

Hannover Re Improves Business Insights and Customer Service by using the MarkLogic® Database

New Unique Service Provides a 360-degree View of Data to Analyze Risks and Make Better Decisions

hannover re®

CUSTOMER:

Hannover Re

INDUSTRY:

Insurance, Reinsurance

CHALLENGES:

Data Integration, Customer Experience, Risk Management

CUSTOMER USE CASE:

Search, Security

BENEFITS:

Immediate insight from aggregate information, spanning overviews down to full details

COMPANY OVERVIEW

Hannover Re, with gross premium of around EUR 17 billion, is the third-largest reinsurer in the world. It transacts all lines of property & casualty and life & health reinsurance and is present on all continents with around 2,500 staff. Established in 1966, the Hannover Re Group today has a network of more than 100 subsidiaries, branches, and representative offices worldwide.

CHALLENGES

As part of its reinsurance service portfolio, Hannover Re offers the next generation of automated underwriting solutions with hr | ReFlex — an innovative combination of point of sale and risk assessment systems specifically targeted at primary insurers looking to deploy all-digital insurance products or adding online and mobile channels to their sales. The company wanted to add a powerful Management Information (MI) aspect to help Hannover Re's clients access all relevant data in a 360-degree view in order to analyze risks and make risk-adequate decisions. Specifically, Hannover Re required an infrastructure that could:

Integrate and Manage Massive Amounts of Diverse Data. The project team quickly realized a relational database could not serve as the foundation of the new automated underwriting system due to the nature of the data. The data produced at the point of sale is heterogeneous (every client works with different sales processes and underwriting approaches), and unstructured content such as lab reports and scanned images need to be made available to decision-makers. Additionally, these records are rich and complex, with sometimes thousands of valuable data aspects within them that need to be exposed.

Reduce Administrative Burdens with a Fully Integrated System. A key requirement for Hannover Re was to introduce a platform that could provide all functionality in a consistent way without adding operational complexity. The goal was to leverage structural queries alongside best-in-class full-text and linguistic capabilities without having to worry about index consistency and the orchestration of all relevant services involved. Competing solutions used combinations of independent components (e.g. database and search engine), which would have led to drastically increased complexity from a development and operations perspective.

Deliver an Exceptional User Experience. A completed application from the point of sale is fairly verbose, with hundreds of thousands of relevant data points, containing information such as health status and history. All of these data points need to be fully available via integrated search (structural and full-text) in order to analyze risk profiles, uncover previously hidden risk patterns and offer options to clients to improve their business operations.

“After examining options such as relational and open source databases, the MarkLogic database was the best option to meet our targets. It provides the infrastructure we needed to make the next generation of hr | ReFlex possible. The agility helps us to ingest massive amounts of heterogeneous data ‘as is,’ integrated search makes the data more accessible, while the enterprise features such as security and elasticity allow us to deliver this on a global scale to the most demanding customers. As a result, we have dramatically improved the customer experience and our clients’ ability to optimize their risk profiles.”

— Jens Blohm,
Managing Director of Life & Health
Northern & Central Europe, and
COO of the Life and Health Business
Group, dedicated to the system and
service portfolio of Hannover Re in
the Life & Health space

Minimize Risk. Because the data involves sensitive health issues, security was an enormous concern for Hannover Re. The team looked into an open source solution, but found the security insufficient.

THE SOLUTION

The MarkLogic database serves as the underlying database and storage layer for an analytic application that is part of the hr | ReFlex product suite. The cloud-based analytic application offers a 360-degree view of all relevant information and is provided in as SaaS to clients around the globe.

The MI component provides superior analytic capabilities for client data collected in a central data warehouse. For every hr | ReFlex installation deployed at a client, MI collects the data resulting from insurance applications as they travel through the different stages of the digital insurance sales process. At any stage, information is recorded (e.g. health conditions of an applicant), which can be analyzed to improve the understanding of the aggregated risk profiles that go on the books of the primary and the reinsurer. The solution provides the ability to analyze all details submitted during the online application process, including any health details declared by an applicant for a life insurance policy.

WHY MARKLOGIC?

The MarkLogic database provides the infrastructure to make Hannover Re’s new hr | ReFlex product suite a reality. Hannover Re clients report surpassed expectations due to the improved levels of customer support. This, in turn, has led to an improved competitive position. Specific benefits include:

Improved Customer Experience. Hannover Re’s new analytical capabilities have been widely and eagerly embraced by customers, as they provide better insight into applications and plans in order to make more risk-adequate decisions and obtain feedback along the customer journey.

Managed Risk. With a 360-degree view of all data, customers can analyze the data to improve the mutual understanding of the nature of the business contracted and the risks that go along with it. Additionally, security features of the MarkLogic database (anonymization of data fragments, strong transport layer security, and enterprise-grade authentication and authorization mechanisms) played a pivotal role in the decision-making process, assuring the Hannover Re team data would be protected.

Reduced Complexity and Costs. Hannover Re eliminated the need for costly and time-consuming ETL tools as MarkLogic ingests data “as is.” Thanks to the universal indexing technology, the team could accomplish all design goals with a single platform product offering outstanding database, search and programming capabilities. Additionally, the MarkLogic database was implemented and is managed by existing staff with minimal additional training required.

Real-Time Information Availability and Scalability. The central analytic data warehouse was designed to host data from a substantial number of worldwide installations. Due to legal constraints and analytical importance (medical time series), the system is expected to collect about 10 years of data from each of these client installations. Overall, the system is designed and built to manage millions of documents effectively in real time.