



→ *Projekt zaměřený na posílení udržitelných sítí a institucionální spolupráce*

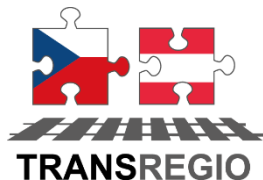
Study on reactivation of railway border crossing Hevlín – Laa an der Thaya

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Carl Ritter von Ghega Institut
für integrierte Mobilitätsforschung



EVROPSKÁ UNIE

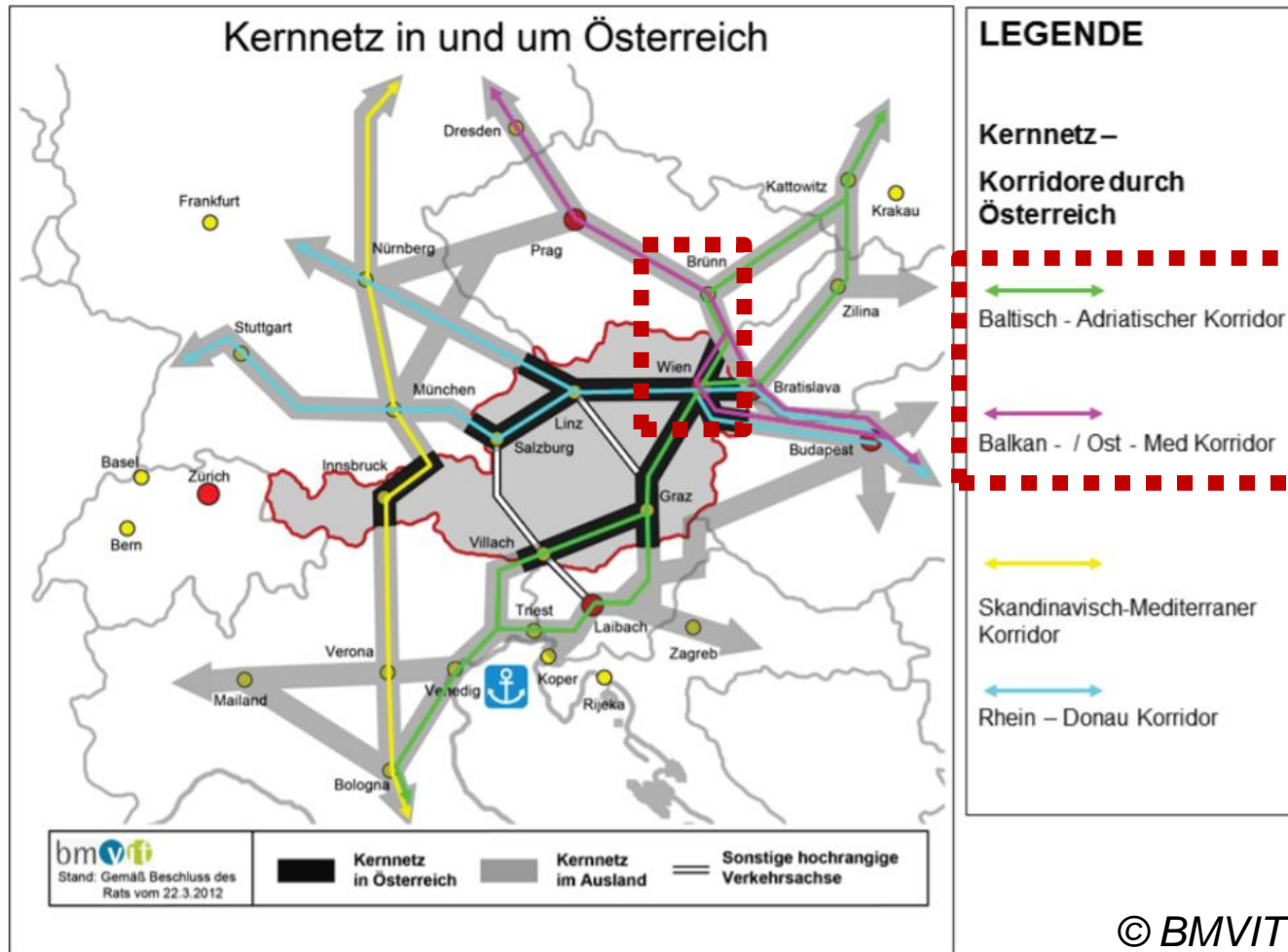


TRANSREGIO



Area of interest

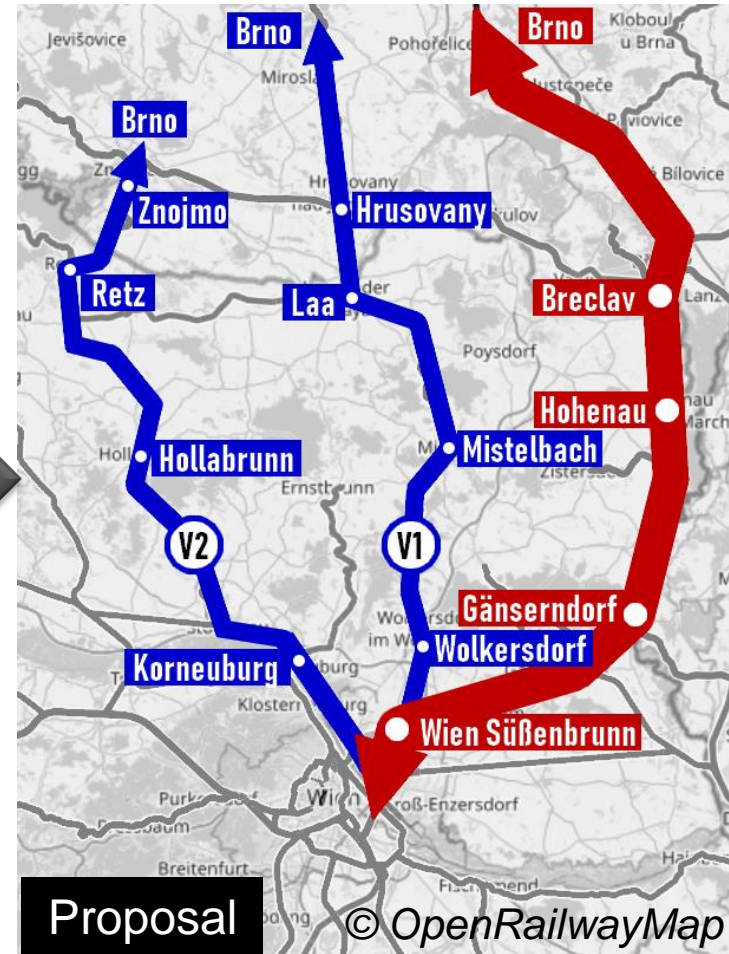
National and international context



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Area of interest

Discharge of the main line



State of infrastructure

Vienna – Breclav

- 65,993 km
- Double track
- 120 km/h
- 140 km/h Drösing→Stillfried
- Category D4
- Inclination < 5‰
- Electrification ~ 15 kV 16,7 Hz
- ETCS Level 2

© Wikipedia



State of infrastructure

Vienna – Laa an der Thaya

- 67,52 km
- Track ► Double: Vienna-Wolkersdorf
► Single track: Wolkersdorf-Laa
- 60-120 km/h
- 140 km/h: Kapellerfeld-Obersdorf
- Category D3
- Inclination < 13‰
- Electrification ~ 15 kV 16,7 Hz
- PZB

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State of infrastructure

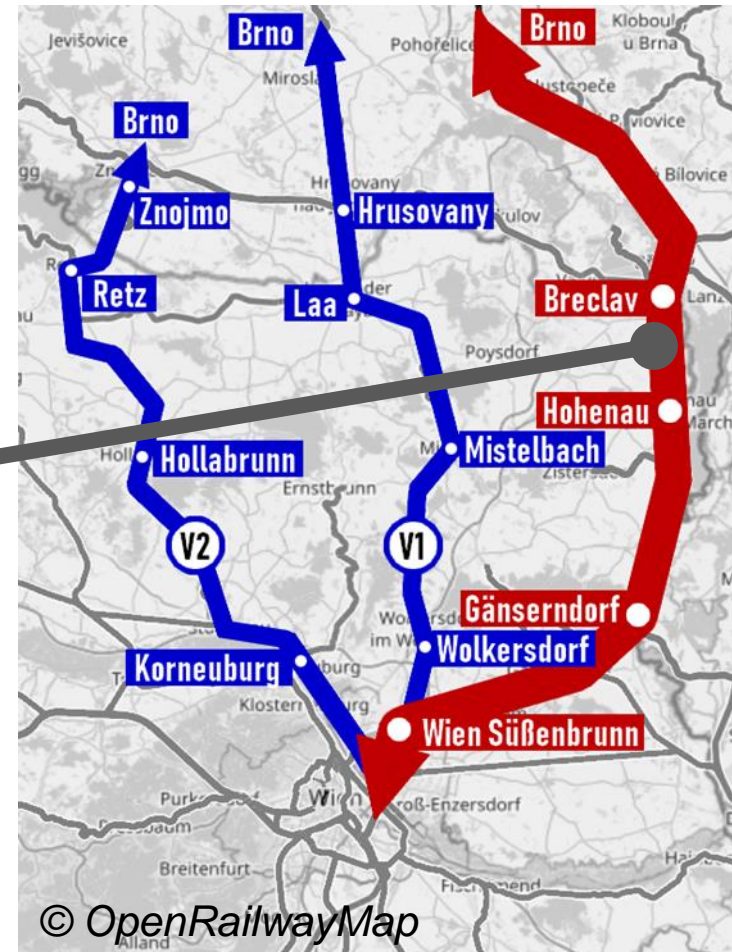
Vienna – Znojmo

- 83,51 km
- Double track: Vienna-Stockerau
- Single track: Stockerau-Znojmo
- 70-120 km/h
- Category D4
- Inclination < 12‰
- Electrification ~ 15 kV 16,7 Hz
- PZB



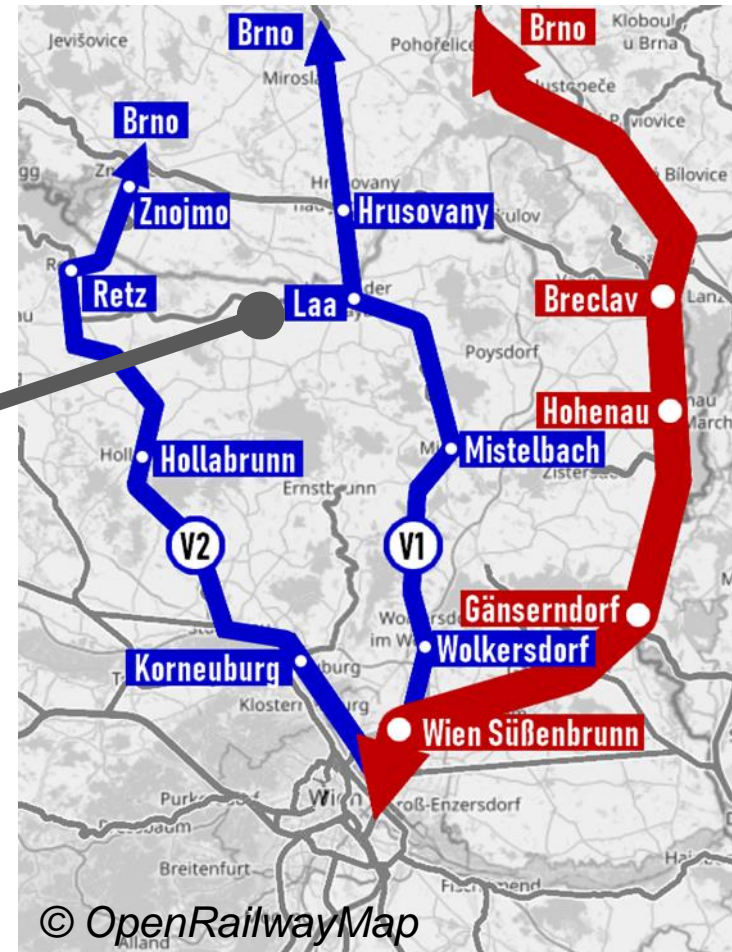
Bottlenecks and weaknesses

Limited capacity of the main itinerary (Nordbahn)



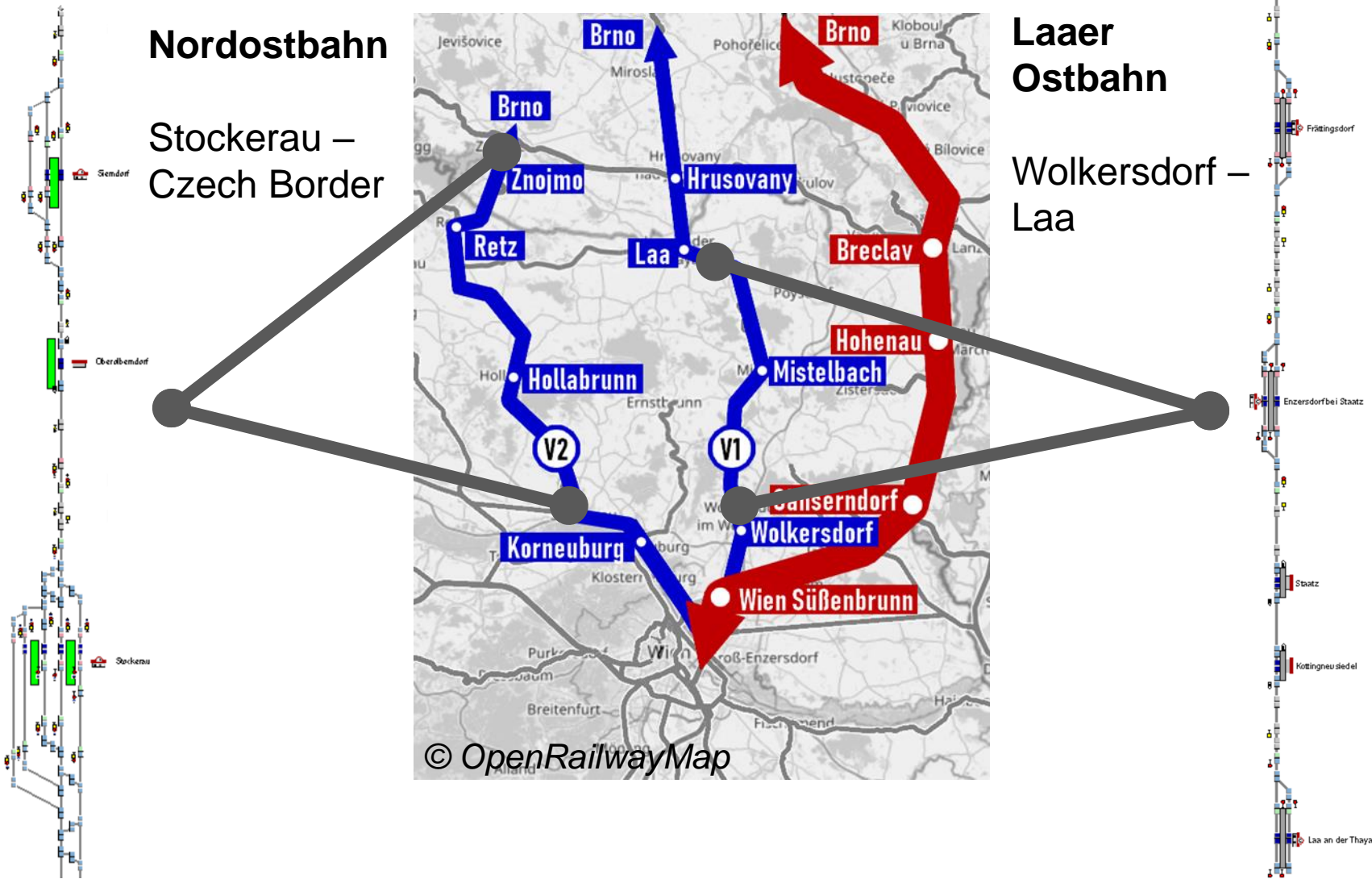
Bottlenecks and weaknesses

Missing bridge between Laa and Hevlin



Bottlenecks and weaknesses

Several sections with only one track



Nordostbahn

Stockerau –
Czech Border

**Laaer
Ostbahn**

Wolkersdorf –
Laa

Simulation of operations

Process

Inputs

- Site plans
- Load tables
- Signal tables
- Track tables
- Timetables



OPEN TRACK

Infrastructure

- Tracks
- Segment lengths
- Speeds, signals
- Junctions
- Inclinations

Operations

- Train categories
- Courses

Outputs

Lines

- Nordbahn
- Laaer Ostbahn
- Nordwestbahn

Time gap

- 7-8h
- 10-11h
- 17-18h

Simulation of operations

Open Track

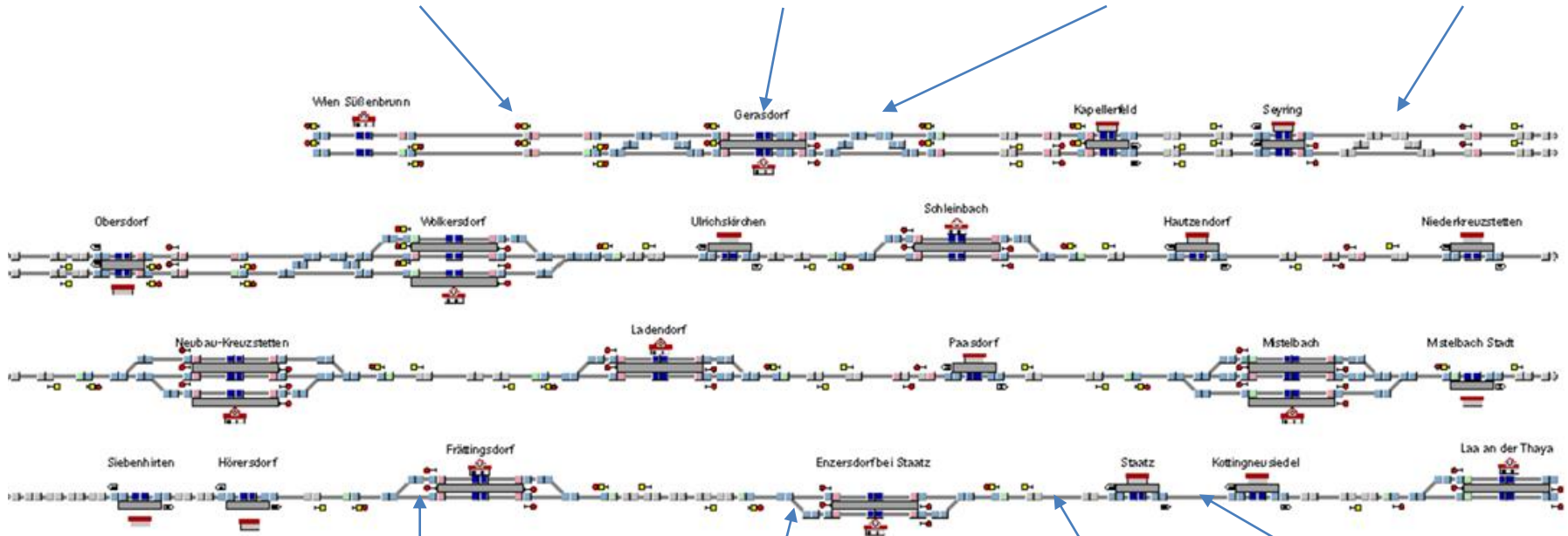
Nodes:

Signals

Stations

Junctions

km-Points



Segments:

Length

Speed

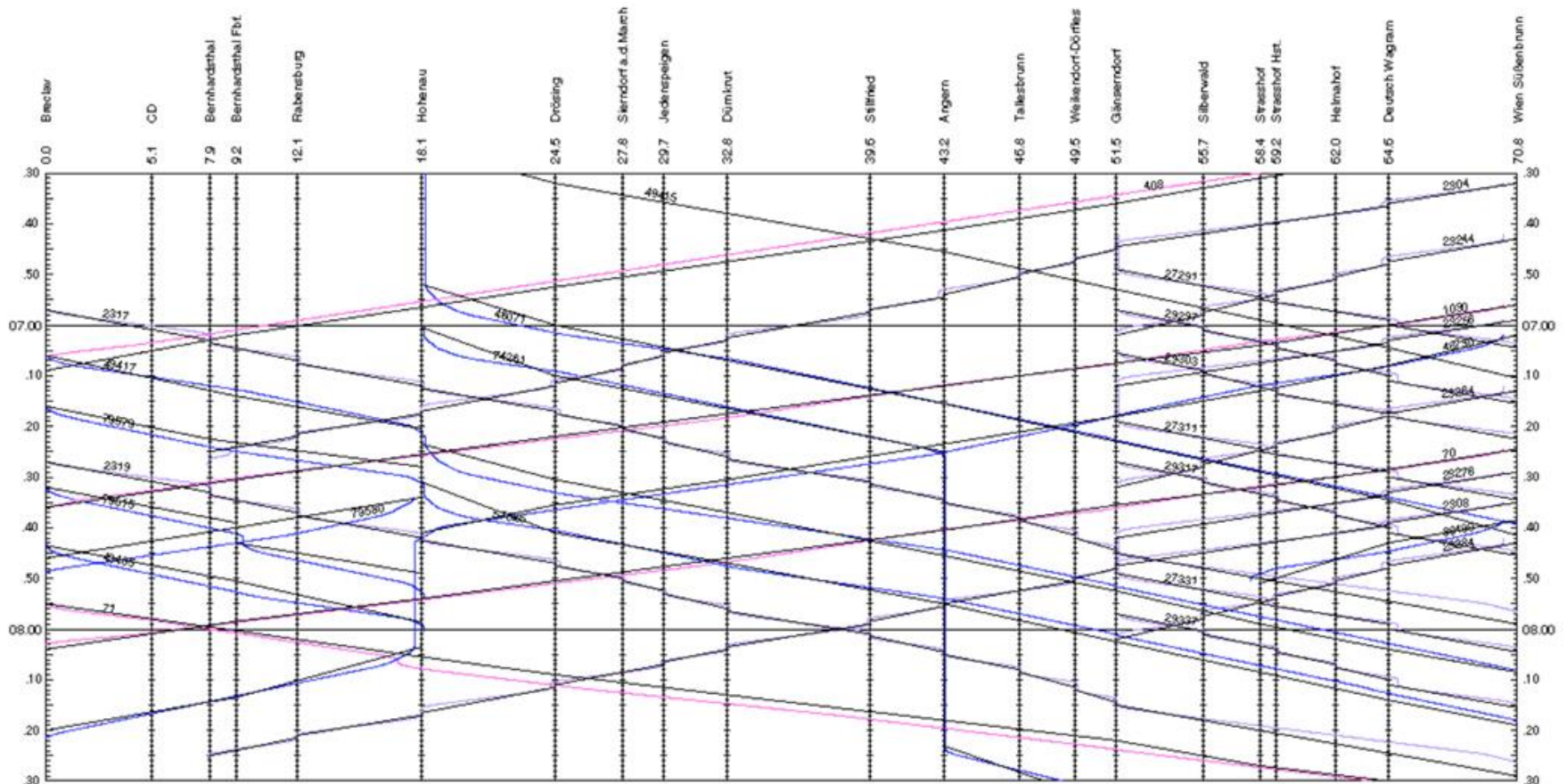
Inclination

ETCS

Simulation of operations

Outputs

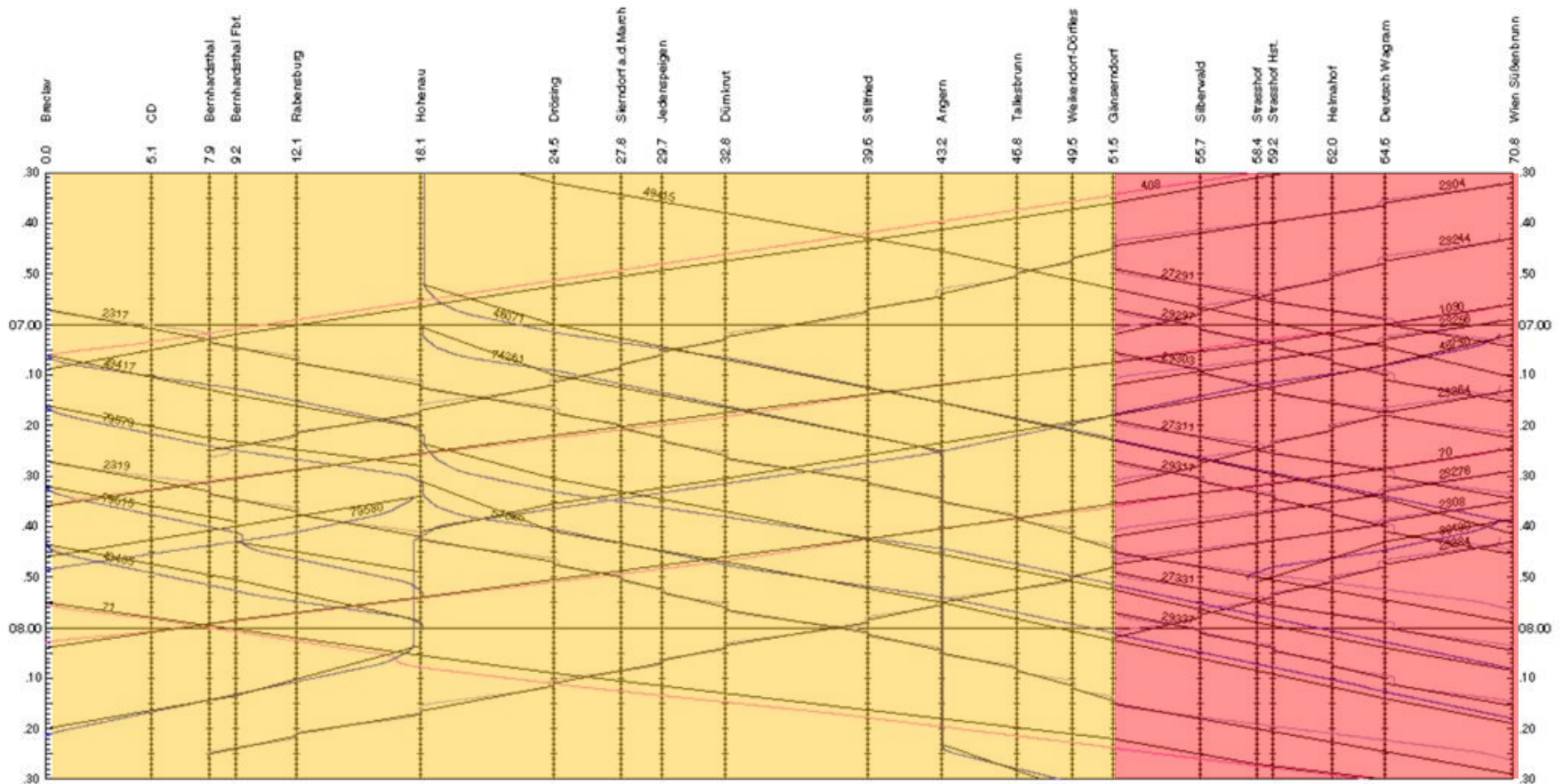
Breclav - Wien Süßenbrunn



Simulation of operations

Outputs

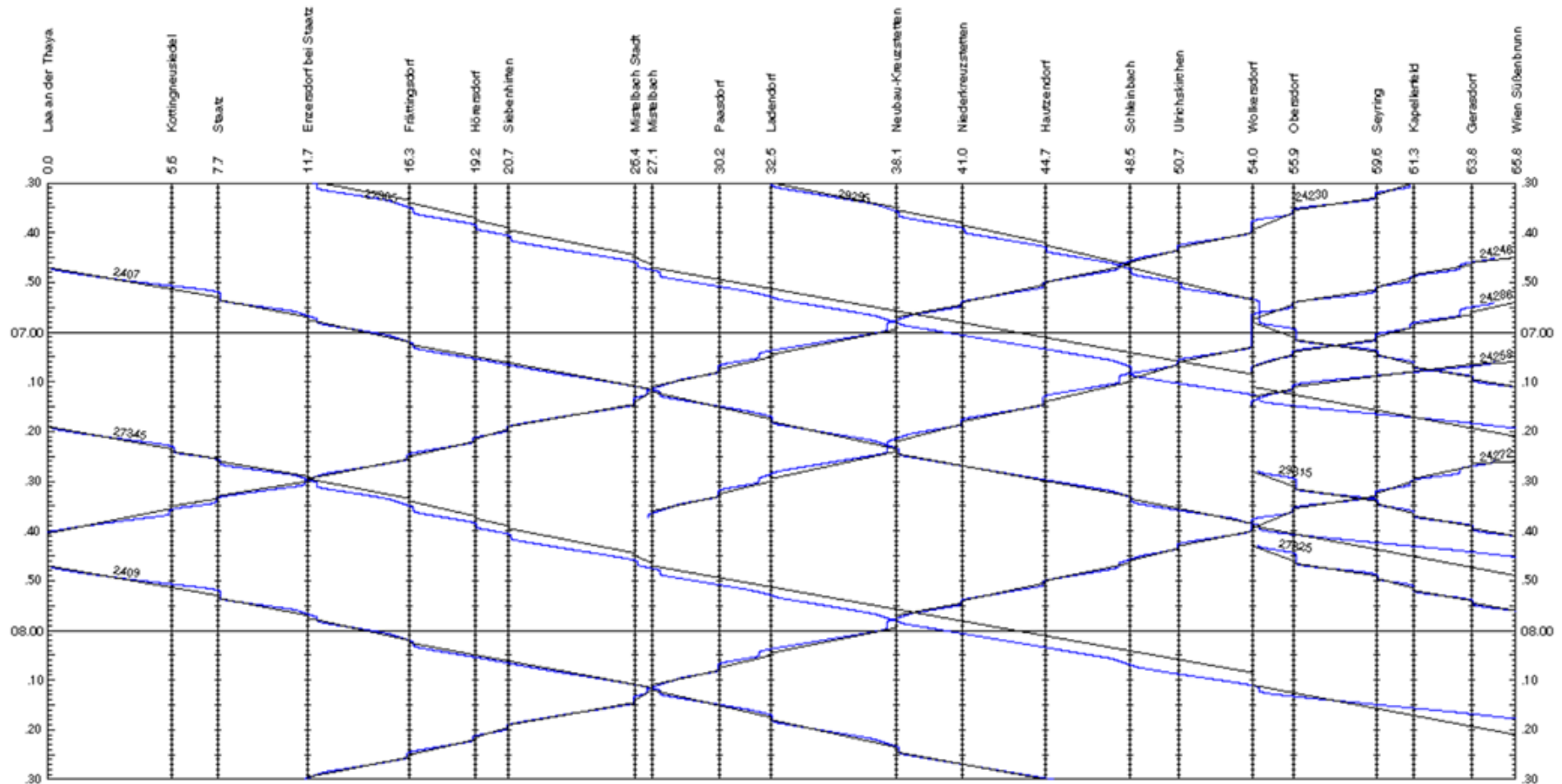
Breclav - Wien Süßenbrunn



Simulation of operations

Outputs

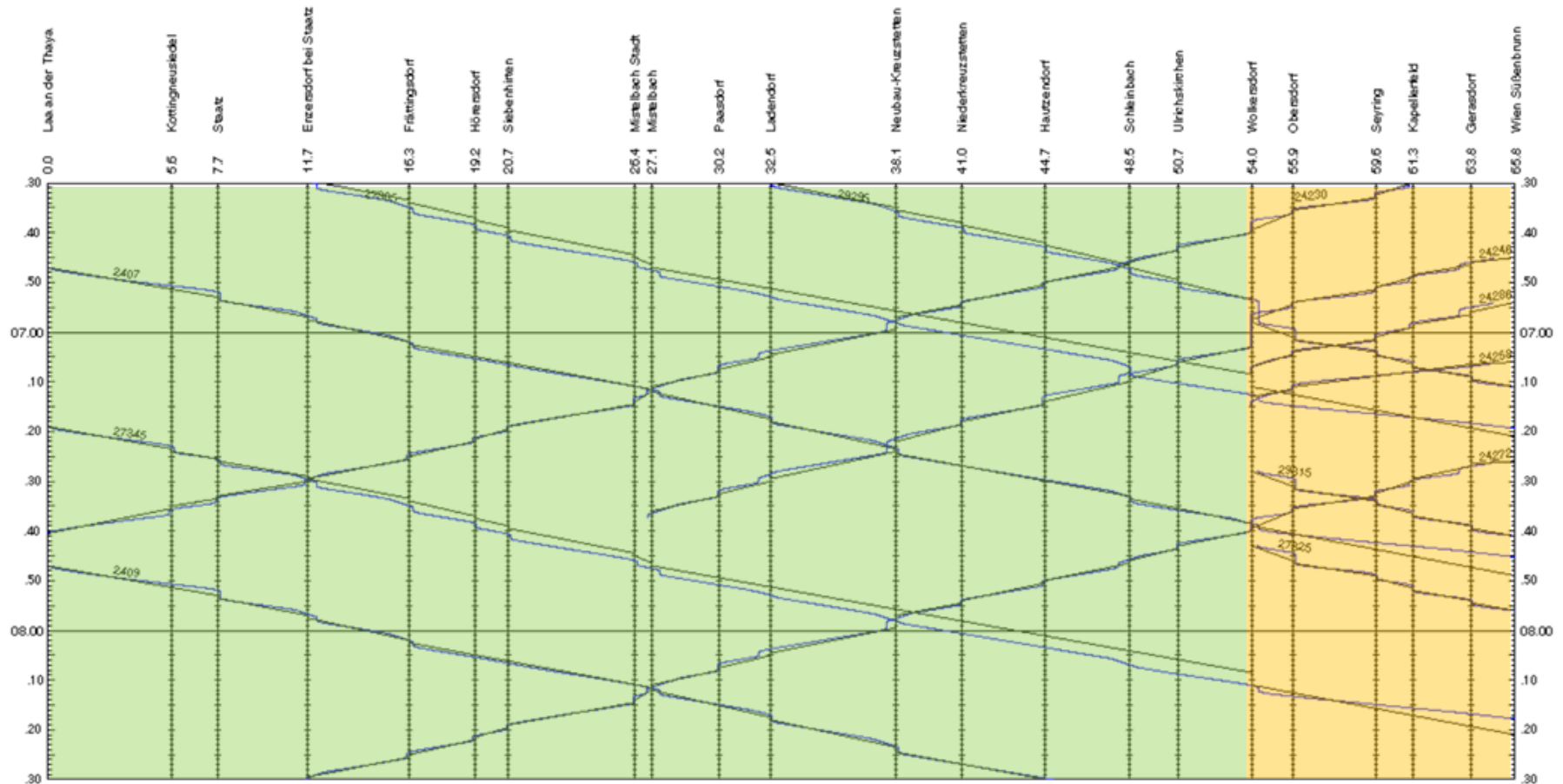
Laa an der Thaya - Wien Süßenbrunn



Simulation of operations

Outputs

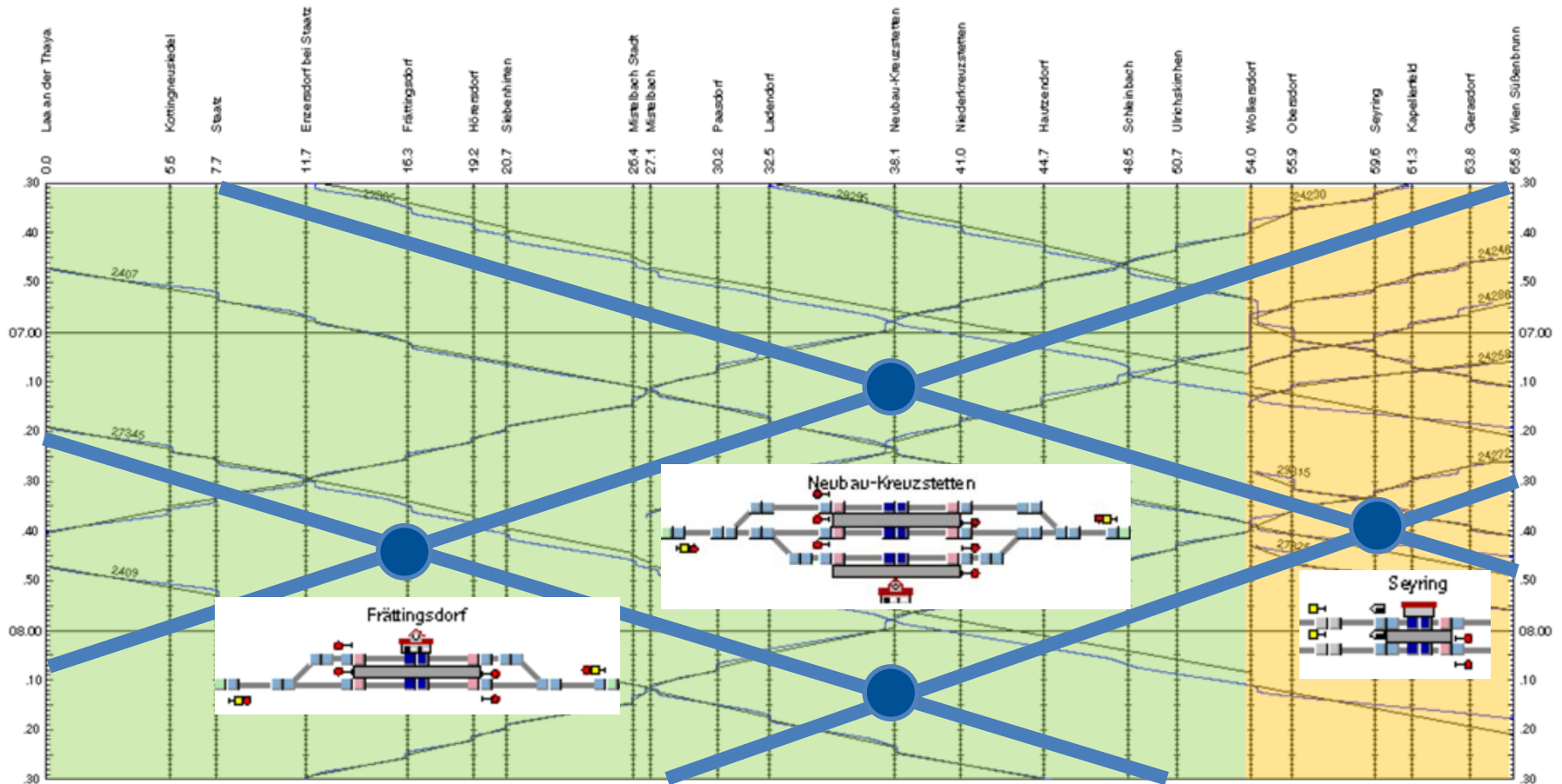
Laa an der Thaya - Wien Süßenbrunn



Simulation of operations

Outputs

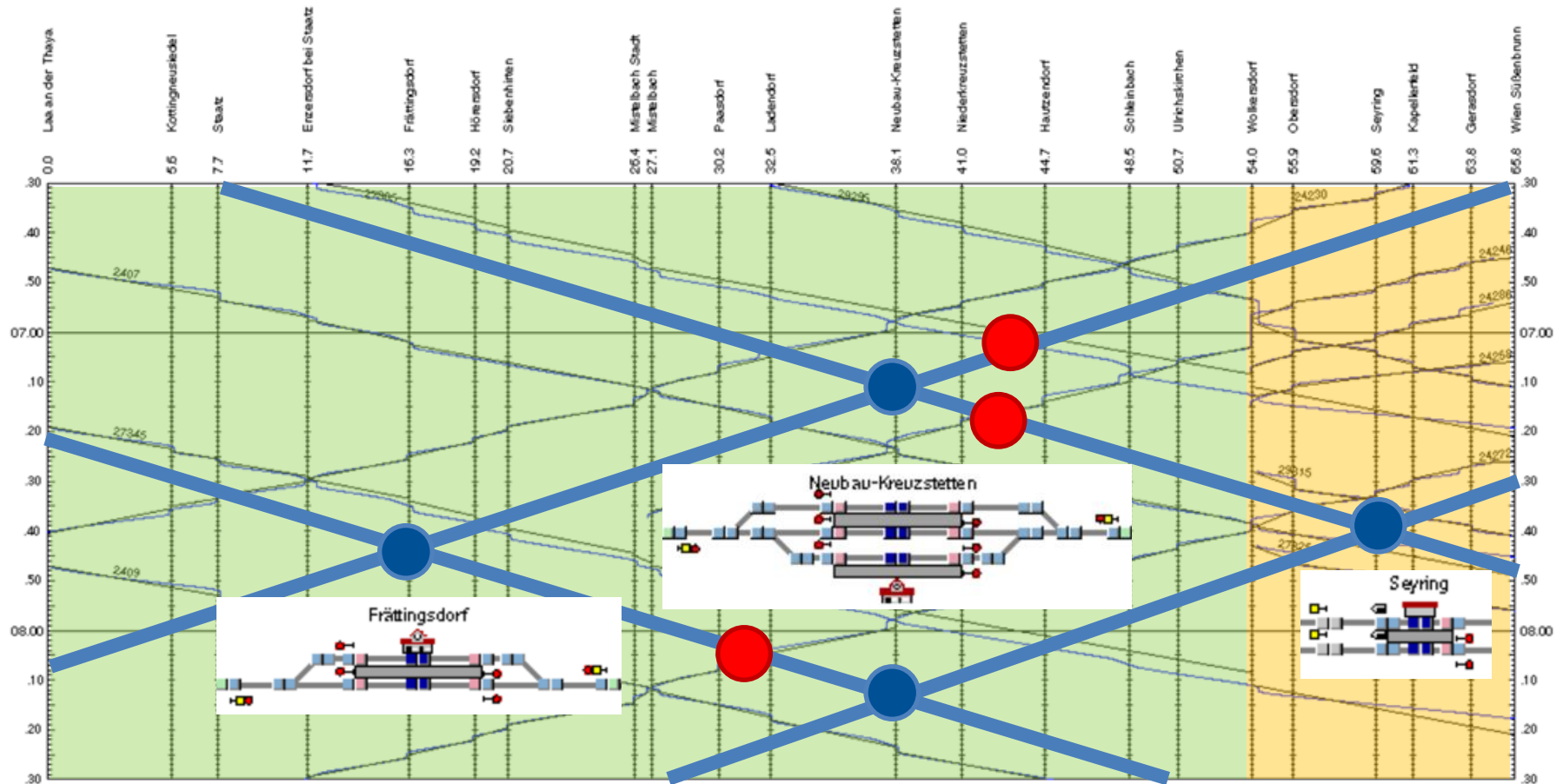
Laa an der Thaya - Wien Süßenbrunn



Simulation of operations

Outputs

Laa an der Thaya - Wien Süßenbrunn



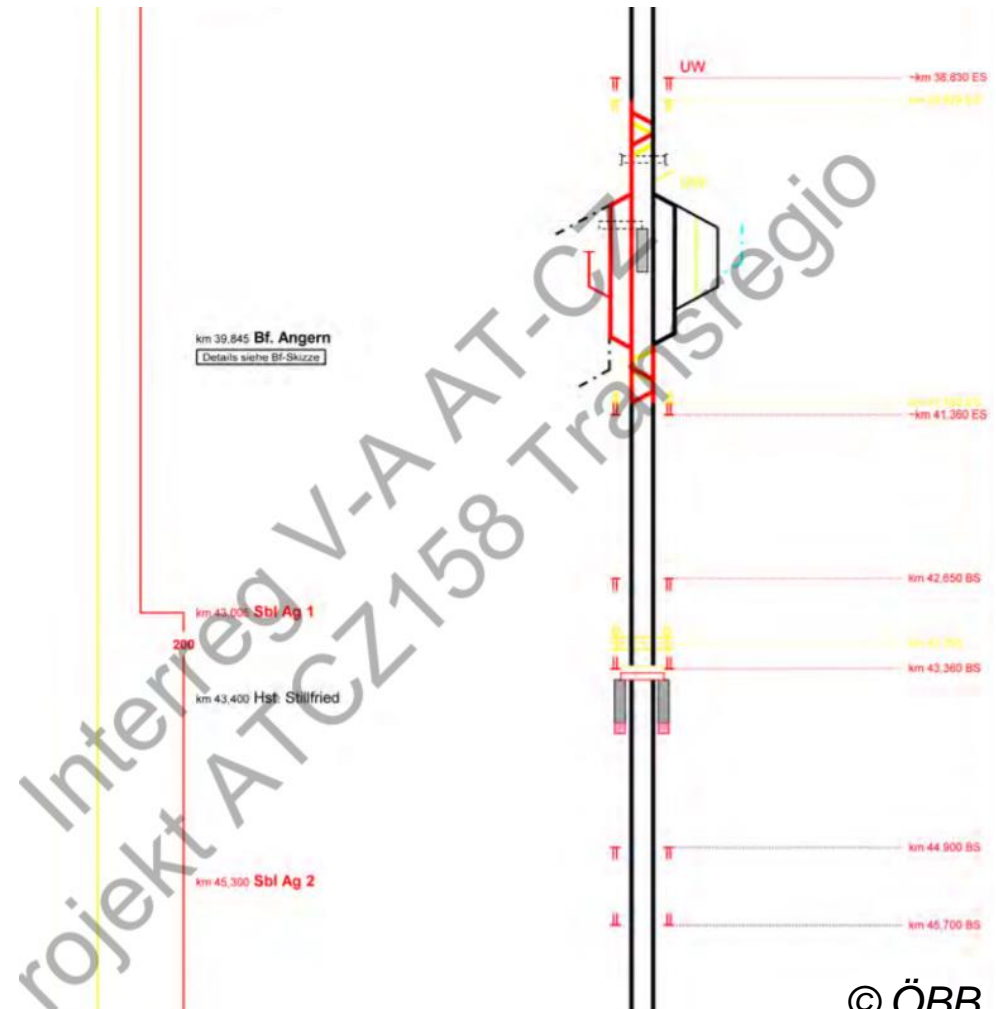
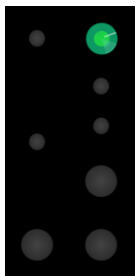
Extension projects

Planned upgrade of the Nordbahn

- **Speed augmentation**
from 120-140 km/h to
160-200 km/h

16

- **Additional signals** to
densify the blocks



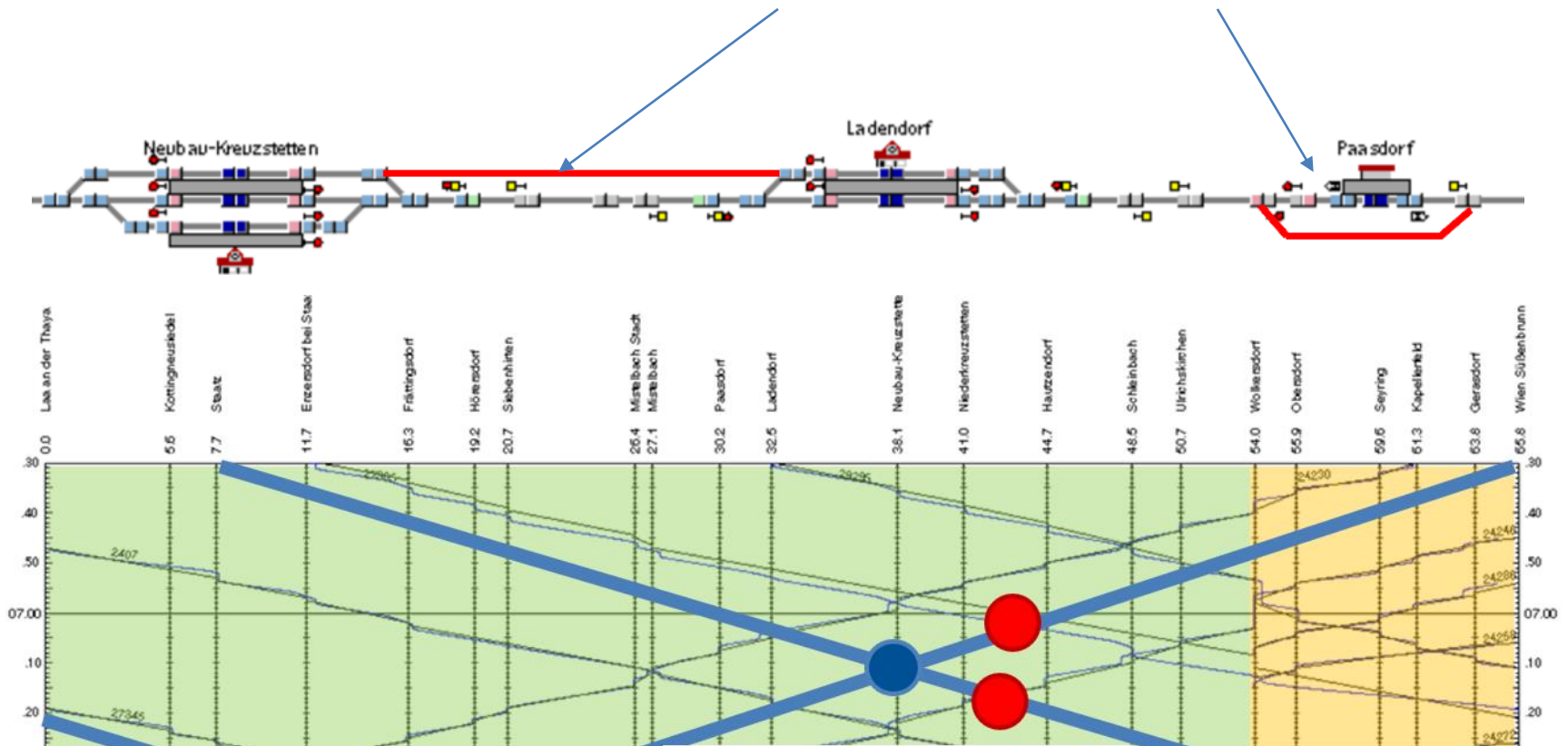
Extension projects

Possible upgrade of the Laaer Ostbahn and Nordwestbahn

Infrastructure improvement:

Double track

Additional track at station



TransRegio Project

Austria – Czech Republic

bahntechnologie
& mobilität

fh
st. pölten



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