MOBILE GOALS

SFD is a rapidly growing French seller of mobile telecommunications solutions. Sylvain Coquio, information systems manager, tells Rick Mitchell that the company has turned to a system based on the Microsoft SQL Server to dramatically improve business data management.

The market for mobile telecommunications equipment and services is one of today's most competitive, and vendors in the sector need accurate, current information to keep pace with constant jockeying on price and product offerings, changing technology, and shifting stock levels and demand.

"It's a very particular business model. You have to react rapidly to adjust prices, up or down, on many levels, nationally, regionally and locally," says Sylvain Coquio, information systems manager for SFD, a major French retail and business-to-business seller of telecommunications equipment and services. SFD is owned at 49 per cent by France's second-largest mobile network operator SFR, which has about 17 million subscribers and is itself owned by Vivendi S.A. and Vodafone.

Created in 1998, SFD has some 2,200 employees working in its core business of managing 270 SFR sales outlets throughout France, under the Espace SFR brand name, expected to increase to some 320 outlets by 2008. Another 200 employees sell equipment and services to companies and provide electronic payment solutions under the SFD Enterprises brand. The growing B-to-B unit has 14 branches bringing in about 18 per cent of SFR's overall sales, says Coquio, and major customers include global energy company EDF S.A., insurance giant AXA S.A. and Hewlett-Packard Corp's French branch. SFD also sells to small and medium-size enterprises and industries, as well as to very small businesses.

Coquio says: "In terms of information management we have a setup that is very complex to manage. Our information is very spread out and each sales outlet operates its own local access and network with its own PCs." To manage and mine all this data, SFD recently built a sophisticated data warehouse based on the Microsoft SQL Server 2005 system, with fully web-enabled entry, reporting and analysis tools, running on an infrastructure based on Dell hardware. SFD calls the system among the most advanced in Europe.

Le problème

SFD generates about 20 gigabytes of total data daily, on prices, stock and sales, from many sources – the network operator SFR, the stores, equipment

suppliers and logistics offices. "There can be as many as 24 different prices for the same handset, depending on how the phone is sold, with a prepaid card, with a subscription, if it is pre-owned or new, or if it's a new or continuing subscription. Since November there are also geographic price differences, with hardware and software components to the price. It's our job in information services to make all this data accessible and usable," says Coquio.

Stock management has to be very efficient. "The price per square metre can be quite high. There are a lot of services to provide, and customers spend an average of 40 minutes in the store to make a purchase," says Coquio. "Our priority is making our customers comfortable. So we have to reduce the area taken up by stock." Another reason: "In mobile telephone sales, the product can be high value, and store theft and aggression are almost as much of a risk as they are for jewellery stores. It's preferable to not keep too much stock on-hand. And, a mobile telephone is outmoded in six months, so we have a tight supply chain."

Until 2004, SFD used a data collection and reporting system based on Oracle software and a Business Objects infocentre, says Coquio. "It was a five-year-old system, and we had made many renovations, to the point that it had become difficult to do any more to boost its performance." Led by Coquio, the company's IT team decided that to get the most out of its copious data flow, it would need to completely revamp the way it managed that data. "We needed a robust, modern data warehouse, reliable in real time and able to integrate data from applications throughout the company into a single view. Tools needed to be based on standards that would ease adoption by vendors, suppliers and, ultimately, customers," says Coquio.

Each SFR local outlet operates its own network with its own PCs

La solution

After a three-month search, the team decided on the Microsoft SQL Server 2005. Deployed in February 2006, the system provides a single, centralised repository – the data warehouse. The Integration Services module extracts data from all the company's applications – decisional, customer relationship management, human resources planning and SAP applications and databases – then converts and cleans data for quality and consistency, finally pulling it into the data warehouse. The Online Analytical Processing engine, called Analysis Services, enables rapid multidimensional analysis and comparison of this data in so-called OLAP cubes. Reporting is handled by the Reporting Services module. "Reporting Services allows reporting data on the fly, at any stage of analysis," says Coquio, adding, "This was a big step up from the previous infocentre, which had much more limited options for reporting."

The new system came with Visual Studio 2005, for software development, and an extensive graphics library. "We used Visual Studio to develop a balanced scorecard application," says Coquio. The balanced scorecard approach to management allows decision makers to formulate a long-term strategy balancing indicators from four key areas: finance, customers, business-process, and human resources perspectives. "To make strategic decisions, it's important to balance those four key areas," explains Coquio. The system's OLAP ranking function attributes scores to results, based on criteria determined by managers.

For the under-the-hood infrastructure, SFD chose Dell hardware because: "It has a good quality/price ratio and standards-based architecture adaptable to Microsoft systems, and we could get everything from one source," says Coquio. SFD equipped stores with OptiPlex desktops, for accessing stock and customer account systems, e-mail, intranet and internet. It installed PowerEdge 6850 rack servers to run SQL Server 2005 and Dell PowerEdge 1855 blade servers to run back-office systems connected to headquarters, collecting sales, price and other store data. Dell EMC CX700 storage platforms hold about 38 terabytes. "You can do complex things with this hardware, but it's very easy to administer and build up. Adding and configuring a server for reporting transactions onto the LAN takes about 30 minutes," says Coquio.

"This system really boosts our ability to view business data and to provide value-added analysis and reporting"

Beginning in April 2005, with help from Oresys Solutions, a Microsoft-certified business intelligence consultant, SFD began its Picasso project, implementing the SQL Server 2005 in a series of gradual steps, starting with internal use, extracting and reporting data from 30 business applications. This later increased to about 45. "We put 2,000 man-days of work into the system over two years," says Coquio. As of February 8, 2006, the system was accessible across the company's intranet.

Coquio describes the SFD system as very user friendly, because it's based on Microsoft standards. "It's easy to navigate and data input is simple and fast in Internet Explorer," he says. Consequently, about 85 per cent of users needed no training at all, with top management getting about a week of training to use the system's most advanced BI functions, such as analysing cubes. "There's more mental gymnastics involved in that," he says.

The system processes about 132,000 transactions, or queries, per month, internal and external, each taking about 0.6 of a second, he says. It has produced some 140 guidelines that make it easier to manage store data on stock, prices and margins, and help managers make better decisions, says Coquio.

Keeping score

Coquio says virtually all 2,200 employees in retail use the system. "Not many escape it," he laughs. SFD makes the system available to everyone, from the CEO down to sales staff, but on varying levels of access and depth, of course, says Coquio. A salesperson can get data relevant to her job and store, and the CEO can get ranked comparisons of about 120 key indicators on the entire company's performance, along with explanatory factors.

There are about 10 to 15 key users, says Coquio. "The marketing manager might get a report looking at logistical, sales and stock data, and product life-cycle data. The human resources manager would be more interested in the absenteeism rate of sales staff, and the chief financial officer can get information on bank deposits, margins, returns on investment, as well as distribution and discounts given."

But the SQL Server 2005 allows a much deeper look at all that data. "The system de-compartmentalises information, breaking down barriers between functional domains," says Coquio. "You can cross human resources information with sales statistics, training and performance data. It can provide a correlation between a particular store's sales and service after sale. It can compare a store's personnel costs to its gross margin performance, or compare brand market share trends with the number of times that brand is out of stock. Human resources and internal management can compare sales productivity with the seniority and/or training level of sales personnel, or a store's sales trend with the level of training of its sales staff. "You can compare almost anything," says Coquio.

"This system really boosts our ability to view business data and to provide value-added analysis and reporting, says Coquio. "And it was by far the best available deal of the ones we considered," he says. Based on its technical and practical merits, the plan got almost immediate strong support from the company's highest management, Coquio says.

Economic benefits

"We have requests for reports coming from everywhere in the company. There's no more need

"It's easy to navigate and data input is simple and fast in Internet Explorer"

to convince people of the need to automate. It has to be done or we lose money!" he says.

"We were losing about 3.5 million euros a year to some questionable internal practices on returns for service after sale and exchanges. If a phone is returned within a week after purchase, we have to cover all logistics, replacement and repair costs. That's a lot of money. The new system allowed us to detect that something was wrong, and we've been able to cut those losses by 75 per cent."

Another big plus, "We're selling data to such suppliers as Nokia and Motorola on the sales performances of their products in our stores. They can access detailed multilevel data through our corporate extranet. In a rapidly changing market, that's a very valuable tool for them. The income we've made from selling this data to them has quickly made the programme worthwhile," says Coquio.

On the horizon

Coquio says his department has more goals for the system, first to extend it to the 200 employees in B-to-B sales. "We could use it to improve our relationship with B-to-B customers, keeping a marketing watch out so that customers have what they need when they need it. It would allow us to propose new offers and measure their profitability. To do that you have to know the customer and the life of the customer."

The Microsoft SQL Server 2005 offers so many powerful ways to gather and analyse data that IT managers have to be careful not to step over France's strict legal boundaries on privacy protection. "There are things that are simply not allowed here. For example, it's not permitted to compare a sales person's absenteeism rates with sales productivity, training, and some other individual-level personnel statistics. Things are quite hemmed in in France!" he laughs.

"Later we'd like to bring in operational tools such as a central cockpit or dashboard to display all the company's indicators and alerts, like in a car or airplane. As all those factors build up, it can get too complicated to keep track of. A dashboard would make it easier to deal with potential problems faster and more efficiently. But for now it's hard to convince management to go for the expense."