



# ETCS in Czechia

# Key Points for Správa železnic



## Safety

▶ Now there is no ATP that actually supervises the driver – speed, stop before the signal at danger

▶ Capacity problem vs. train safety device situation of other states

▶ Replacement of class B (only available on 25 % of the network, will not ensure the necessary safety)



## Interoperability in Czechia and EU

▶ **Single system across the EU network** → equipping vehicles with one on-board that works everywhere, stable and robust system



## Market opening

▶ Emphasis on compatibility and common interface, delivery times, cost-effective solutions

# Rapid Implementation of ETCS is Necessary

## Strategy of ERTMS Implementation in Czechia 2022–2040

25 %



**ETCS  
L2**

**TEN-T lines**

Class B  
decommissioning

L1 Limited Supervision  
for secondary lines with  
lower traffic volumes

75 %



**ETCS  
L1/2**

**Important and  
busy urban,  
suburban lines**

L1 Limited supervision, LEU  
and controllable Eurobalises



**ETCS  
STOP**

**Regional lines  
with low traffic  
intensity**

**ETCS is the only target ATP system for all the Czech railway network**  
(user friendly, sustainable, economically viable)

# ETCS in Czechia – Timeline

2005

**ETCS pilot project** in Czechia (Velim – Poříčany, 22 km)

2011

Evaluation of **ETCS test operation** and verification of its implementation in national conditions

2017

**Completion of the first section of ETCS L2**  
**National Implementation Plan ERTMS – Decision ETCS Only operation 2025**

2020

The NIB recommendation – to implement **ETCS on the whole network**

2020

First conceptual document – basic **technical strategy** and **schedule for ETCS implementation 2022 – 2040**

2021

**Government resolution** – Plan for **safety increase** on the Czech railway

2022/23

Správa železnic is a member **EUG** and **EULYNX** – Full market opening to competition

2025

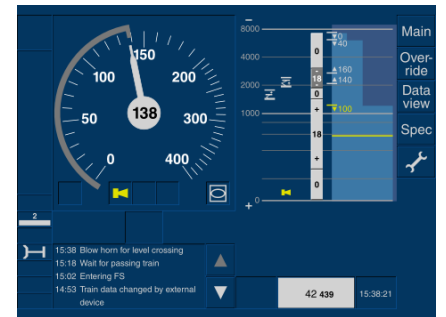
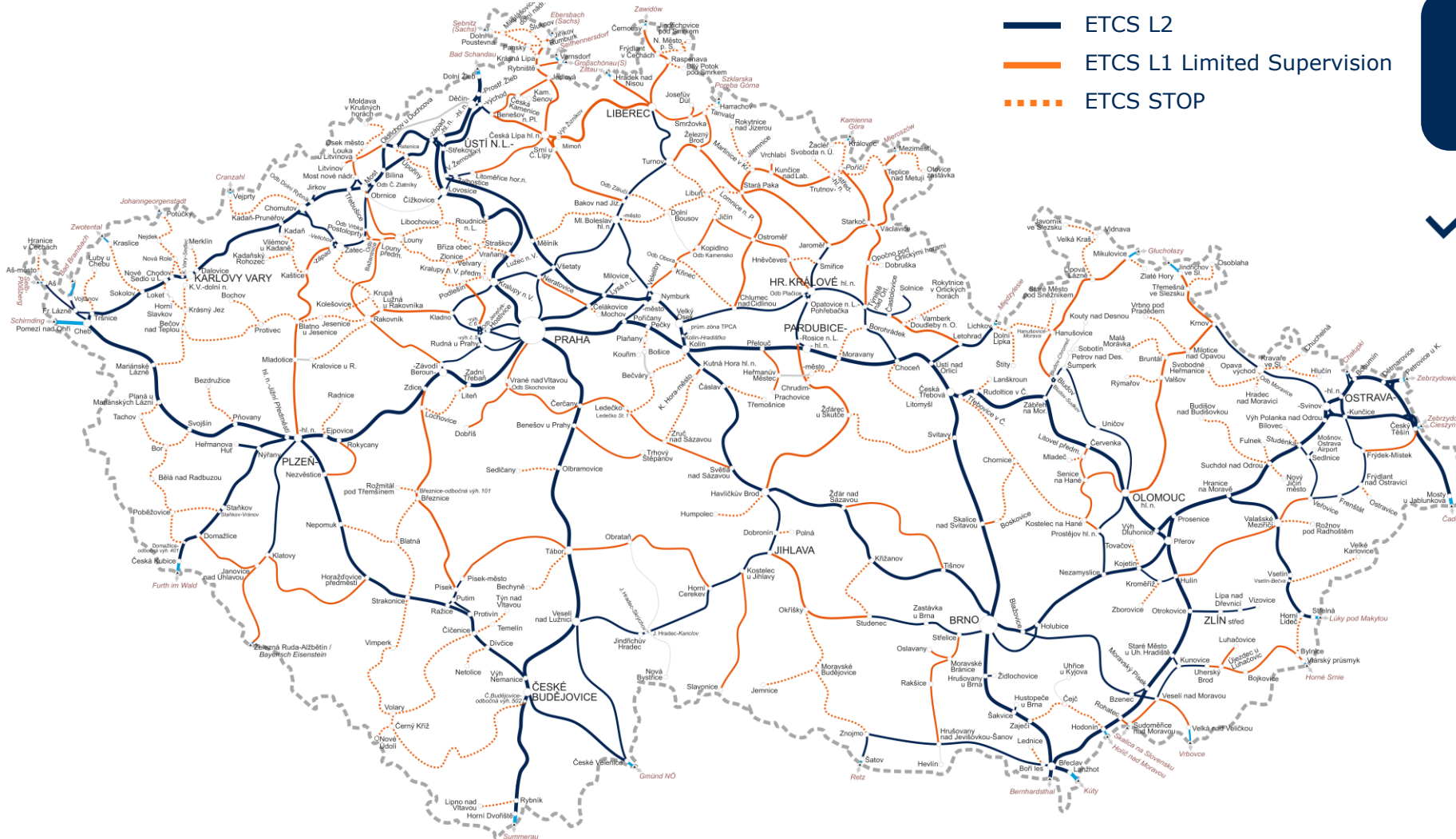
**Start of ETCS only operation on the main corridors**

# Strategy of ETCS Implementation in Czechia 2022–2040

- ETCS L2
- ETCS L1 Limited Supervision
- ETCS STOP

The Government of Czechia and MoT

✓ approved the ETCS plan and technical variants for all lines in Czechia



# Solution for Secondary Lines LEU + controllable Eurobalises



**Rapid solution of ATP implementation necessary**



**Crucial targets and requirements** for Czech regional lines

To **avoid accidents caused by human factor** (driver) → frontal collision of trains

Applicability of the digital and technical solution in a **very short time**

Solution **MUST be compatible with OBU ETCS**

Technically **simplified and economically favorable** solution



Simple interlocking, LEU and Eurobalises



Solution based on **ETCS L1 (Limited Supervision)**

**ETCS STOP** – detection of undesirable passing Signal at Danger emergency brake + maximum speed supervision – station/open line

**ETCS L1 Limited Supervision** – solution working with braking curves

# Conclusions

- ✓ **Rapid safety increase by ATP application needed**
- ✓ **ETCS is a target, class B shall not be installed any more**
  - Solution for Správa železnic – Czech Government authorized the concept *ETCS L2 – ETCS L1 Limited Supervision – ETCS STOP*
- ✓ **Necessary conditions:**



## National level

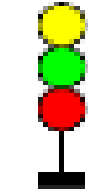
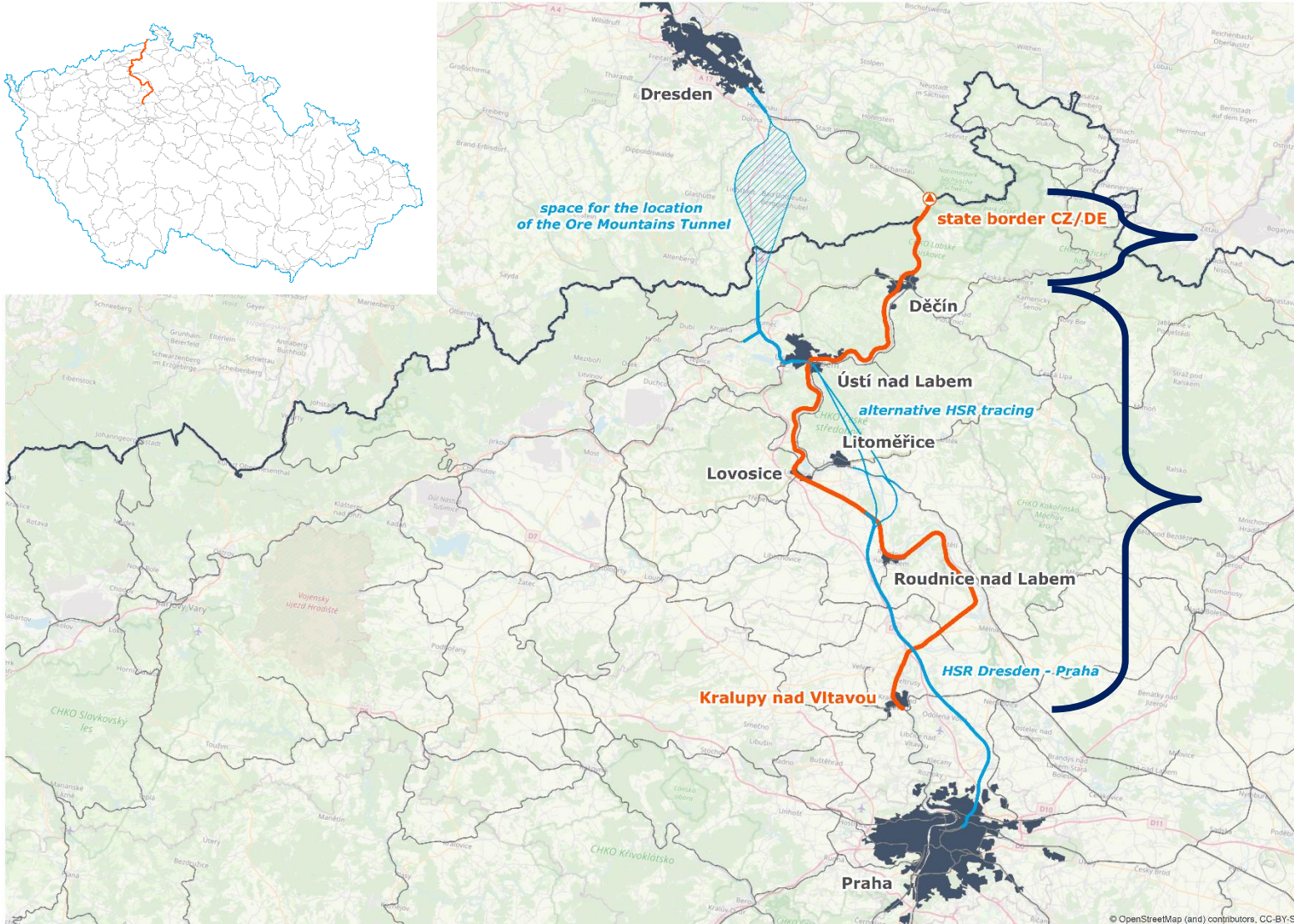
- Strengthening of capacities compared to the current state
- ETCS L2 only with interlocking optimisation (pilot project)
- Find a suitable technical solution of LEU for ETCS L1 LS/ETCS STOP
- Solution for open interface – based on EULYNX



## European level

- Level 1 shall remain in the CCS TSI - crucial for making last mile interoperable
- Competition among ETCS Trackside suppliers shall increase
- Stability needed – TSI shall be stable and shall ensure backwards compatibility of all solution

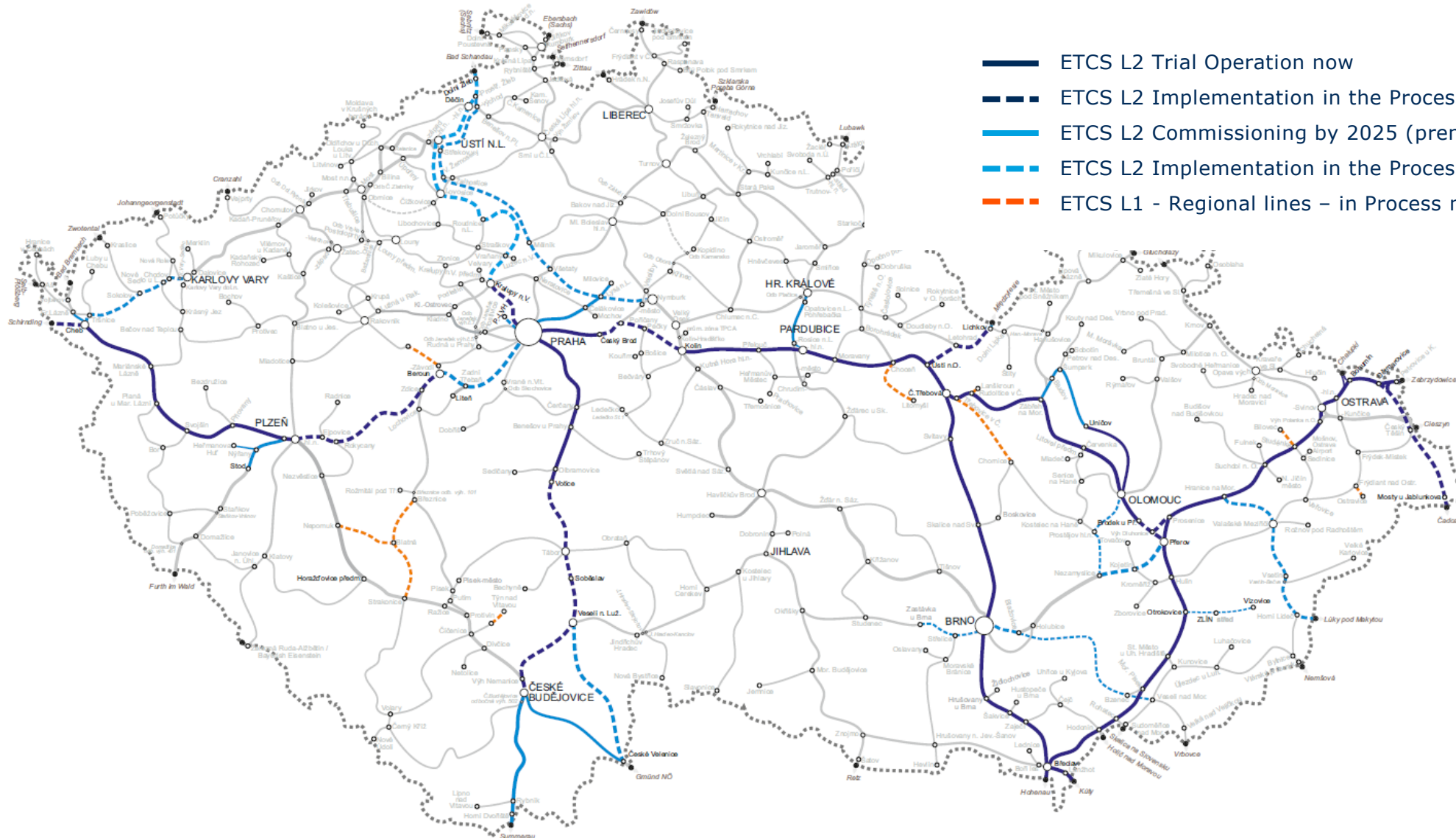
# ETCS Kralupy n. V. – Děčín – CZ/DE border



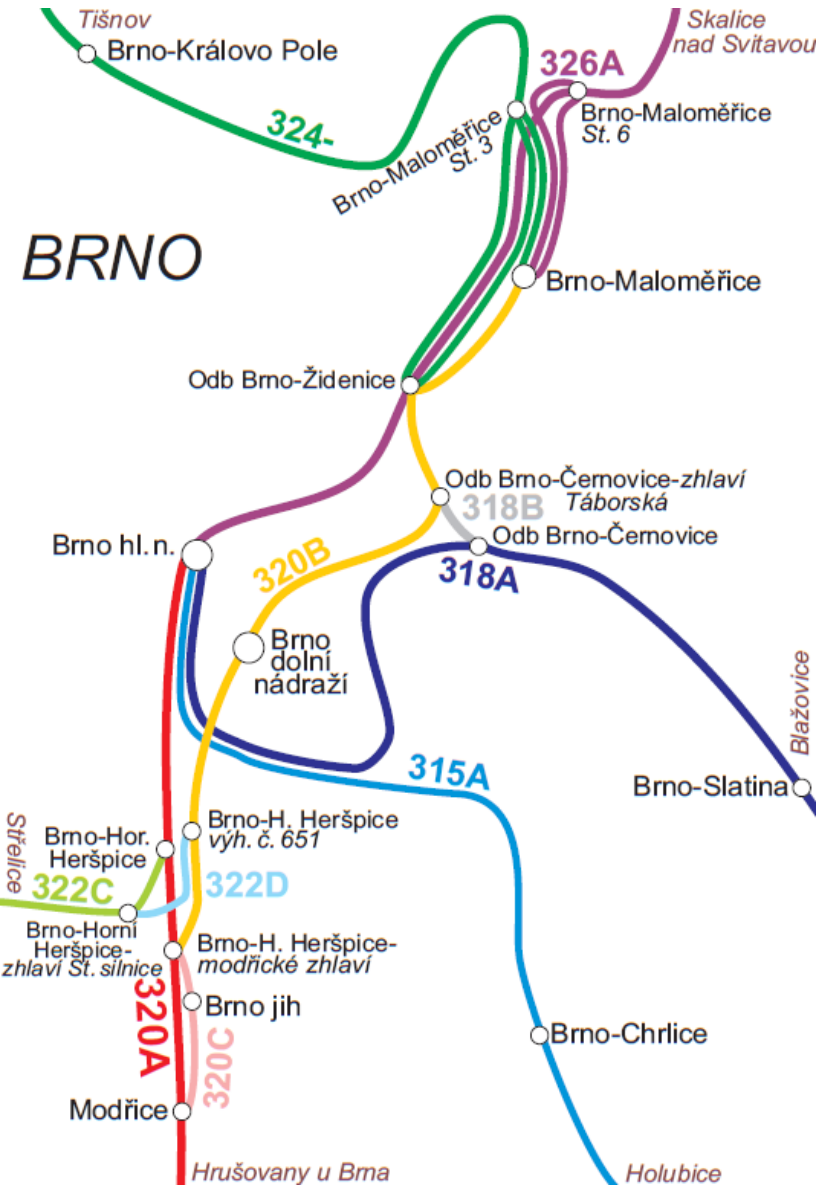
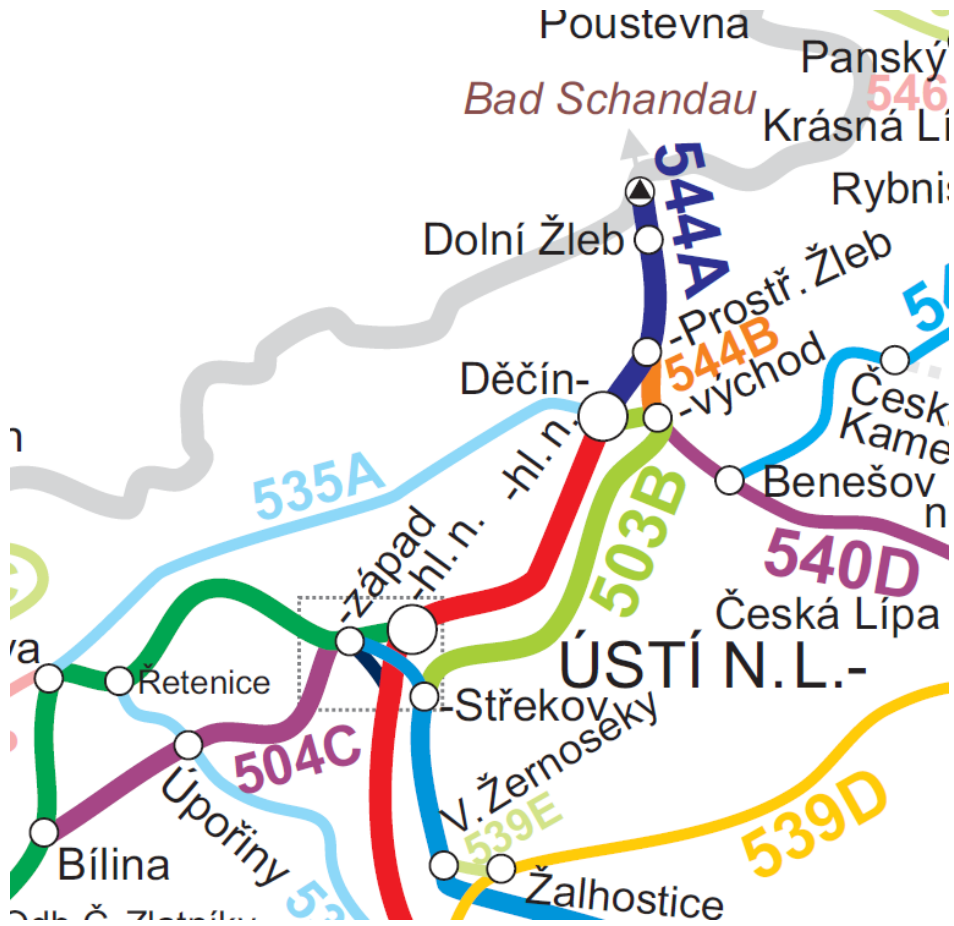


# ETCS Trackside – Current State and Horizon 2025

- ETCS L2 Trial Operation now
- - - ETCS L2 Implementation in the Process now
- ETCS L2 Commissioning by 2025 (premised)
- - - ETCS L2 Implementation in the Process by 2025 (premised)
- - - ETCS L1 - Regional lines – in Process now



# ETCS Trackside



# ETCS Trackside

