WhereScape®
Data Automation

WhereScape enables Data Warehouse Modernisation project at Ethias

ethias

Investec

Industry:
Insurance

Location:
Liege, Belgium

Employees:
2,000

Solutions:
WhereScape® 3D,
WhereScape® RED,
WhereScape® Data Vault Express,
Oracle

Highlights:

- Data warehouse modernisation project in progress
- Team has grown from 4 to 18 developers in one year
- Data loading frequency increased from weekly to daily or faster
- Agile methodologies enabled for closer collaboration with the business

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Jonathan Drèze, Ethias's Project manager
at NRB

About Ethias

Ethias is the fourth-largest Belgian insurance company, founded over 100 years ago. Today it insures over a million private companies and individuals. NRB is a Belgian IT company that hires 3,200 people and realises a turnover of nearly 500 million euros. NRB is the prime ICT service provider of Ethias, taking care of its complete IT environments.

The Challenge

When the Ethias team tried to modernise its data ecosystem and adopt Agile methodologies, its legacy data warehouse and manual ETL tools severely hindered progress. Hand coding limited staff productivity, while the technical experience required meant the team could not be grown quickly or cost-effectively.

Ethias' main data source is an IBM mainframe hosted and operated by NRB. The company also uses cloud-based accounting applications, manual sources such as CSV files and older sources like Salesforce. From a business perspective, the sources are categorised into life and non-life insurance.

The process of loading data from these sources was very manual and slow. The load frequency was weekly, which was the limit of the infrastructure, and the project had ten people working on it. This often meant the data was not fit for purpose. For example, one data mart was built for a month-end financial closure, and of course, the end of the week is not always the end of the month.

Ethias and NRB decided a data warehouse modernisation project was necessary to grow the business and expand the digital services it can offer. The company has four legacy data warehouses, built with classic ETL tools on Oracle Exadata, that it wanted to decommission and combine into one. Ethias issued a request for proposals for a new solution to design and build a new data warehouse.

The Solution

Ethias and NRB invited several software vendors for proof-of-concept sessions, then chose WhereScape due to its high level of automation in the development process.

The long-term aim was to use WhereScape to create a new overarching data ecosystem to fulfil Ethias' digital ambitions. However, first, the NRB data team that Ethias has put in charge of the Ethias project needed to win the confidence and investment of the business. So, they started using WhereScape in a smaller-scale project to demonstrate that it could be trusted with the company-wide plan.

Jonathan Drèze, Ethias's Project manager at NRB, explains: "We started using WhereScape with four people on two projects over a one-year timeframe. The proposal was to demonstrate that with WhereScape we can deliver both projects with short-term planning, then extend the proof of concept. We really started with a blank piece of paper."

The team also chose a switch to Data Vault modelling. While this can be done with hand coding, Data Vault is incredibly labour-intensive to run so its complexity is perfectly suited to an automation tool. WhereScape enables developers to produce code at a much higher speed and manages the interdependencies that can cause a lot of maintenance as Data Vault projects scale.

WhereScape 3D, the design tool, enables architects to quickly spin up complex designs and prototypes, following best-practice templates. WhereScape RED then builds the architecture by enabling developers to drag and drop objects from source to target on an intuitive GUI. The thousands of lines of native code required to commit the actions on the underlying platform are then generated automatically in seconds.

Jonathan said, "Building a Data Vault is possible with hand-coding ETL, but we wanted to move quicker, so we chose WhereScape. If you want to build a Data Vault by hand there is a lot of maintenance work to do, and it's really costly because it's a manual operation to adapt the code and fix issues. With WhereScape the

Data Vault is harmonised and standardised. It is more robust than with manual tools."

A big advantage to using a code generator is that less experienced developers can produce huge amounts of code without human error. The NRB team realised it could train new staff to use WhereScape in a fraction of the time it would take them to learn to hand code, and so hire more junior staff for the same cost as a few experienced hand coders. This perfectly suited the company's aim to grow the data team quickly in their push to modernise the data ecosystem and become more data-driven.

Samuel Matiuz, BI/ETL consultant at NRB, is responsible for the onboarding of new hires on the Ethias data team. He explains how this works at a technical level: "If you have a junior consultant on WhereScape you can bypass the templating stage because it's already been done by a senior consultant, and the junior person can add data without knowing about the stages before that. They can learn that after. But with hand coding you have to know everything before you start. With WhereScape you can integrate people without months of learning until you have a consultant who can manage development independently."

👍 The Results

In the first year, as planned, WhereScape proved it could be trusted as the foundation for the larger project. The first tasks were completed with huge savings in cost and time, while technical improvements were made to the infrastructure to increase the speed and frequency of data delivery.

Jonathan said, "After one year, we delivered both projects, so it was a success. After this confirmation, we decided to go for the full scope of the project – the decommissioning of the legacy data warehouse."

One of those projects was the month-end close. Instead of ten people working on it over three years, in one year with just two people on WhereScape, Ethias enhanced the load frequency from weekly to daily. Now the data is always suitable for use in the company's month-end accounting closure.

With the value of WhereScape demonstrated to the business, the NRB team was trusted to hire new staff. "We started to make the team bigger and bigger. At the beginning, we were four, and now we are 18 on the data team, with 15 using WhereScape. If you know SQL, you can be integrated into the team in a few weeks. That's an advantage of WhereScape – the scalability," said Jonathan.

WhereScape removes the risk from much of the development work while keeping team members in control. Automation enables light-touch governance over a large team by flagging any potential issues as they arise, allowing technical leads like Sam to keep on top of the infrastructure without spending all his time checking it manually.

"It's interesting to have everything in the same place. In RED, all the tables are properly qualified by types to see if everything is correct. I can easily switch from one table to another to compare them, so it's an advantage to have everything on the same tool as you don't have to read the databases each time.

"In 3D you have the comparison between models with the merge tool, which helps us to easily check if people are doing their jobs and following guidelines. I also made many queries on the database, RED and 3D repositories to check if naming conventions and data types are correct. It's easy to do because the tables of both repositories are well structured so I can read them quickly without documentation. It's also easy to make some BI queries to maintain a high level of consistency."

With more staff working on a new, ambitious project, everything must be documented correctly. This demonstrates to the business that everything is on track, ensures that knowledge is not stuck with certain individuals, and helps new hires to understand the project's scope quickly. While Ethias did not have time to produce this with their hand-coding model, now it is generated at the click of a button.

"The documentation is shared with the customer,

and it's useful and good quality. It improves the quality if we compare with what was delivered before," said Jonathan.

While Ethias started using Agile methodologies before using WhereScape, the new, bigger development team, empowered with automation, means the team's Agile initiative is no longer held back by legacy infrastructure.

Jonathan explains why: "We are working very close to the business in Agile mode, with regular meetings to check the scope of the project and that deliverables are being met. We show quick and dirty prototypes to the business, building some dimensions to show what will be built at the end, like a data mart and what it will deliver.

"Once the prototype is validated, using WhereScape it is quick to develop the full flow of data using 3D to build the Data Vault, and then RED to implement

business rules and build the data mart. The development part is really accelerated."

Sam elaborates: "With our previous data warehouse, the source system wasn't very flexible. It was a full refresh of database tables every time we wanted to load data in the data warehouse – a long process. Now we have a CDC tool on the mainframe, so if the data is available, it takes a few seconds to extract it, very near real time. Before we weren't close enough to the client, now we have adjusted this, and our communication is much better.

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