

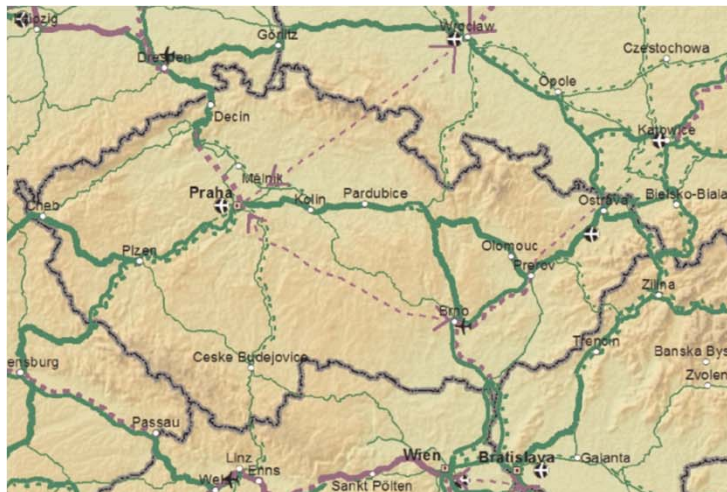


High-speed Rail in the Czech Republic

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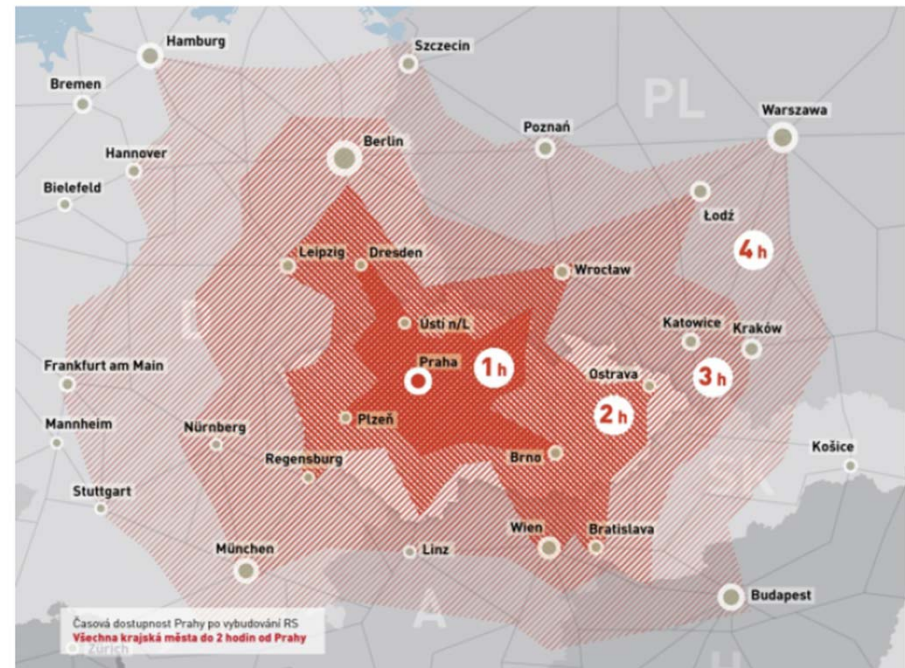
High-speed lines and trans-European transport network

- **Extent of the high-speed network is defined by Regulation of the European Parliament and Council (EU) No. 1315/2013** of 11 December 2013 on Union guidelines for the development of trans-European transport network.
- Individual Member States shall **complete the global network by 31 December 2050** and the **core network by 31 December 2030**.
- The newly built **high-speed lines** shall have the **design speed of 250 km/h or higher**.
- **The new TEN-T network must be equipped with modern technologies (ERTMS) and must meet technical requirements** (minimum train speed and length).



Concept of HSCs in the Czech Republic

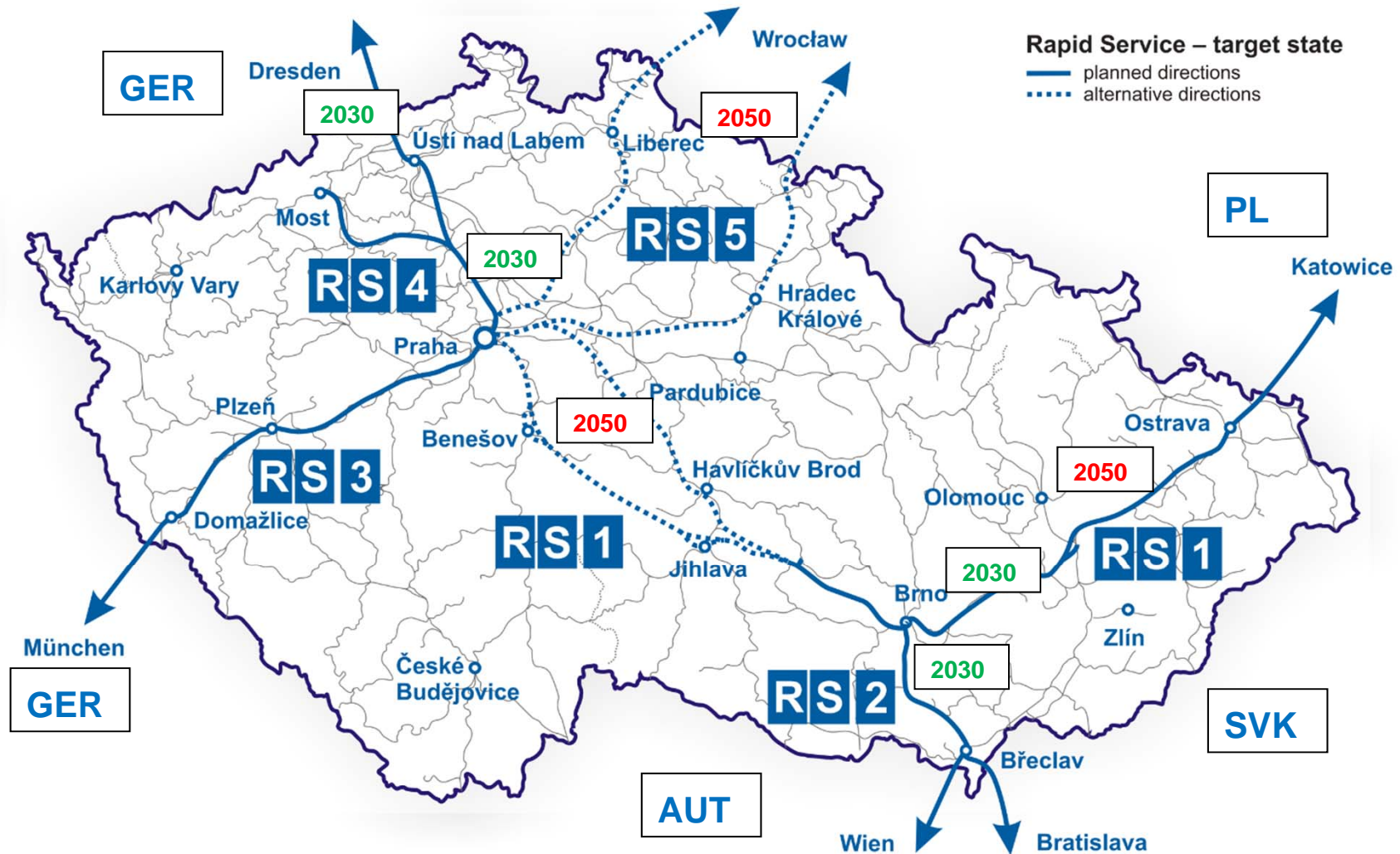
- The need to strengthen our competitiveness and ensure quality transport connections for citizens of the Czech Republic led the **Ministry of Transport to creation of concept of High-speed connections “RS”**
- High-speed connections consist of **new lines and modernizations of existing lines**
- the aim is to create an interconnected system that connects the biggest cities of the Czech Republic
- unlike the original project of HSR, which was designed primarily for international connections, RS shall enable **maximum utilization for intranational trains, including interregional connections**
- the objective is **to connect Prague with all major regional centres of the Czech Republic and make them reachable within two hours**
- the lines shall be also open to the existing types of **express trains** (e.g. Railjet and Pendolino).



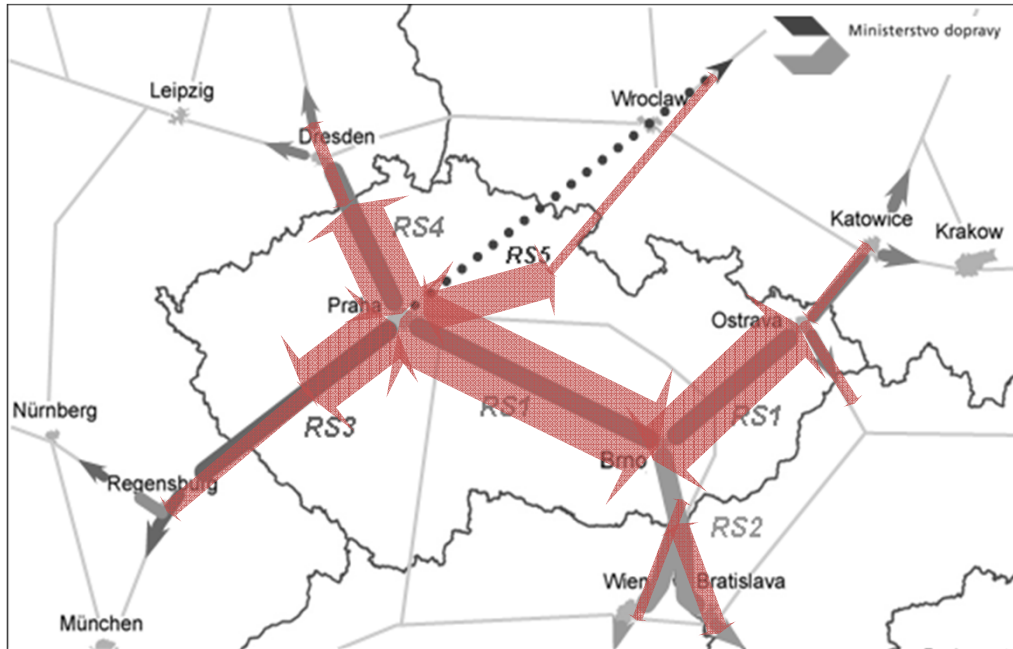
Future Railway Travelling Time from Prague



Possible extent of RS network in the CR



Transport Demand on RS lines



Route	Route location	Direction	Approximate number of passengers/24 h
RS1	Czech Republic	Prague – Brno	60 thous.
	Czech Republic	Prague – Ostrava	48 thous.
	transnational	CR – Katowice / Žilina	9 thous.
RS2	transnational	CR – Wien	9 thous.
	transnational	CR - Bratislava – Budapest	16 thous.
RS3	Czech Republic	Prague – Pilsen	48 thous.
	transnational	CR – München / Nürnberg	14 thous.
RS4	Czech Republic	Prague – Ústí nad Labem	46 thous.
	transnational	CR – Dresden – Berlin	10 thous.
RS5	Czech Republic	Prague – Hradec Králové	29 thous.
	transnational	CR – Wrocław – Warszawa	7 thous.



Technical and operational study of HSR

- Addresses the issue of high-speed rail (HSR) from a complex point of view
- **Analyses** the current HSR operation in Europe and **proposes technical solutions for HSR in the Czech Republic**
- The study addresses the impact of new technical requirements of HSR design on the existing **legislation**. It also sets out demands for new CSN standards, RIA regulations, or other standards (or modifications of the existing ones) that would deal with the issues that are not adequately addressed by the existing national or EU legislation on railway interoperability.
- **According to conditions set out in the study, design line speeds of new network sections shall be higher than 200 km/h**
- **The study shall be completed in May 2017**



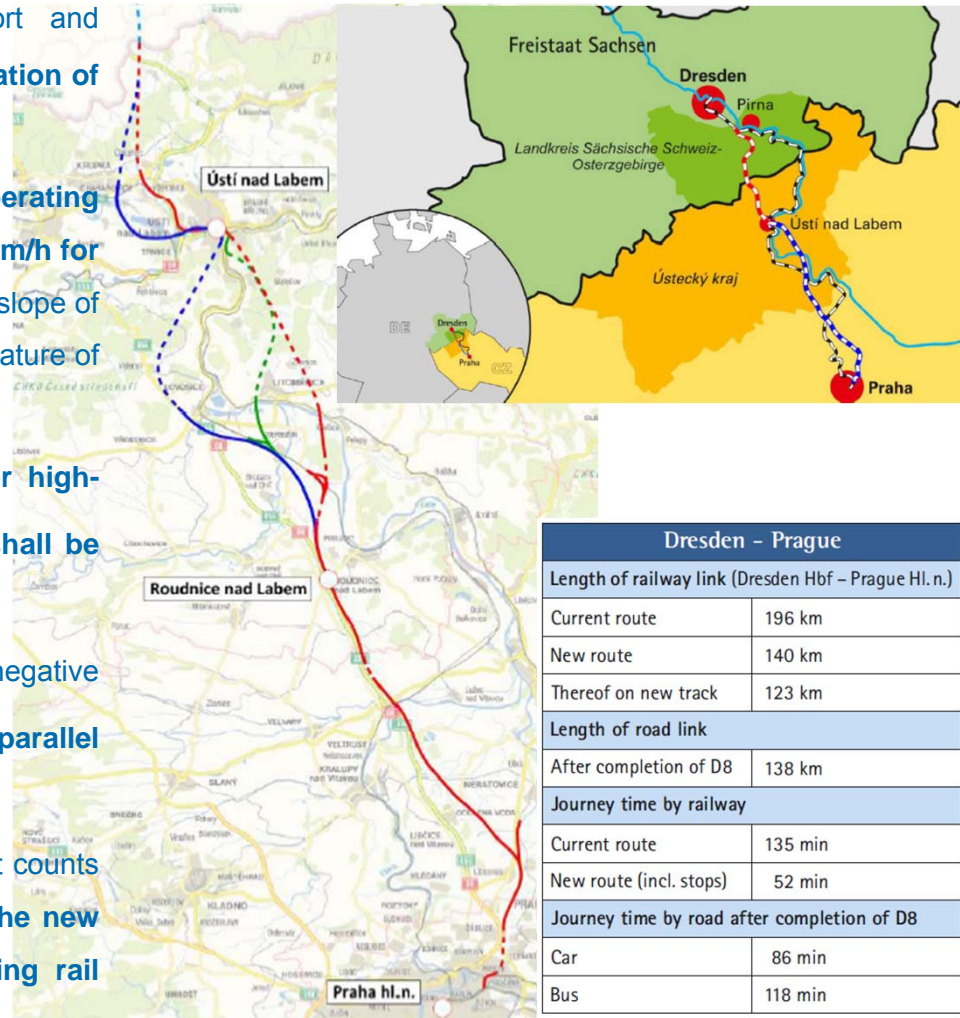
High-speed line Prague – Brno

- From the national perspective, the most important new construction is the **section Prague – Brno. It is a core section not only for the Czech Republic, but also for the entire Central Europe**
- Its construction will significantly contribute to improvement of long-distance relations in both domestic and international rail transport
- Continuation of works on High-speed connections requires **spatial stabilization of individual line sections**
- **The track's design speed shall be between 250 km/h and 350 km/h**
- In the first stage of operation, the maximum design speed will probably not be used and the operating speed will be lower (200-230 km/h), particularly with regard to capabilities of train sets used



New railway connection Prague – Dresden

- The RIA cooperates with the Ministry of Transport and representatives of the Free State of Saxony on preparation of cross-border connection Ústí nad Labem – Dresden
- The cross-border section shall have the maximum operating speed of 120 km/h for freight transport and up to 230 km/h for passenger trains. The maximum permissible longitudinal slope of the track shall be 12.5 ‰, which corresponds to the dual nature of track operation
- The track in the direction of Prague is designed for high-speed passenger trains only. The operating speed shall be up to 350 km/h
- In order to limit landscape fragmentation and other negative impacts on the environment, the route partly leads in parallel with the D8 motorway
- In order to improve regional transport services, the project counts with the possibility of building transport terminals on the new line and connection of the new line with the existing rail network



New railway connection Prague – Dresden

	Track section Dresden – Ústí nad Labem	Track section Ústí nad Labem – Prague
Length of railway		
Current route	82 km	114 km
New route	56 km	84 km
Length of new track	43 km	80 km
Length on German territory	22.5 km	-
Length on Czech territory	20.5 km	-
Journey time by railway		
Current route	65 min	70 min
New route (incl. 2 min stop)	25 min	27 min
Type of Traffic		
New route	Mixed traffic: passenger and freight	Passenger high speed traffic
Design parameters		
Maximum design speed	up to 230 km/h	up to 350 km/h
Freight traffic speed	120 km/h	-
Number of line tracks	2	2
Electrification	15 kV 16,7 Hz / 25 kV 50 Hz	25 kV 50 Hz (3kV ss)
Signalling system	ETCS	ETCS
Communication system	GSM-R	GSM-R



Modernisation of the line Brno – Přerov

- The first approved project of the High-speed connections concept
- **Modernization** of the entire line to the speed of **200 km/h**
- Significant **improvement of accessibility** of the Ostrava region
- **Shortening of travel time** from Brno to Ostrava from 154 minutes to **77 minutes**
- Expected increase in the number of passengers from 7,000 to 17,250 persons a day in the most used section
- Substantial increase in **track capacity**, elimination of fly-over crossings, and reduction of **noise pollution**
- total investment costs of CZK 35 billion (EUR 1.3 billion)
- expected start of operation in **2025**



European Cooperation

- Individual RS routes are being prepared in cooperation with **DB Netz AG** and **ÖBB Infrastruktur AG**
- Cooperation was also established with representatives of **High Speed Two Limited**
- The “potentially needed” projects listed in **Bundesverkehrswegeplan 2030** also include the **modernised railway connection in the direction of Munich and Dresden.**

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Správa železniční dopravní cesty



Ministerstvo dopravy

Thank you for your attention!

