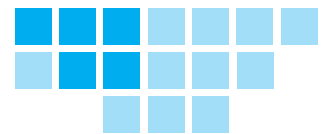




START OF OPERATIONS IN RECORD TIME WITH INTEGRATED PLANNING SOFTWARE



INITIAL SITUATION

Covering a distance of 575 kilometres, the Saale-Thüringen-Südharz (STS) rail network is the largest network to have been taken over by a private operator since the German railway market was deregulated in 1995. The time window between Abellio Rail Mitteldeutschland GmbH being awarded the contract in October 2012 and the start of operations, scheduled for December 2015, was tight: new trains had to be procured and the operating structure had to be set up from scratch. To accomplish this, Abellio needed a high-performance planning system that would be ready for use in next to no time and have automation and optimisation functions that would be able to make up for the lack of empirical data for planning and dispatch.

OVERVIEW

Employees	> 350 employees (train drivers, customer advisers, maintenance staff, employees at customer service centres and administrative staff)
Vehicles	35 engines
Transport Services	575 km Saale-Thüringen-Südharz rail network, 9.2 million train kilometres per year
Operations	Rail passenger transport
Objectives	Integrated planning system Optimisation and automation functions
Specific Details	Short implementation phase "Greenfield" project
IVU products	IVU.timetable, IVU.run, IVU.duty, IVU.vehicle, IVU.crew

With the date for the start of operations set, the schedule for establishing the operating structure was tight. This is why it was particularly important to find a software solution for the planning and dispatch of employees and vehicles that could be introduced quickly and reliably. Further requirements were that the system should allow dispatchers to be flexible in their reaction to disruptions and simplify settling up with the public transport authorities within the STS network.

In order to perform planning and dispatch in a largely automated way and as efficiently as possible, Abellio Rail Mitteldeutschland GmbH decided to opt for integrated standard software and selected IVU.rail for the resource planning of its 35 vehicles and over 350 members of staff.

IVU.rail was implemented in just 10 months, allowing the planning of vehicle working, schedules, duty schedules and roster schedules to start as early as April 2015 and ensuring that operations would start on time for the new timetable.

Thanks to high-performance optimisation algorithms, the integrated system enables the efficient and largely automated planning of rolling stock and staff. Besides a mobile employee portal, it also features IVU.control, a product for processing settlements with the public transport authorities that documents deviations, calculates the operating capacity and prepares quality records. This constitutes valuable support for a rail network involving 5 different public transport authorities.

Timetable planning benefits from the automation and optimisation functions of IVU.rail: specified maintenance and cleaning intervals are taken into account when rostering the vehicles. In the case of disruptions that are known in advance, such as major building works, IVU.rail helps the planners by providing a variety of scenarios for run schedules and duty schedules that Dispatching can use if necessary. IVU.rail also allows planners to respond quickly and flexibly to disruptions that occur at short notice: the system constantly compares actual and planned times and

IVU.rail helps with personnel deployment, for example by automatically taking into account qualifications, planned absences and supplementary times for travel between deployments, breaks and transfers. In the event of a disruption, the software's intelligent suggestion system helps dispatchers to select a suitable reserve employee. The mobile employee portal displays



personalised notifications from Dispatching and enables working hours and activities to be recorded conveniently on the go. This data then becomes available in the overall system immediately: dispatchers check the details and release them for payroll accounting with a click of the mouse. This results in an entirely digital workflow covering multiple divisions.

„Our aim is to provide short-distance rail passenger transport that is both attractive and forward-looking. To this end, we have chosen flexible, high-performance solutions that keep pace with our requirements. In IVU rail, we have found a system that provides us with the optimum support we need to meet increasing requirements as well.“

IVU for Abellio