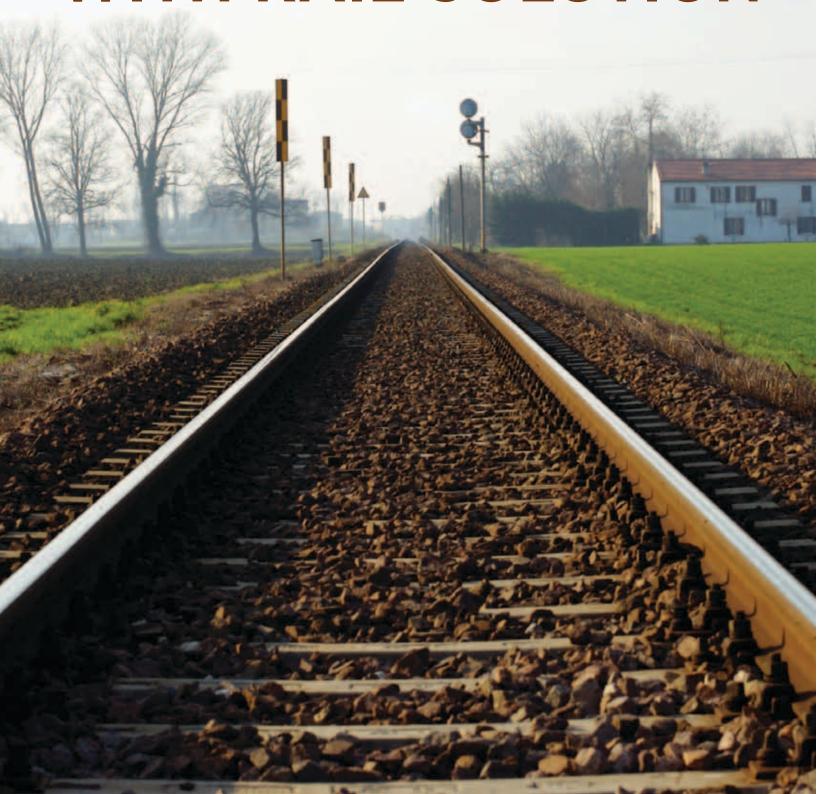
VOLKSWAGEN DRIVES EFFICIENCY WITH RAIL SOLUTION



For one of the world's largest automakers, not all success takes place on the road. Volkswagen AG uses Europe's dense railway network to supply materials and vehicles to many of its production and distribution facilities across the continent. When the manufacturer wanted to more efficiently manage its freight logistics operations, it chose a paperless solution from CSC.

"When we began supporting Volkswagen [in 1997], employees used telephones and large data sheets to plan and control their rail operations. It was very labor intensive," says Hans-Joachim Lucke, CSC Transportation and Logistics business manager in Germany. "They needed an IT solution that would help plan, control and monitor the rail operations that supported their production facilities and factories."

The manufacturer decided to start a project to create an IT system, called RANDIS, for VW's rail logistics. Volkswagen awarded the project to CSC because of our deep business and logistics expertise and rail industry references.

A team from CSC's award-winning Logistics Competence Center began developing the solution based on CSC's Rail Cargo industry solution, called CP BIS. In 1998, CSC delivered the first version of RANDIS to VW's Wolfsburg, Germany, production facility to support movement of resources. CSC has been supporting RANDIS ever since.

Integrating a new solution

One challenge the team faced when developing the pilot solution was that RANDIS had to fully integrate with VW's existing complex IT environment in Wolfsburg.

"We expanded our CP BIS solution to be fully independent of database types, operating system environments and hardware types," says Lucke. "Another challenge was that the telecommunications infrastructure in Eastern European countries was still poor. CSC built for Volkswagen one of the first Webbased rail applications, dedicated for use in their Slovakia and Hungary plants."

With the pilot's success, CSC began enhancing RANDIS for more widespread use, adding new modules and interfaces. Because VW's rail operations run 24x7, the automaker needed the solution to be highly available. Today, RANDIS runs in a failure-protected environment based on an IT-Unix/Oracle environment in Volkswagen's own data processing center. CSC provides 24x7 application support to ensure RANDIS' availability.

To help Volkswagen's logistics team operate efficiently and proactively plan its manufacturing activities, the company also needed an electronic data interchange capability to interface with shippers, third-party rail carriers and enterprise resource planning systems. Now, via a browser-based Web application, shippers get information from rail logistics operations and deliver shipment information to rail operators.

For example, at Volkswagen's Audi production factory in Ingolstadt, Germany, nearly 300 users work with RANDIS. This includes the factory's manufacturing, distribution and maintenance departments, which load and unload rail wagons at different stations across the plant.

RANDIS stores all location and status information about wagons and related cargo in a common database, with wagon locations visualized in a graphical track diagram. Along with information about goods requirements from VW's factories, RANDIS also ensures the correct wagons and goods are moved by rail operations. Because the system provides multisite information and a multilingual capability, a user at a production facility in Germany, for example, can see if his material was loaded at a production



facility in Hungary. RANDIS also delivers information about rail operations to VW's own data warehouse application for statistical and accounting tasks. With this information, weaknesses can be identified and eliminated for future planning.

Supporting international operations

Today, CSC has implemented and now supports RANDIS at the manufacturer's VW production facilities in Emden, Mosel, Kassel, Hannover and Salzgitter, Germany; Bratislava, Slovakia; and Pamplona, Spain; and at its Audi production facilities in Györ, Hungary; and Ingolstadt and Neckarsulm, Germany.

Volkswagen uses the system to manage its daily runs of 100 freight trains loaded with nearly 2,500 freight wagons. At the company's largest factory — at headquarters in Wolfsburg — the company moves about 160,000 wagons each year, to or from loading and unloading stations. As an additional benefit, RANDIS helps the manufacturer reduce energy consumption, emissions and waste through more efficient use of its rail infrastructure.

"Our work with CSC as an experienced partner in the rail segment has ensured that rail logistics in the Volkswagen Group is supported efficiently by a consistent, companywide standard IT solution," says Klaus Mennenga, Volkswagen Logistics Planning manager.

For more information, visit www.csc.com/cpbis (in German).