithms enables real-time analytics and predictions, making it extremely suitable for Warta's requirements. AI techniques can be used within Vertica for data pre-processing and transformation, making it easier to handle large and complex data sets. Vertica can be integrated with various data sources and types, and it supports various data formats.

When the decision for Vertica was made, it presented a great opportunity to comprehensively review existing processes and optimize them, knowing what Vertica could bring in terms of process automation. The team had previously spent hours importing large files into the database. Vertica includes a COPY TABLE command which enables file imports practically in real-time. When data analysts are tasked with

acquiring and testing new data sources, often from external databases, this option is invaluable. The team would also continually optimize queries manually. However, this is no longer needed according to Dorosz: "The projections that Vertica offers mean that individual analysts no longer need to manage query optimization, boosting their productivity."

Results

25x Faster Performance Leads to 5% Reduced Claims Frequency
The Warta implementation of Vertica includes a statistical environment for data modelling and hypotheses verification. Vertica provides in-database machine learning algorithms that enable predictive analytics. This means you can build and deploy machine learning models directly within the database, which can speed up the process by eliminating the need to move data. Models built here are then leveraged by the insurance policy pricing process.

The reporting environment includes predefined reports as well as dynamic ad hoc reports. These lead to faster decision-making as reports can be changed on the fly during a meeting. Vertica is 25 times faster than Warta's previous technology. This has drastically changed working practices for the analysts as they can now verify more hypotheses, knowing an answer will be delivered straight away. "Thanks to Vertica's incredible analytics speed, we can experiment and draw conclusions on a massive scale. Our fundamental approach has not changed, but

after removing the performance constraints we faced before, we are able to greatly spread our wings," says Dorosz.

The advanced analytics capabilities through Vertica have led to the team being able to pinpoint potentially higher-risk policy seekers. Since Vertica was implemented, the insurance claims frequency has reduced by five percent. Over the entire Warta insurance portfolio, this adds to substantial savings, and a return on investment for Vertica within just 12 months.

Reliable Low-Maintenance Environment & Advanced Analytics
Warta IT was pleasantly surprised at how low-maintenance Vertica proved to be. The environment is completely stable, and the built-in high availability and scalability brings additional security assurances. Vertica easily processes large data tables of up to six terabytes and the simplicity of the SQL language has made the switch from the previous environment much easier with a short learning curve for the data analysts.

CVS-based data frames and calculations from the statistical environment are loaded into Vertica in seconds, without the need to use ETL tools. The new environment integrates seamlessly with the data science ecosystem, providing connectivity to popular data science platforms and languages in use with Warta, like Python, R, and others, enabling data scientists to leverage AI libraries and frameworks like TensorFlow and others.

Dorosz concludes: "The new style of working with Vertica makes data analytics a lot of fun. We joke that the only downside is managing our CEO's expectations as he has now seen the speed with which we can deliver valuable business results! Warta has one of the strongest analytical teams in the insurance market and thus the greatest level of complexity to differentiate between customers. Customers

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with a low, custom risk profile might not be noticed by other companies and receive average quotes. However, Warta will give these customers a competitive price, so ultimately our customers are the biggest beneficiaries of our Vertica project."

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