

SUSTAINABLE THROUGH TRAINING

Operational analysis of several timetable concepts
for the Western Railway in Austria

Client: ÖBB-Infrastruktur AG

Project period: June - August 2010



Initial situation

The ÖBB-Infrastruktur AG uses RailSys® successfully to work on several projects, e. g. construction planning or to create the TSR booklet. Thus, the whole infrastructure network already exists in RailSys® and is maintained on a daily basis.

It is also possible to use interfaces to other systems and to import timetable data without loss into RailSys®. New interfaces can be developed.

Challenge

In the course of this examination the usability of the described data shall be tested as a pilot project in terms of the feasibility of the timetable concepts by use of operational planning and simulations.

It is essential to integrate the employees of the ÖBB-Infrastruktur AG in this project to ensure a concurrent improvement of their knowledge in handling RailSys®.

Strategy

Since the investigations mostly concentrate on the year 2011, the first step is the input of all the relevant data for that year into RailSys®. This data particularly consists of construction activities and timetable data, which have been imported from another system.

With the existing data several investigations are operated. These ensure a quick and efficient de-termination of potential conflicts, weaknesses and bottlenecks that arise during the daily operation of the rail transport.

The results are used to develop possible solutions for a quality assurance with improved punctuality and reliability. Conflict-free timetables are constructed, analysed and tested for efficacy. Furthermore, the remaining capacity for the freight traffic is determined.

The capacity consumption is determined with the UIC leaflet 406 capacity calculation, which is implemented into the software RailSys®.

Operational simulations enable an estimation of the timetable stability of all examined timetable variants to find the ideal solution with the best parameters.

Result

We could verify the feasibility of the train runs and detect available train paths for the freight traffic. If a loss of the running time occurred due to restricted utilisations, they were disclosed. The timetable stability was evaluated.

However, it was about much more: the employees of the ÖBB-Infrastruktur AG were involved in the whole project and hence, received a deepening training. This sustainability is one of our company's objectives.