WhereScape®

LEADING AUTOMOTIVE COMPANY

Using Sensor Data from Trucks to Improve Profitability

"We believe by understanding vehicle activity we can create much more relevant offers."

"WhereScape is enabling us to get value from the sensor data and shorten times to market; we are able to deliver our BI solutions faster than ever before."

The Challenge

A leading automotive company needed to combine sensor data with operational data to deliver compelling offers, provide greater customer service and improve profitability.

The Solution

An integrated Enterprise Data Warehouse with a single global modelling standard; automated and managed by WhereScape.

The Benefit

The company get value from their sensor data, shortening times to market and delivering BI solutions faster than ever before.

WhereScape talked to a leading automotive company that manufactures trucks, buses and construction equipment about why they have consolidated their business and how truck sensor data is helping them to stand out from the competition and improve profitability.

Q | Why has the organisation consolidated its businesses?

We were a set of independent companies that were 'competing' with each other. Our response to tough market conditions was to consolidate into a single company with a global view of our entire business. It's this view that's core to our future; not only does it give us information about the past but, used with the right technology, it can help us make predictions about the future. A good example of this is in our truck division; sensor technology is helping us overcome commoditisation by enabling us to create unique, tailored and profitable offers for warranties, financing, insurance and service packages.

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Q | Tell us about the challenges affecting the truck industry right now

The truck industry is currently at a similar point the car industry was in the 1990's; competition is tough, margins are extremely tight and profit is primarily made through add-on sales. The key difference being that for the car industry add-on sales were parts and for the truck industry it is offers for warranties, financing, servicing and insurance. The major challenge for all truck companies right now is how to create compelling offers that are significantly better than those offered by the competition. Our response to these challenges has been to introduce sensors to our trucks; we believe by understanding vehicle activity we can create much more relevant offers.

"With WhereScape we have an agile analysis and data management strategy. They automate the planning and building of data into our IBM Netezza Enterprise Data Warehouse (EDW), 10 times faster than traditional methods."

Q | Tell us about how truck sensor data has become core to your business

Truck sensor data enables us to truly understand every aspect of each individual truck. We can now monitor truck components, precisely where it has been driven to, how fast it was going and even how aggressively it was driven. Sensor data combined with operational data (such as make, model and service history) allows us to build a very detailed profile about the truck. By using the right information management tools we can produce offers that have a high statistical chance of being profitable.

I can give some really interesting examples. We buy back trucks after leasing contracts have expired and analyse the potential value based on the sensor data. A truck that has been driven through the Australian outback is not going to have the same life expectancy as that of a truck which has been driven on European highways. So, rather than selling both trucks simply based on mileage, we can sell the trucks based on their actual life expectancy. This differentiation enables us to achieve a much higher margin on the truck with a higher life expectancy. This margin can be as much as 5%, which equates to millions of Euros a year which makes a huge difference to profitability.

Another example is around predictive maintenance. Sensor data analysis allows us to predict more accurately when parts might fail. If we know a certain part is at risk after say 100,000 kilometres and a particular truck is being driven in harsh conditions, we can predict when servicing will be required. We can send a message to the customer either on the dashboard or via email to say that you need to take the truck to the workshop for servicing. This kind of insight allows us to offer fixed price service contracts with the guarantee that there will be no breakdowns.

Fuel consumption is another interesting example. People buying trucks are obviously very interested in the fuel consumption of their fleets. Using sensor data we are able to calculate average fuel consumption by truck, journey and even by driver. Having this information and being able to act upon it by finding more economical routes or educating drivers can equate to significant savings for fleet owners.

Q | Does the use of sensor data pose a big technological challenge to the organisation?

Yes, it completely changes the game. Sensor data on its own is of no value, we have to be able to analyse it against operational data. So, for example sensor data on a particular truck needs to have

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context by being linked with its servicing history. These two data types are completely different; sensor data is high volume, low complexity and operational data is low volume, high complexity. Making sense of how these two data types fit together and managing them in a fully integrated Enterprise Data Warehouse (EDW) is just the start of the challenge. Sensors create data sets that are large and complex so it's difficult to process them using traditional data processing. We needed a faster and more agile approach to capturing, processing and analysing this data to support the business strategy.

It is not just sensor data that poses a challenge to us. We are also integrating many other types of data to improve profitability; for example unstructured data such as weather, traffic and strike information.

" WhereScape is the only tool that can ensure our new environment works now and in the future and it's crucial to how we use Big Data to drive value for our customers."

Q | How has WhereScape helped overcome this challenge?

With WhereScape we have an agile analysis and data management strategy. They automate the planning and building of data into our IBM Netezza Enterprise Data Warehouse (EDW), 10 times faster than traditional methods. WhereScape is enabling us to get value from the sensor data and shorten times to market; we are able to deliver our BI solutions faster than ever before. WhereScape is also helping us with the integration of all of our information management systems. As an organisation, we needed to move from

a series of independent data marts with their own modelling techniques to a fully integrated EDW with a single global modelling standard. WhereScape has been crucial in helping us to do this; we have gone from an ad hoc technical approach to a model driven approach.

The main IT benefits of using WhereScape is without a doubt data consistency and integrity of our entire data environment. We have 5 sites working on the same EDW, WhereScape helps us ensure everyone is working efficiently and in the same way. Additionally, system maintenance changes are now achieved much more quickly than they used to be as deploying changes through WhereScape is incredibly straight-forward.

Q | Tell us about your experience of working with the WhereScape team?

We have created a new centralised information management environment which gives us a 360° cross-functional view of our data. This new environment is based on a single modelling method and EDW and is our first concrete step in managing Big Data. We will now be able to respond to new demands of mixing data from the different businesses with larger volumes, close to real-time response as well as better traceability and reusability. WhereScape makes all of this work in a fast, flexible and reliable way. I believe that WhereScape is the only tool that can ensure our new environment works now and in the future and it's crucial to how we use Big Data to drive value for our customers. I am really impressed with the WhereScape team, they are a smart bunch of people who understand they need to keep enhancing their products to meet market needs. WhereScape is central to our future and I look forward to working with them for many years to come.

TERADATA. ORACLE® IBM DB2® Microsoft SQL Server NETEZZA hadoop Greenplum Microsoft SQL Server Parallel Data Warehouse Microsoft Azure

About WhereScape

The pioneer in data warehouse automation software, WhereScape empowers organizations constrained by time, money or lack of resources, to deliver business value from their decision support infrastructure – including enterprise data warehouses, business facing data marts, and big data solutions. WhereScape has global operations in the USA, UK, Singapore, and New Zealand. www.wherescape.com