RailSys®

Construction management with RailSys®

The infrastructure is the basis of rail traffic, not only metaphorically. Maintenance and new constructions are necessary to be able to compete with other types of transport. The most important evaluation criteria of railway traffic is the reliability of connections. It is therefore important that even in times of change, e.g. due to construction works, the quality of the operation does not diminish.

RailSys® provides a continuous support for all processes of operational planning, evaluation and request of constructions. The interruption-free data exchange between all involved partners (such as infrastructure companies, construction management and coordination departments or train operating companies) is ideal for your construction management.

You can answer the following and other questions in relation to construction management with the help of RailSys®:

- How can you optimise infrastructure construction works?
  Does the reduction of crossovers during constructions or synchronized construction phases reduce investment costs?
- Which construction procedure is the most profitable?
  (Comparison of extended bi-directional operation vs. total blocking, establishment of a temporary crossover to increase capacity, performance of bi-directional operation, avoidance of rail replacement services)
- Which are the interactions between construction processes and the rail operation?
- How do single track sections impact the operation due to track closures?
  (e.g. definition of suitable time slots, proof of feasibility of altered operational schedules, identification and display of route conflicts, development of possible solutions)
- Are overtaking possibilities an improvement for the capacity?
- Which routing option is the best with regard to running times, capacities, maximum loads?

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Usage restrictions, including track closures and speed restrictions etc., can be directly entered into the RailSys® **Infrastructure Manager** or transferred from the **RailSys® Web Construction Manager**. All usage restrictions precisely define the location, time and duration of track closures and speed restrictions. They can be displayed in any RailSys® window during the **timetabling** and are accurately reflected throughout the entire planning process.

The **travel time penalty** caused by speed restrictions and deviations is automatically calculated for any affected train. **Deviations around track closures** are efficiently scheduled at the push of a button. The software provides a large scale **re-routing of trains in the network** if direct bypassing is not possible. An integrated feature makes the re-routing convenient for you.

In addition, it is possible to assign an individual **construction management status** to each train. The status is considered during the automatic creation of the **construction management report**. A detailed display of the **timetable statistics** shows the precise traffic load curves for the tracks and in stations, thus enabling the fast identification of time gaps that can be utilised for track works. Timetable statistics are also helpful in finding additional time gaps resulting from construction works. They can be used for **maintenance activities**.

Thus, you can provide an accurate and dependable assessment of the **capacity consumption** and **remaining capacity** as well as the involved restrictions of regular operations, such as the need for rail replacement services, cancellations re-routings etc., before a construction project commences.

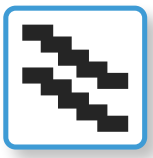
Information about the interrelation of several restrictions in the network can be integrated into the planning and results in e.g. the grouping of several works.

Infrastructure Manager

A detailed infrastructure model that is accurate to the meter can be recorded and used in a number of ways in the Infrastructure Manager. The essential elements for maintenance activities and constructions are:

- TSR booklet
- Line catalogue
- Position plan
- Administration of level crossings for public services (police, emergency services, …)
- Management of maintenance measures with timestamps
- Construction planning with timestamps

Timetable Manager



In the Timetable Manager the timetable is created based on the infrastructure. Specific characteristics such as train control operations can be modelled. The following timetable outputs can be generated:

- Working timetable
- Run time booklet
- Speed manual
- Working timetable
- Graphical timetable
- Platform working (in graphic and table form)
- Transport map
- Various timetable exports for data exchanges

RailSys® Web Construction Manager

The RailSys® Web Construction Manager is web-based and can not only be used as an information platform for daily infrastructure but also as a managing tool for constructions.

Construction activities can be requested, planned, coordinated and released. These may include shut down of overhead wirings, closures or logistic tracks.

Constructions of train stations e.g. lifts, stair entrances and toilets can be coordinated with the RailSys® Web Construction Manager as well.

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