



“SAS and Outwares have provided us with a dynamic ‘one tool fits all’ application that facilitates reporting throughout the company.”

Michael Brognez
ICT Program Manager, SNCB-NMBS

The Power to Know®...

Streamlined reporting at all corporate levels



SAS drives Web-based Management Information System

In large organizations like the Belgian national railway company (SNCB-NMBS), reporting takes place at many levels. The sheer amount of data, however, makes it difficult to gather information and finalize reports on time. That changed when the SNCB-NMBS decided to implement a true Management Information System based on SAS technology. The Web-based reporting system deploys company-wide features in a set of three tools that can be accessed by multiple users depending on their needs, organizational level, and IT knowledge. Use of the reporting tools has resulted in a better grasp of available information and increased employee productivity.

Getting to the figures faster

The SNCB-NMBS employs over 41,000 people and manages some 3,450 kilometers of railway lines across Belgium. In 2001, it carried more than 160 million passengers. These impressive figures imply equally impressive amounts of corporate data. “Retrieving useful information within a reasonable time frame was becoming a problem,” admits Michael Brognez, IT Program Manager at the SNCB-NMBS. “As a result, managers were turning to the ICT department to request the data they needed, which meant we could not focus sufficiently on ICT projects. We needed to find tools that would help managers research and analyze available data more efficiently and independently. Tools that would provide our various departments with easier access to descriptive statistics adapted to their specific needs. Tools that would also present figures and indicators as clearly as possible and provide enough flexibility for customizations.”

A three-in-one solution

“Our greatest challenge was to set up a single system to address the entire range of needs of the various types of users,” continues Brognez. “The first step in meeting that challenge was to precisely identify the needs of each user. This was done with the help of Outwares, a consulting company and SAS partner specializing in data warehousing and Web enablement. We knew that SAS could provide the kind of tools we were looking for. Outwares helped us develop the most appropriate set of solutions for our situation. The

result is a three-level reporting system over the Intranet based on a common data warehouse. Depending on their position, skills and needs, users can view static reports, access a multi-dimensional reporting application, or produce tailor-made reports based on customized queries.”

Static reports: easier follow-up of performance indicators

Static reports are used for recurring measurements that need to be made at regular intervals. The Human Resources department of the SNCB/NMBS, for instance, uses such reports to monitor workforce evolutions. With the new application, HR staff can instantly request tables and graphs that clearly classify personnel according to gender, language or function. The application is also used by the Passengers department to analyze critical measurements such as the number and type of tickets sold, the sales figures per station, or the most requested journeys. All these indicators greatly facilitate the preparation of monthly performance reports for executive management. “The system uses SAS to extract all relevant information from our various databases”, Brognez explains. “SAS gathers the scattered data into a central data warehouse, turns the raw data into tables and graphs, and publishes these tables and graphs in HTML or PDF format so that they can be viewed with a simple Web browser. The displayed figures cannot be modified, which ensures the reliability of the information.”

Multi-Web: dynamic analysis and decision support

The multi-dimensional part of the application makes the reports dynamic. Authorized users of this so-called Multi-Web section benefit from cross-analysis results. This type of report is generated whenever a specific need arises. For example, ICT managers can analyze workloads and resource usage from a combination of perspectives such as time, employee, activity, and unit. They can manipulate the displayed data by changing the chosen variables or modifying the table layout. They can also drill down into more detailed data by simply clicking on the table columns. 'Traffic light' indicators can be included to pinpoint problems and catch key performance measurements at a glance. Reports can later be exported to Microsoft Excel or saved on the user's PC. "The Multi-Web section is built on Outwares' Ceres framework, a Java-based business intelligence tool that enhances reports generated by SAS," notes Brognez. "SAS greatly improves decision-making by providing essential features such as variance analysis, exception reporting, business forecasting, and critical success factors. The application also includes sophisticated analysis functions over the Web."

Query tool: personalized queries on the raw data

The query tool application, in addition to all Multi-Web features, enables direct access to the raw data. The Freight department, for instance, uses this feature for credit control purposes. Financial and credit control managers can now query the customer database for specific information, instead of having to contact the customer or to ask staff to look it up. Users can build a series of conditions for precise data filtering. The queried information can be presented in a wide variety of graphs and figures, which can also include 'traffic light' indicators. "The query



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function offers the greatest potential, because it provides the widest analysis spectrum and allows users to truly 'play' with the data," indicates Brognez. "Of course, users need to know what they are doing. That's why we have defined a security system based on each user's profile. Only a limited number of authorized users can currently access the queries, but their number will increase as our training program goes along." The query tool is also based on the Ceres framework. "It was developed using SAS' software for enterprise application development, which greatly facilitated the development of the query tool and the graphical representation of results," notes Brognez. "It really makes life easier – both for the ICT developers and for the end users."

Benefits that are bound to grow

With the project still in its early stages, the SNCB-NMBS is already experiencing notable benefits. "Both the quality and speed of delivery of the reports are on the rise," remarks Brognez. "Our reporting system is convenient, reliable, and attractive. And it took surprisingly little time to implement: the query tool was up and running in less than 200 man-days.

Work efficiency has improved, since the reports now take much less time to produce. As a result, staff have more time to spend on key issues, such as interpreting performance indicators. Now that management has a convenient reporting tool at its disposal, ICT staff can fully concentrate on technical projects. As more and more people become aware of the tool's many possibilities and are trained to use some of its more advanced features, we are expecting an additional boost to our organizational efficiency. In the end, this should also benefit our service to end customers."

The SAS/Outwares reporting solution is a thin client one: a Web browser is all that is required for users to access a wealth of information.



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