

High Speed Train Line

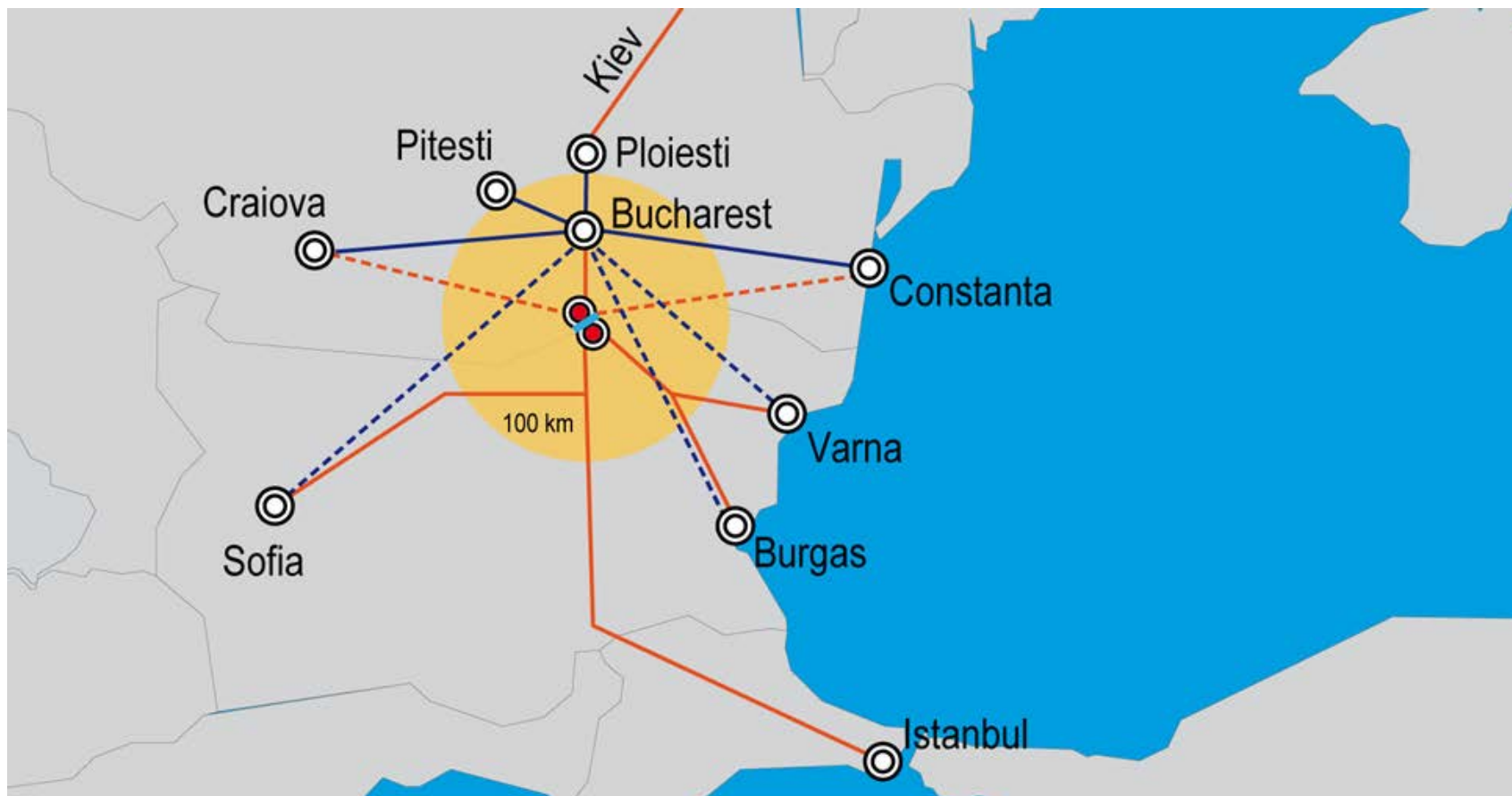
[KIEV]-BUCHAREST-RUSE-[ISTANBUL]


Timisoara, September 13th 2012

TRANS EUROPEAN CONNECTIONS

- ▶ **Only 10-12 cities with 2 Mio or more inhabitants all over Europe.**
High-Speed lines should primarily connect these mega settlements.
- ▶ **Target destinations should have at least 300,000 inhabitants.**
In (South-East) Europe sea-port cities such as Constanta, Varna or Thessaloniki fulfil these requirements.
- ▶ **High-Speed-Trains should stop only at big cities or junction points.**
But at important exchange points more than one stop could be required.
- ▶ **Stations should be at City Centres, alignment should pass them by.**
- ▶ **Interoperability should be offered with multi-modal nodes.**

REGIONAL CONNECTIONS



 Euroregion Ruse-Giurgiu

HIGH-SPEED-TRAIN EFFECTS

- ▶ Based on 200-250 km/h peak an average speed of 150 km/h including stops and slowing down sections can be assumed.
- ▶ 150 km/h average speed means no more reason to use air-transport for distances of less than 400 or even 600 km.
- ▶ No road transport – on what distance ever – is able to compete with such a High-Speed-Train.
- ▶ Maximum speed of more than 200-250 km/h creates enormous technical problems but offers no additional advantage.
- ▶ Conventional rails and traces can be used with only minor adaptations and normal trains are able to use high-speed rails.

BUCHAREST-ISTANBUL STOPS



BUCHAREST-ISTANBUL FACTS

- ▶ Full distance of around 700 km from Galati/Bucharest to Istanbul.
- ▶ Out of them 500 km will go over plains, 150 km over Balkan Mountains, 50 km through urban areas.
- ▶ Tunnels and underground sections have maximum length of 20 km.
- ▶ These more difficult sectors include a new Danube bridge and some smaller bridges or viaducts.
- ▶ 11-12 stops or stations have to be adapted or newly built.
- ▶ Train frequency of 2 hours between 06:00 and 22:00 asks for availability of 10 full trains.
- ▶ For train operations (on board, at stations, with security), maintenance, etc. around 1000 employees will be required.

BUCHAREST-ISTANBUL FIGURES

- ▶ Overall investments of € 3.0-3.5 billion can be estimated.
- ▶ Aside railway construction this budget includes costs of a new Danube bridge, adaptation/construction of specific station buildings and maintenance facilities, purchase of specific rolling stock.
- ▶ A specific platform company for this project needs to structure funding by activating and combining EU subsidies, (development) bank loans and private equity.
- ▶ Coverage of at least operation costs out of income from selling tickets can be realistically estimated.
- ▶ Leasing of specific railways for other use (commodity transport during the night, etc.) can create additional income.



SPEED UP!