

Railway Gazette

INTERNATIONAL

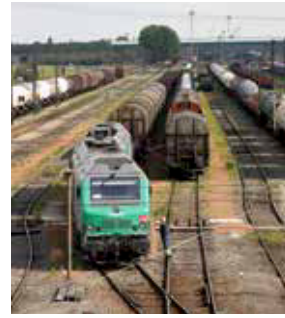


GERMANY

DB at the crossroads

Balancing commercial and political imperatives in a changing market

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ATO over ETCS

Interoperability is key to automated operation on main line railways

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Global rendezvous in Berlin



SIEMENS

Ingenuity for life



An Abellio Rail Mitteldeutschland train passes Saaleck castle in Sachsen-Anhalt.

Abellio makes a **quick** start

Thanks to the use of integrated resource planning and management systems, Abellio Rail Mitteldeutschland was able to mobilise for a new operating concession in only 10 months.

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 IVU Traffic Technologies AG

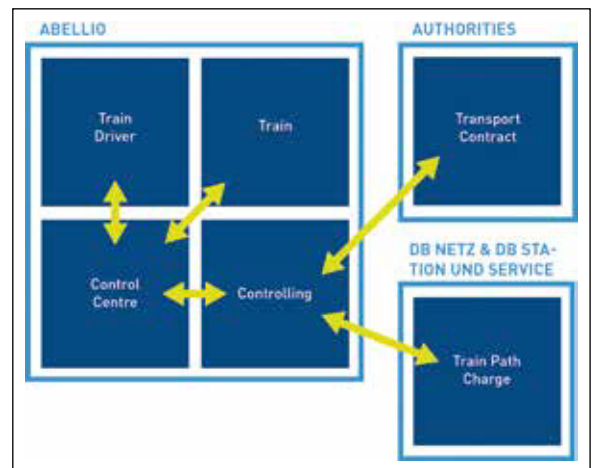
With the timetable change in December 2015, Abellio began operating the Saale-Thüringen-Südharz network under a contract that runs to December 2030. Spanning 575 route-km across five *Länder* and requiring the operation of

9.2 million train-km, it was the largest regional railway concession to be awarded since the reform of the German rail market in 1994 (p59).

The STS contract was awarded in October 2012, following a competitive tendering process. This gave the NS subsidiary three years to establish a local business and procure new trains. The group was already active in Nordrhein-Westfalen, where it acquired its first regional contract in 2005, but decided to establish a new subsidiary, Abellio Rail Mitteldeutschland.

Having subsequently won further tenders, Abellio is rapidly becoming Germany's leading non-DB passenger operator. During the next three years, it will take over four more networks in central Germany, Nordrhein-Westfalen and Baden-Württemberg.

Full mobilisation for the STS contract began in June 2014, leaving little time to set up new management structures. Abellio therefore decided to adopt the IVU.rail integrated software, which is available as a standard package (RG 4.14 p55). Rapid implementation enabled the operator to start planning the schedules, duty and staff rosters for the 2016 timetable in April 2015.



The IVU.rail integrated software provides Abellio with a constant flow of data, ensuring a transparent settlement with the regional authorities.

Flexible planning

Abellio uses IVU.rail to plan the efficient utilisation of 35 trainsets and more than 300 employees. The system contains powerful optimisation algorithms that enable efficient and largely automated deployment. A mobile employee portal and a contract settlement module help to create an entirely digital workflow, in which all data are constantly available. This is particularly useful in the event of any disruption.

Planners can prepare for major engineering works, which are generally



Left: A mobile employee portal allows staff to access their rosters and log their working times in the system directly.

Regional GERMANY



Photo: Abellio Rail Mitteldeutschland

The freely configurable planning rules allow the operator to prioritise different optimisation targets such as cost effectiveness or stable operations.

Individual employees can log in to the mobile employee portal using their smartphone or tablet to receive notifications of any roster changes and obtain their new duty schedules. They can also enter holiday requests and log their working hours. In the event of a delay, train crews can document their overtime from their mobile device, and once the extra hours have been approved the system feeds them through to the payroll accounting.

Abellio has also licensed the employee portal for real-time reporting. On-train customer assistants use the portal to report whether cleaning tasks have been undertaken. Thus the fleet management team always has up-to-date data about the condition of each vehicle.

Transparent settlement

Under the STS contract, Abellio is obliged to provide regular performance and quality reports to all five regional authorities over the next 15 years. The deal includes complex provisions for the assessment of cancellations and delays, together with a penalty regime. The operator is using IVU.control to report on its contractual obligations.

This system is closely interlinked with the IVU.rail resource planning software, and documents all the relevant operational data such as vehicle-km, vehicle types, and seating configurations. On the basis of the contractual agreements, the system analyses operating performance to determine any deviations. Regular daily and monthly reports can be prepared automatically. ■

known about in advance. Using the software, they can create alternative vehicle diagrams and duty schedules for various scenarios that take into consideration possible disruptions, line closures and even rail replacement buses. As with the normal schedules, these 'what if' scenarios can be optimised to ensure the best possible level of resource efficiency. The dispatching team can then implement the most suitable scenario(s) as required.

IVU.rail also includes automatic functions to support the fleet management team during short-term disruption. The system continuously compares the current position of each trainset to the target timetable. If there is a significant deviation, it alerts the

vehicle dispatcher and calculates the likely delays for the train's subsequent trips. If a substitute set is required, the software knows the locations and maintenance status of all available vehicles and can provide the fleet managers with a list.

The system also supports the rostering of train crew, maintenance staff and employees at Abellio's customer service centres. Based on the vehicle diagrams, the duty scheduling functions facilitate the creation of efficient yet well-balanced rosters, taking account of any time needed for transfers and rest breaks. The automatic personnel dispatch function enables staff to be allocated to the rosters, based on individual qualifications and planned absences.

Abellio Rail Mitteldeutschland is using IVU.rail software for its resource planning and accounting functions.



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