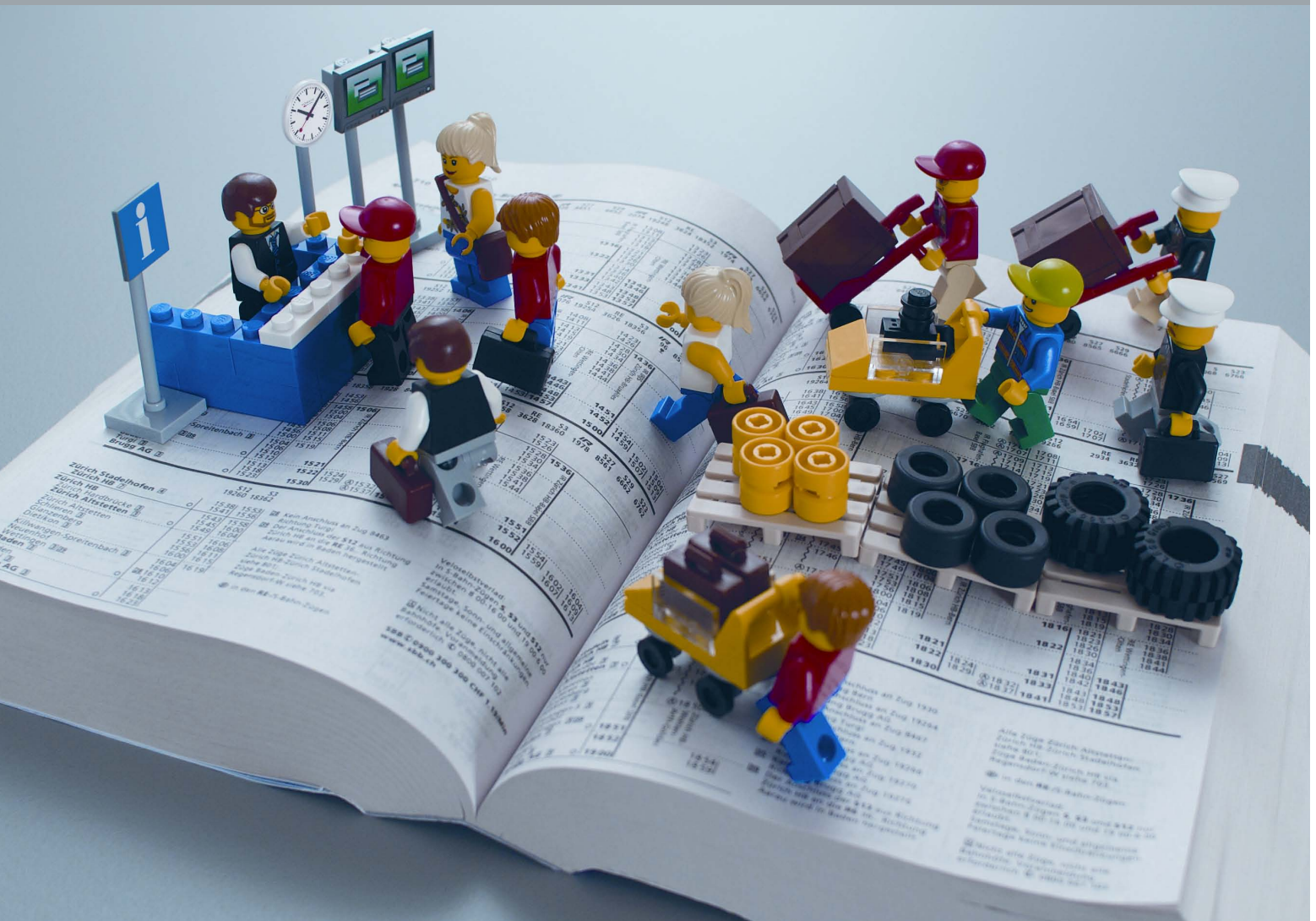
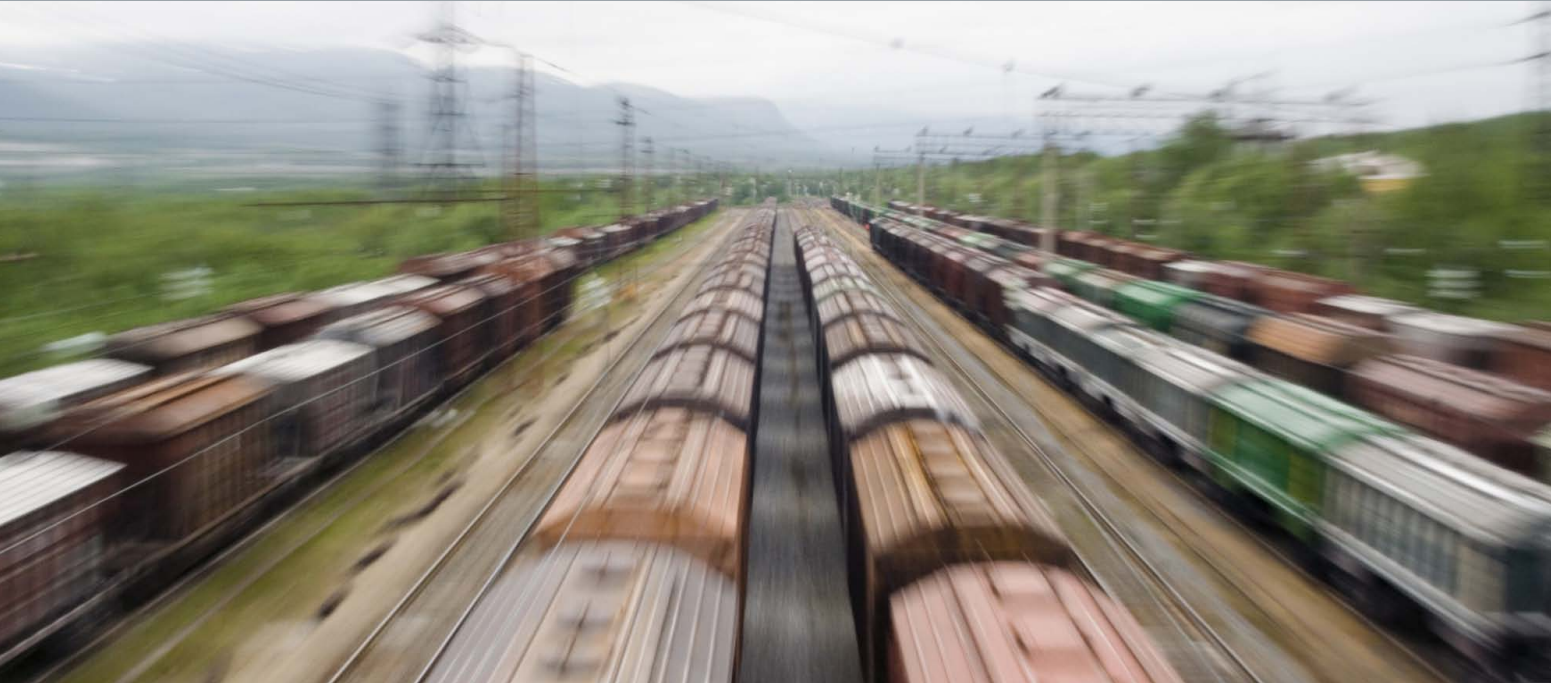


NeTS

Using Network Capacity to the fullest



The Challenge



Using Network Capacity to the fullest

Rail infrastructure operators are faced with the major challenge of meeting growing requirements for passenger and goods transport using the capacity of their existing infrastructure. One central feature of the planning, dispatching and control cycle involves optimizing timetable design. High levels of efficiency, reliability and flexibility are needed and demands will continue to grow in future.

Increasing usage of existing infrastructure network capacity results in growing demands for more accurate, flexible and efficient planning processes. Planners must be able to make the best possible use of the network capacity, in order to increase the profitability of the business.

Flexibility on a day-to-day Basis

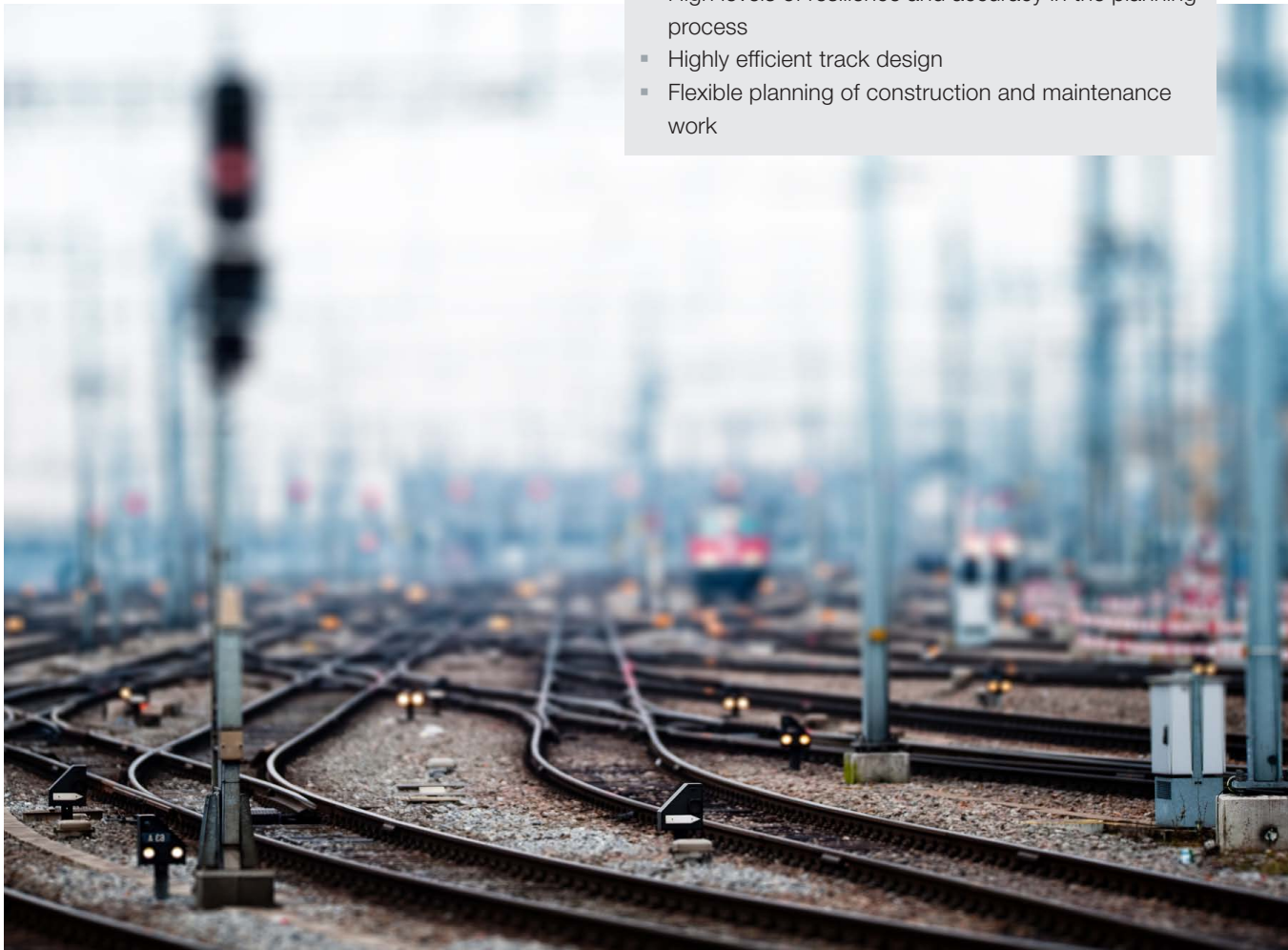
Every day, the planner is faced with planning and managing a large number of ad-hoc requests for additional passenger and freight trains at very short notice. Customers expect quick and transparent processing of their requests.

Accommodating Construction Work

The growing usage of network capacity results in more repair and maintenance work to rectify problems caused by wear on rails and the track superstructure. Route closures combined with reduced speed sections on neighboring tracks are an everyday occurrence. The closed and reduced speed sections may apply to an individual track, sections of a route or entire routes. The planners must be able to analyze and minimize deviations from the annual timetable. This means that track planning must be more flexible and more efficient.

Planners must meet the highest Standards

- Best possible use of network capacity
- High levels of resilience and accuracy in the planning process
- Highly efficient track design
- Flexible planning of construction and maintenance work



Designing Train Paths

In NeTS planners can carry out all the necessary planning tasks from annual planning and ad-hoc requests through to short-term day-to-day plans. Their core task is timetable design.

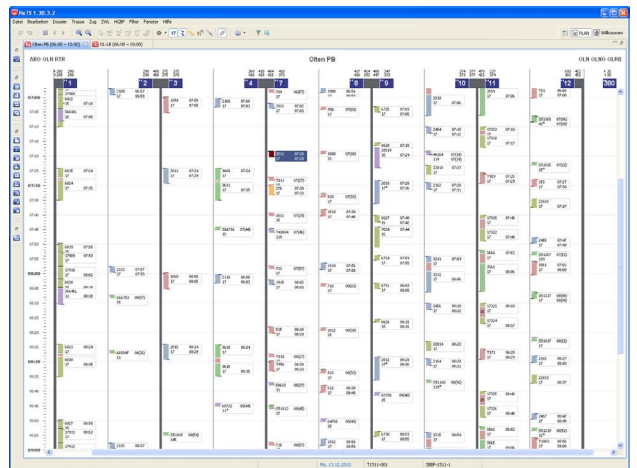
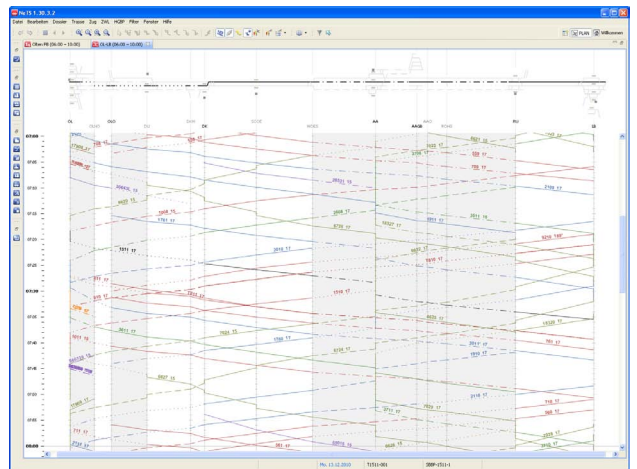
The tried-and-tested NeTS tools make planning easier:

- Creating and processing existing and planned train paths and trains with simple, intuitive support tools
- Refining train path planning with a user-friendly train graph
- Analyzing and planning routes with high levels of accuracy using the integrated route view
- Checking and amending platform allocations in the network nodes (stations) using the clearly laid out occupation diagram
- Creating and managing train paths in train families
- Managing operating days for train paths and trains using the calendar (includes timetable periods, operating days and public holidays)
- Processing planning components more easily and systematically using comprehensive filter functions
- Configuring and saving presentations, overall views and individual views

NeTS meets the differing requirements of route and node planners, while also accommodating individual preferences.

The Benefits of NeTS

- Extremely transparent planning process with node and route planning in one system
- Accurate run time calculation as a result of precise route planning
- Improved flexibility offered by day-to-day planning options
- Better traceability using the planning variant and planning dossier management function
- Increased reliability as a result of simple conflict identification using comprehensive graphs and tables
- Increased efficiency through the use of train families
- Comprehensive views for planners:
 - Integrated route view
 - Train graph
 - Main track occupation plan
 - Train path and train editor



Managing Train Paths

Planners record and manage temporary closures of individual tracks, route sections or entire routes, together with reduced speed sections.

In the integrated route view, planners can close the tracks where construction or maintenance work is needed. The closed sections are highlighted in color in the train graph and in the route view. Using graphical aids of this kind and accompanying tables, planners can identify possible conflicts within the existing plans. NeTS can be used to take necessary measures, for example adding a new route.

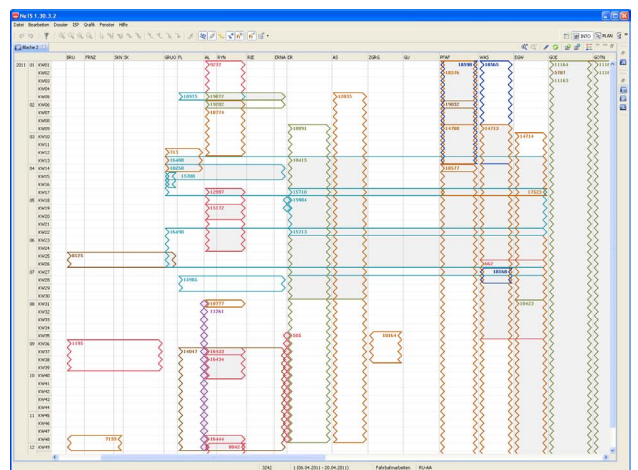
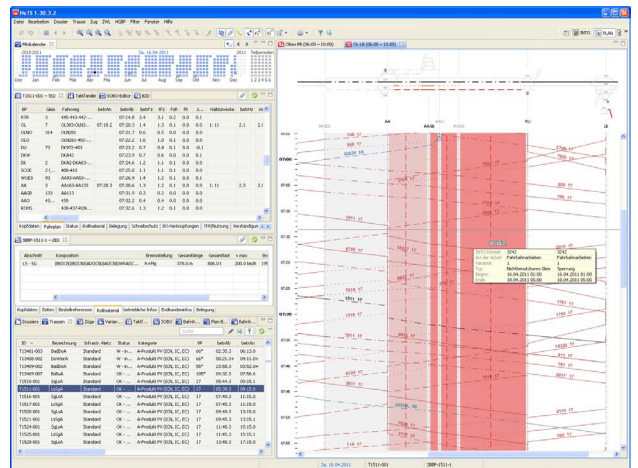
Applying for Train Paths

The entire process of applying for train paths can be managed in NeTS.

Clear role definitions allow all relevant activities, including inquiries, rough planning, formal quotations, detailed planning and approval, to take place efficiently and transparently within the same system. The partners involved (rail transport companies, infrastructure operators and contracting authorities) have direct access to the system and can view and edit their data at each stage of the process.

The Benefits of NeTS

- Planners manage track closures and reduced speed sections in the planning system, which allows the impact on the timetable to be identified immediately
- Tracks are closed in the graphical route view
- The train path application process has direct links with the planning system, allowing for efficient and transparent management
- All organizations involved have controlled access to the system



Comprehensive and integrated Approach

Design, management and train path applications all take place within the same system. User roles and accompanying permissions can be managed in NeTS. This allows different sites to work smoothly together and follow the necessary processes.

NeTS is fully integrated into the overall optimization process, from planning, dispatching and control through to ongoing optimization. Infrastructure operators benefit from central, open interfaces between NeTS and neighboring systems.

Linked Systems

- Topology database
- Rolling stock database
- Run time calculator
- Third-party systems which make use of timetable data

Customization Options

NeTS can be adapted to meet individual customers' requirements. Customized solutions are developed in close cooperation with the customer. Netcetera's extensive experience of project management and systems integration are essential to the efficient and successful implementation of the project.

Netcetera's professional support team provides support for customers during the introduction of the system and during operation. The team can solve technical and specialized problems quickly and competently. Customers can specify the required level of availability and response times of the support team.

Tried-and-tested Solution

NeTS was developed on the basis of extensive knowledge of the industry and using the latest technology, in collaboration with the Swiss Federal Railways (SBB). The solution meets current and future requirements for timetable planning, train path applications and maintenance planning.

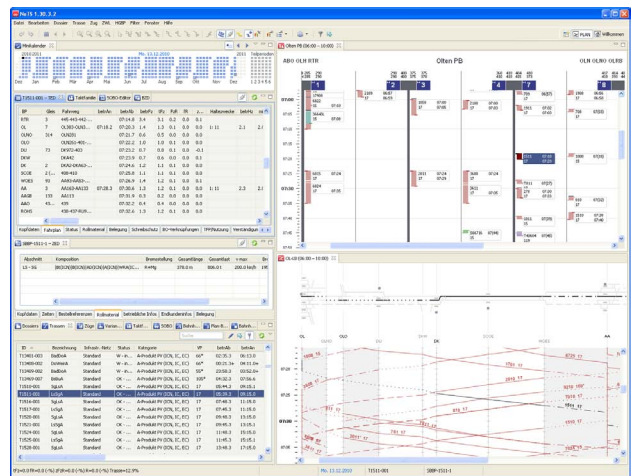
The NeTS solution has demonstrated its efficiency on one of the busiest rail networks in the world. It has been in operation at Swiss Federal Railways (SBB) since 2009.

In cooperation with



The Benefits of NeTS

- Designing, managing and applying for train paths in one system
- Open, central interfaces allow for the secure exchange of data with neighboring systems
- Customized to meet individual customers' requirements
- The support team provides rapid, expert support for customers
- Swiss Federal Railways (SBB) has been managing its entire timetable with NeTS since 2009



netcetera

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Engineering

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