UIRR
INTERNATIONAL UNION FOR ROAD-RAIL COMBINED TRANSPORT

UNECE WP.24

Sustainable Transport Connectivity between Europe and Asia

"OPERATIONAL CONNECTIVITY FOR INTEGRATED INTERMODAL TRANSPORT AND LOGISTICS "

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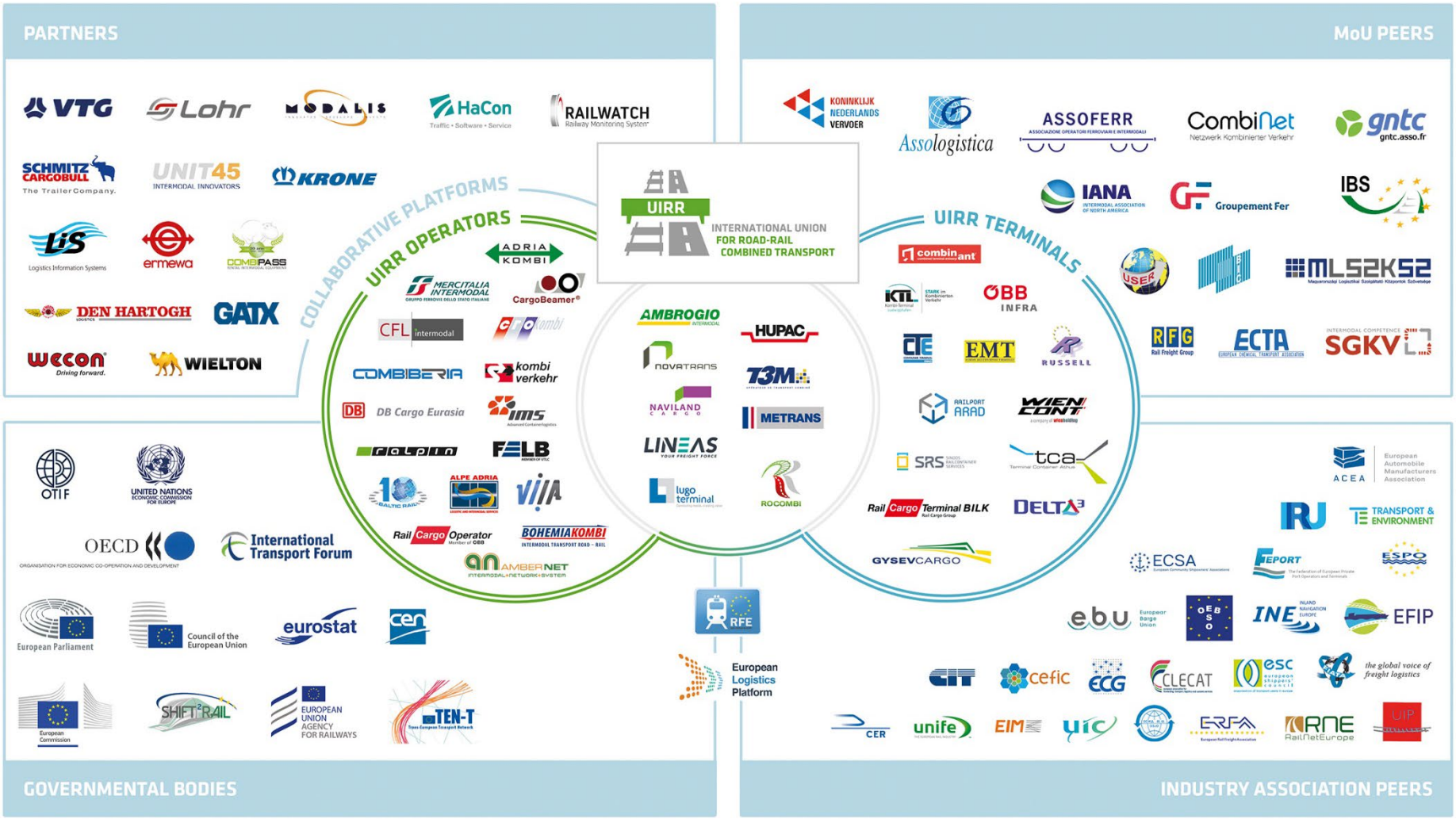
President

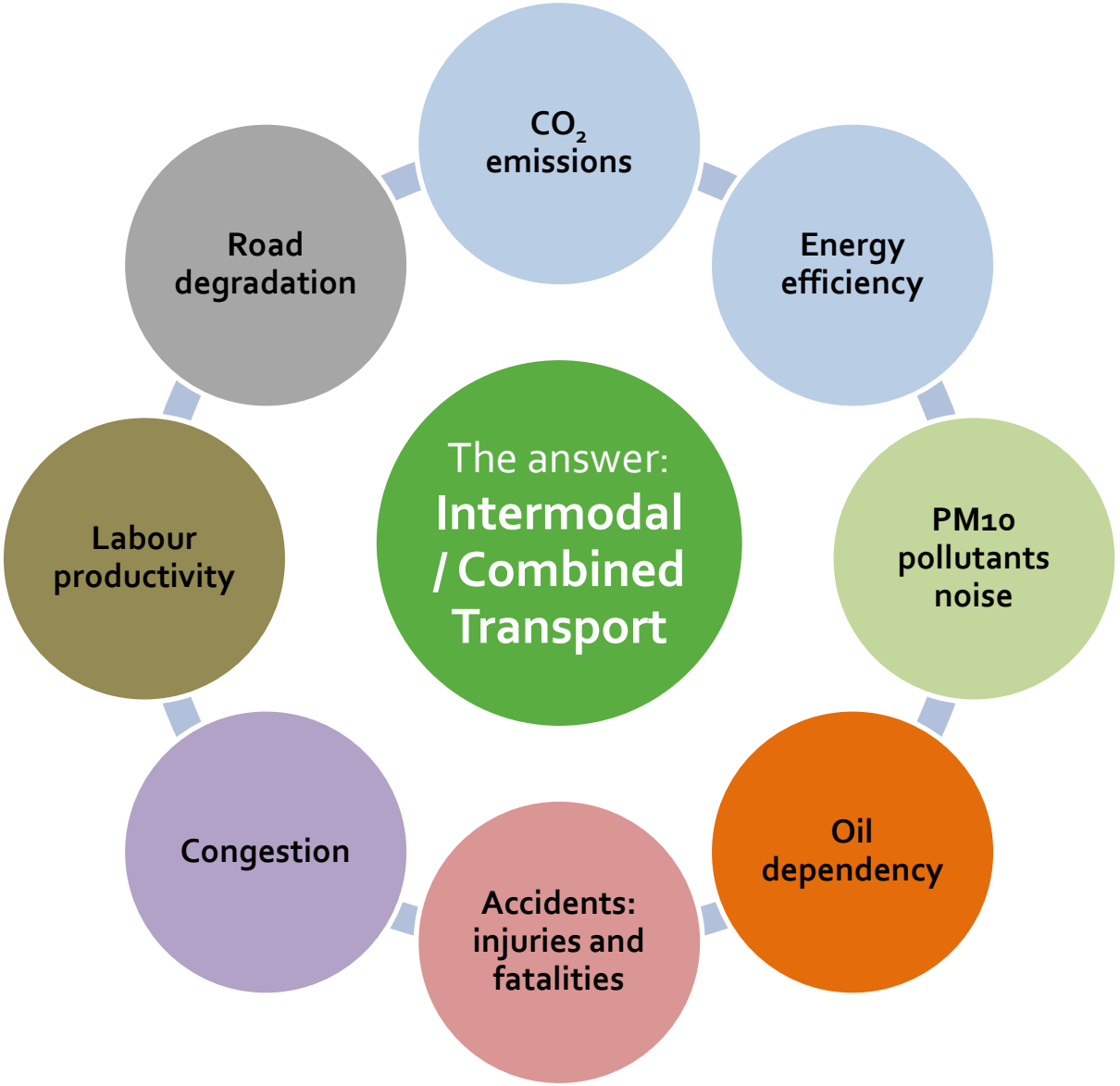
GENÈVE 30 October 2019

UIRR: the Industry Association of Combined Transport

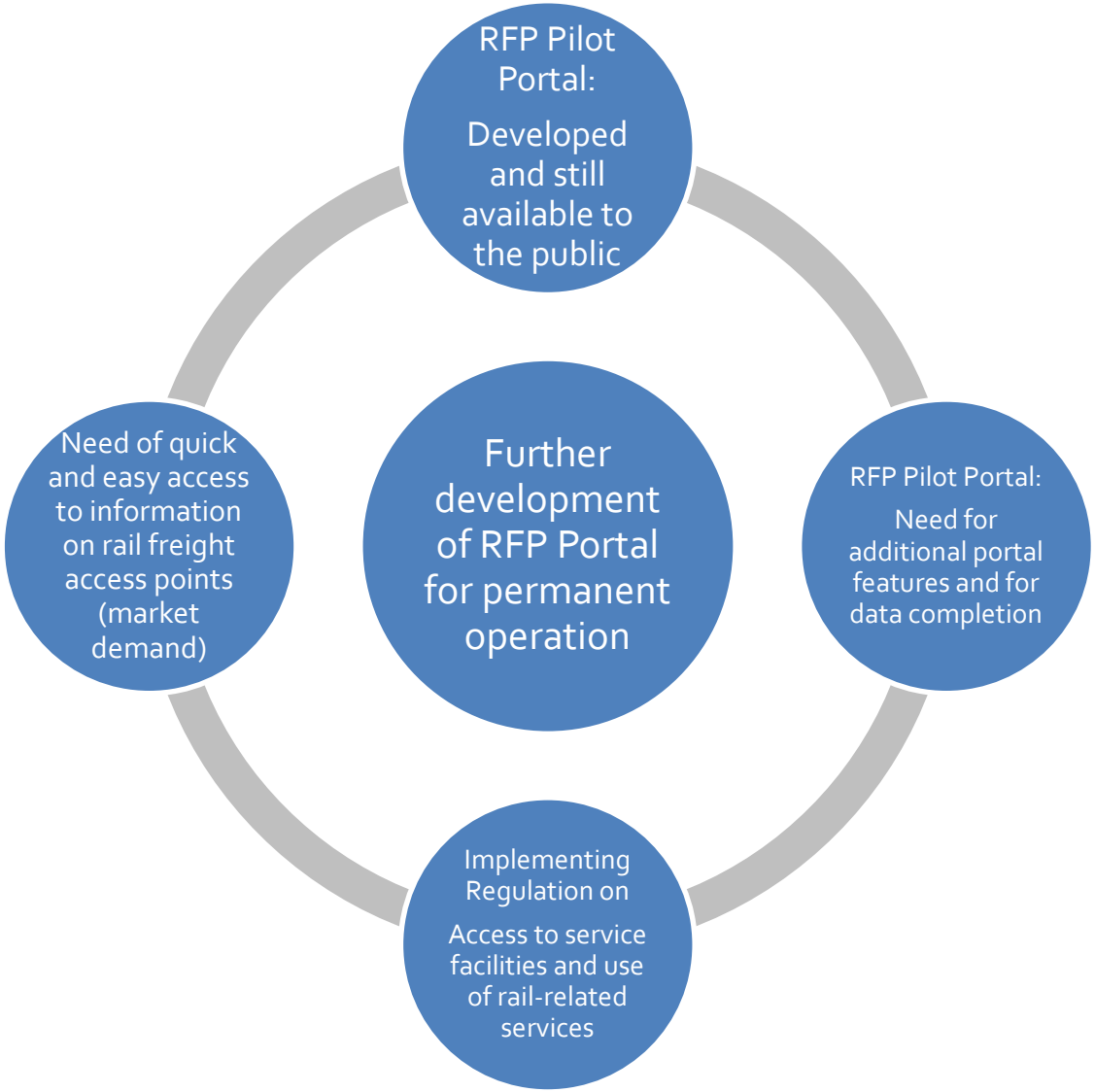


The challenges of longer distance freight transport

- **Climate**: CO2 and energy efficiency
- **Environment**: air and noise pollution, vibration
- **Public security**: oil dependency
- **Safety**: accident injuries/fatalities and material losses
- **The economy**: GDP loss due to congestion
- **Employment**: labour productivity
- **Infrastructure**: road degradation and spatial constraints



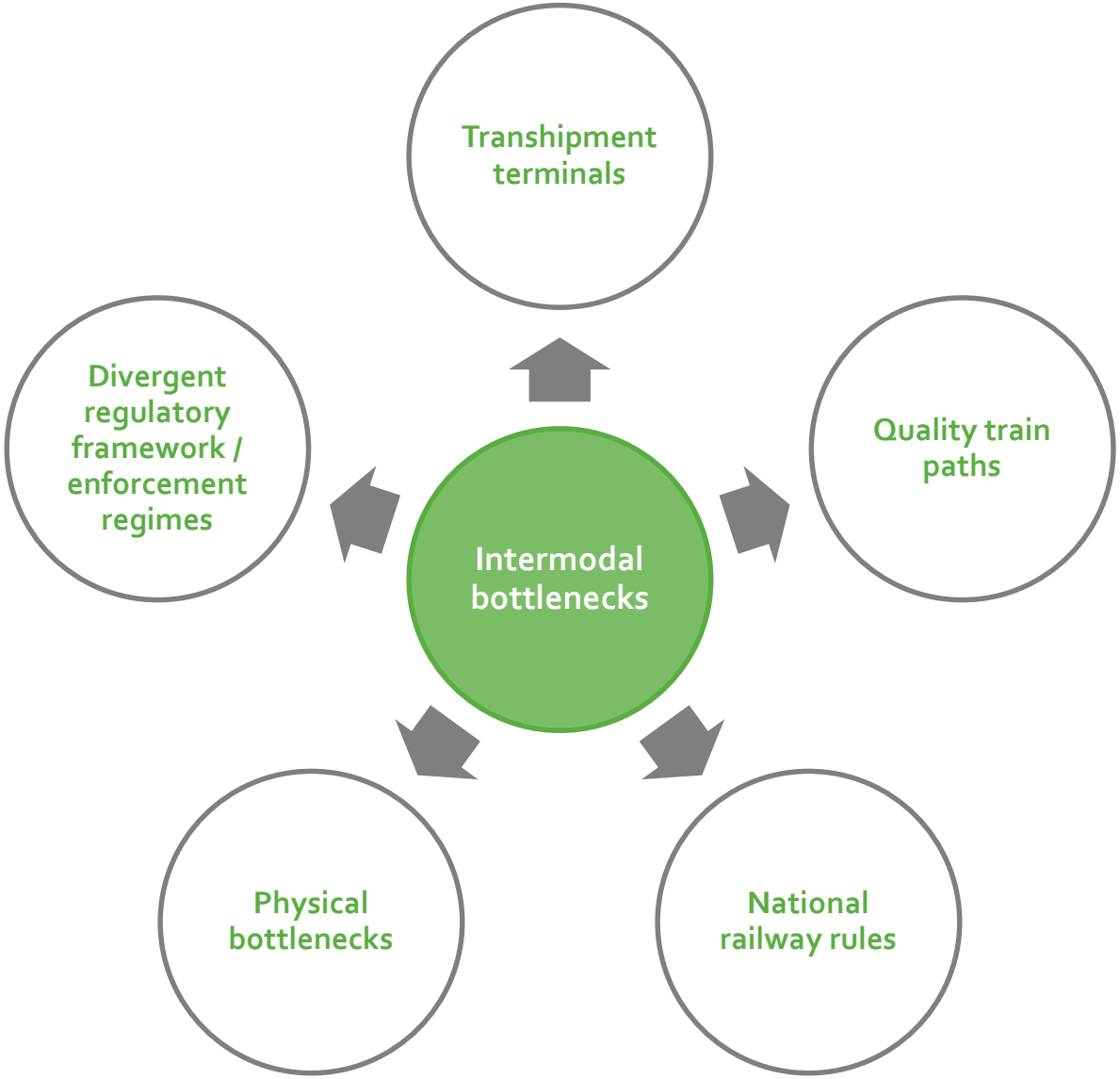
EU STUDY ON RAIL SERVICE FACILITIES PORTAL



For last mile: use of eco-friendly trucks

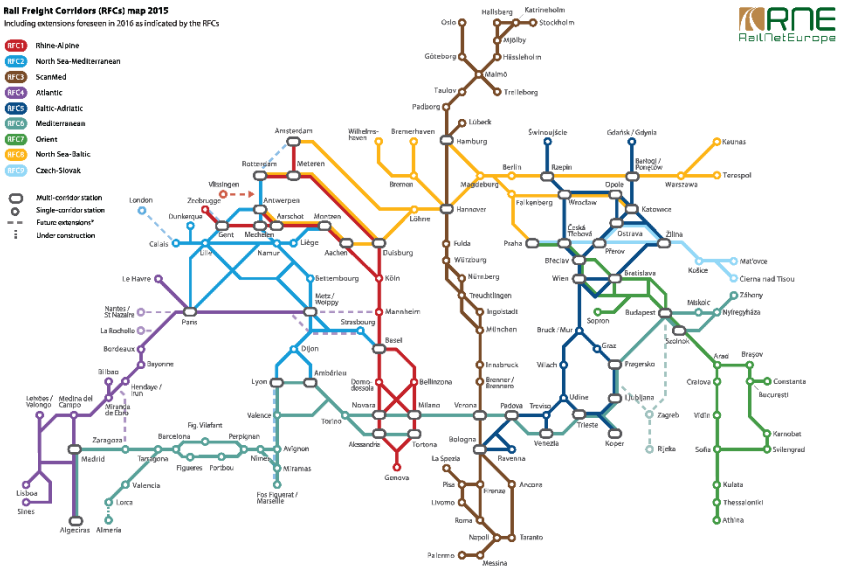
LNG and electric delivery vehicles: positive air quality and noise results – greater flexibility

Bottlenecks to the development of intermodal transport



Physical bottlenecks

- **Symbolic infrastructure**: uneven progress – some big projects advance faster than others
- **Connecting lines**: uncoordinated upgrades of connecting lines to/from symbolic infrastructure like Gotthard Base Tunnel
- **TEN-T parameters**: inconsistent progress in train length, axle load and loading gauge upgrades and ERTMS implementation
- **Small-scale bottlenecks**: replacement of switches, extension of bypass tracks, completion of missing electrification progresses slowly and often lacks funding
- **Coordination of works**: deficiencies both in the coordination of planning and the implementation of works is a shortfall of cooperation foreseen under the Rail Freight Corridors



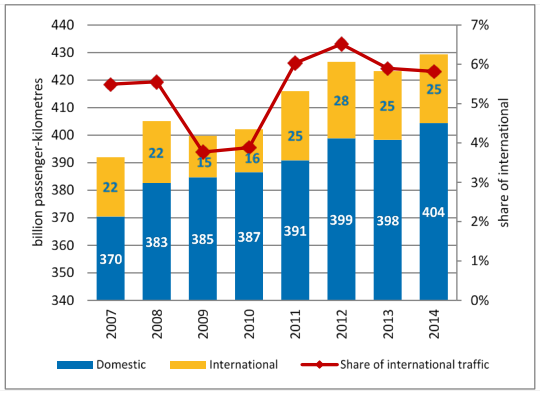
Terminal capacity

- **Uneven terminal density**: good subsidy scheme > no CAPEX support
- **Lack of urban terminals**: close to downtown to directly support city logistics
- **Quality/homogeneity**: upgrade to CNC parameters
- **Access lines**: often of secondary importance to IM – cause for delays in both terminal and train operations
- **Operational standards**: Implementing Act on Access to Service Facilities
- ***'Not in my back yard' effect***: fear of noise and traffic is hurdle to new projects
- **Lack of coherent intermodal plans and/or commitment to modal-shift**: insufficient input to encourage developers and/or to reduce risks

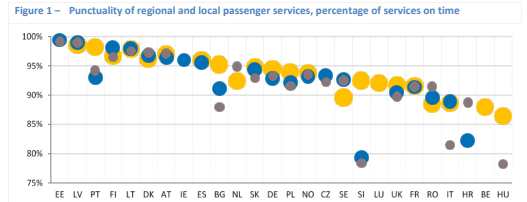
Quality train paths

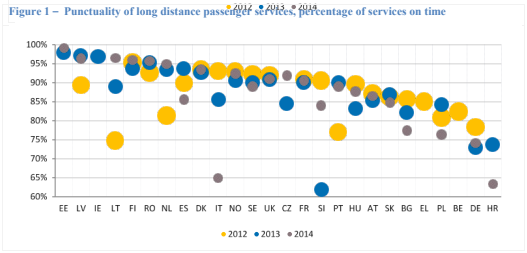
- **Passenger traffic**: 10% growth (2007-14 - in pkm) | punctuality: **80-85%** (to 5 minute)

Figure 1 – Evolution of rail passenger traffic volumes



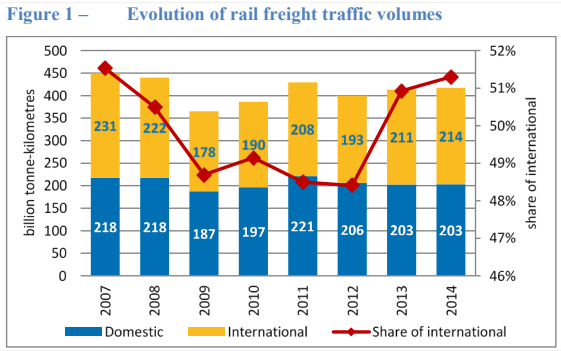
Source: RMMS





- **Freight traffic**: stagnation (2007-14 - in tkm) | punctuality: **n/a**

Figure 1 – Evolution of rail freight traffic volumes



Source: RMMS

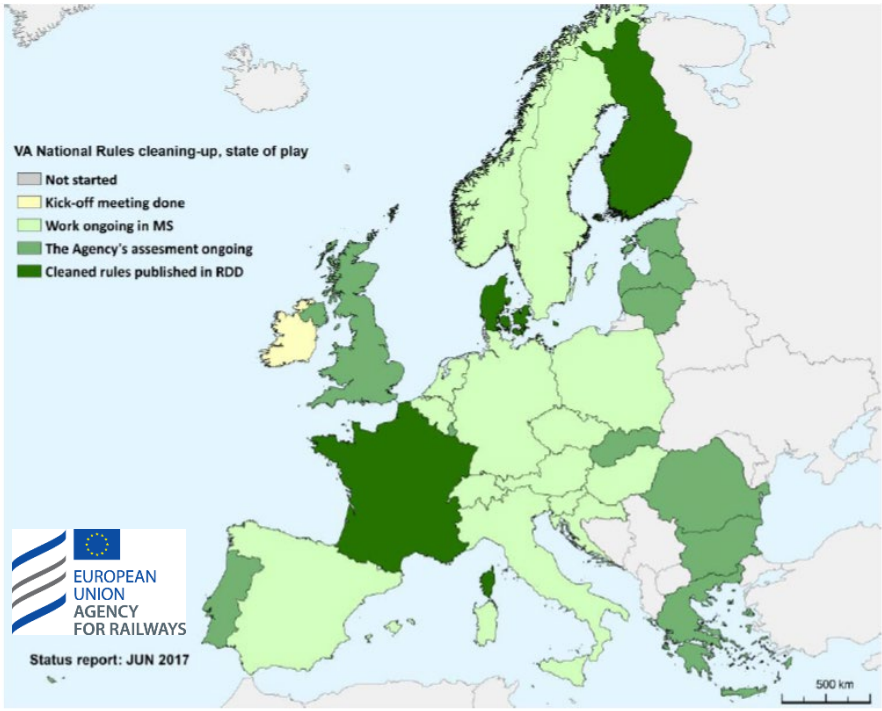
Rail freight quality:

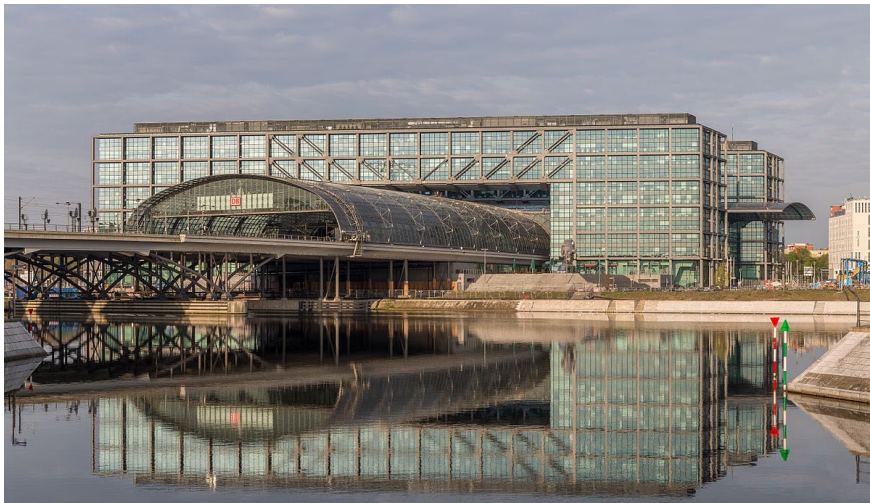
- Sector data collection (UIRR, RFCs) shows great variations with average around 50% (to 30 minute standard)

Pre-defined freight train path categories and a European hierarchy of all train types is needed!

National rules

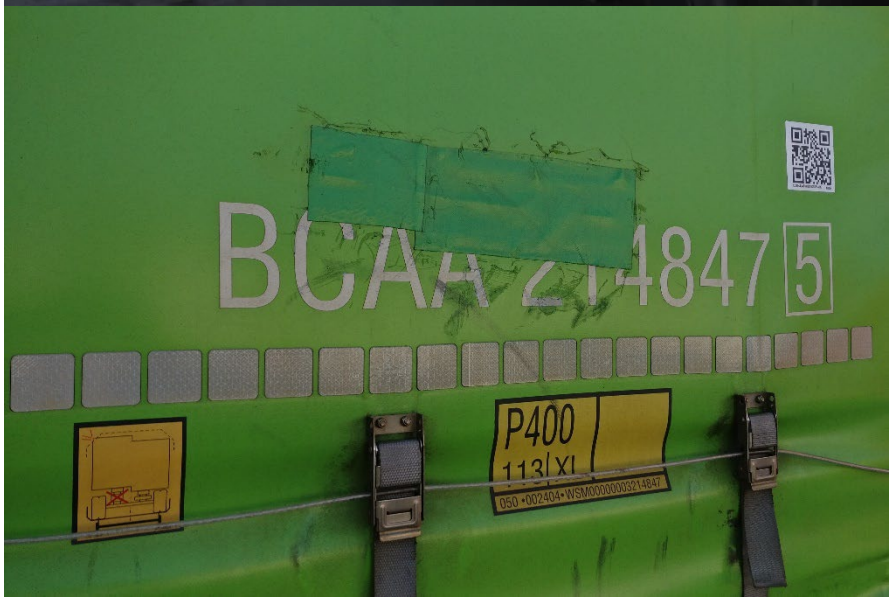
- **Clean-up of national rules**: work in progress at ERA – core countries still lagging behind
- **UIC Leaflets vs ERA TSIs**: persistent lack of clarity; some progress in revising UIC Leaflets / IRS
- **Traffic rules**: no European priority rules, passenger traffic is *'informally' prioritised* over freight trains - even when latter is on time
- **Path allocation rules**: freight comes after passenger when deciding access to the tracks – without proper social benefit analysis
- **Infrastructure development**: lack of fair competition for investment resources between freight and passenger needs





Divergent regulatory framework and enforcement

- **Intermodal uncertainties**: ageing and imprecisely worded Directive 92/106 impedes uniform application of rules, which results in enforcement-related disruptions in some Member States
- **Voluntary standards**: codification- and identification-related heterogeneity causes extra costs and losses of efficiency
- **National compensation schemes**: unpredictable national schemes reduce the value and effectiveness of compensation and promotional measures extended to intermodal actors and/or users
- **Unclear goals**: lack of coordination between Member States and mode-specific regulators in the goals to be achieved by intermodal transport result in wasteful use of resources



Major rail routes for Eurasian traffic in Europe

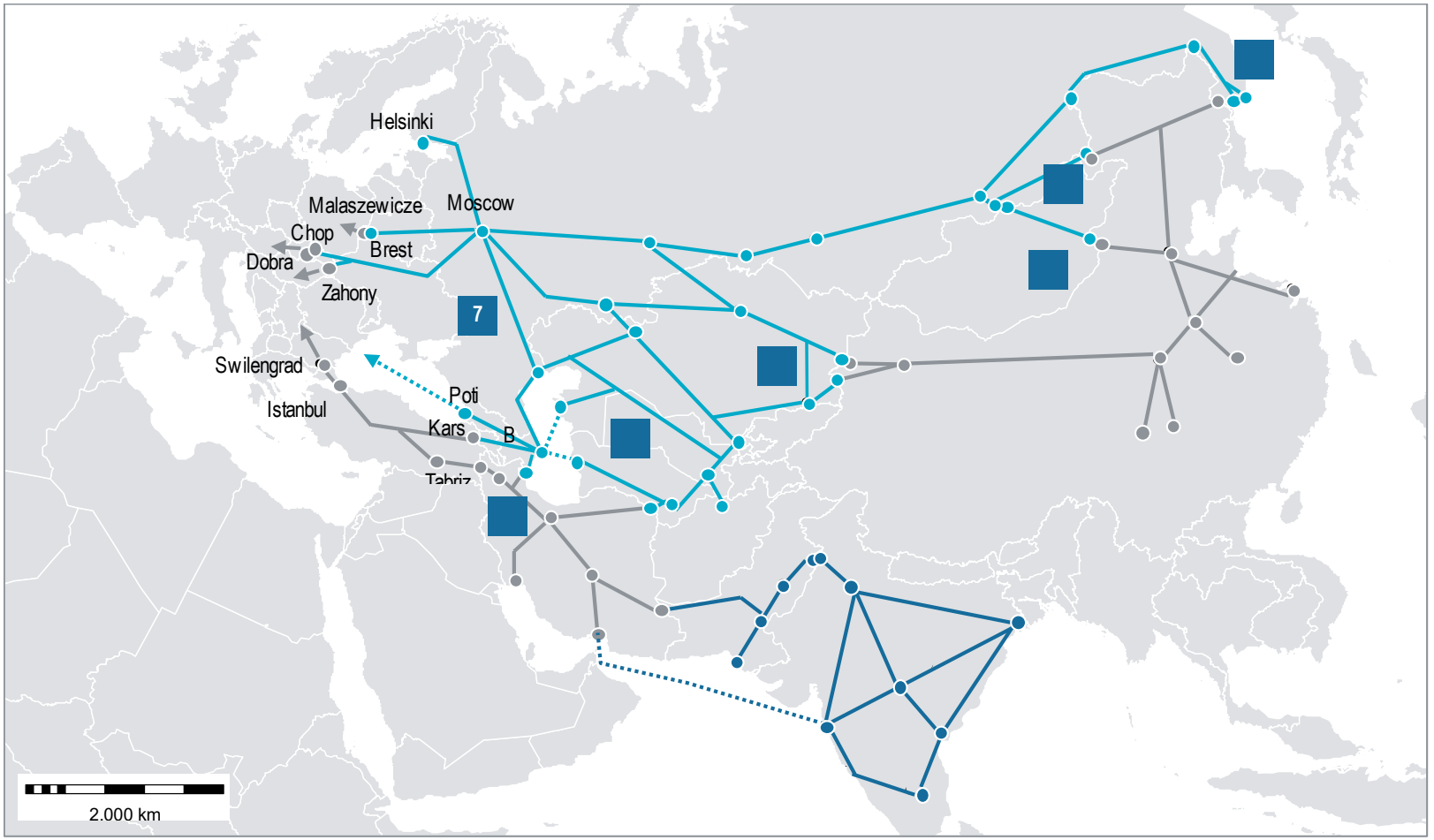
Interconnection points of routes from Asia to European Rail Freight Corridors

1. Malaszewicze – Brest (RFC 8)
2. Cierna – Chop (RFC 9) and Zahony – Chop (RFC 6)
3. Swilengrad – Kapikule (RFC 7)
4. Via Stockholm (RFC 3)

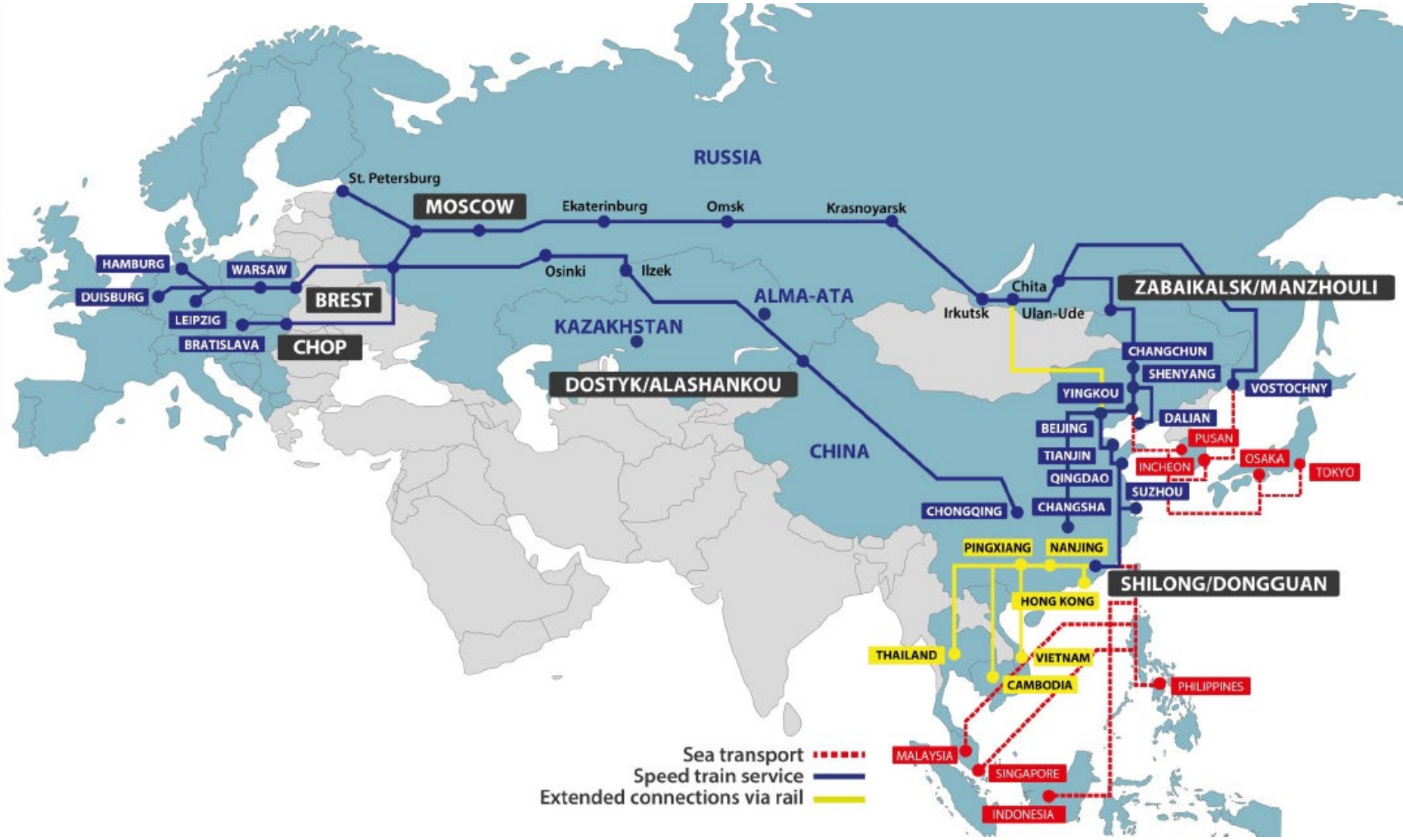
European Rail Freight Corridors[2)]

- RFC 1: Rhine – Alpine
- RFC 2: North Sea Mediterranean
- RFC 3: Scandinavian – Mediterranean
- RFC 4: Atlantic
- RFC 5: Baltic – Adriatic
- RFC 6: Mediterranean
- RFC 7: Orient – East Mediterranean
- RFC 8: North Sea – Baltic
- RFC 9: Rhine – Danube or Czech – Slovak[3)]
- RFC 11: Amber[4)]

Main Eurasian routes with track gauge



Well identified routes – high level quality



Route assessment

Route	Length	Transit time[1)]	Capacity and Comments
1 **Via Alashankou/ Dostyk or Khorgos (Kazakhstan)**	> 10,000 km	> 16-17 days	> High reliability, good infrastructure > Sufficient capacities, new terminal in Khorgos
2 **Via Manzhouli/ Zabaykalsk (Russia)**	> 11,000 km	> 17-18 days	> High reliability, good infrastructure > High volume but limited free capacity in Zabaykalsk
3 **Via Erenhot/Zamyn-Uud (Mongolia)**	> 10,500 km	> 18-19 days	> Alternative to route 2, additional border crossings > Weak infrastructure in Mongolia, limited capacity
4 **Via Suifenhe/ Vostochny (Russia)**	> 11,500 km	> 18-19 days	> Suitable route for traffic from South Korea > High reliability, good infrastructure
5 **Via Dostyk or Khorgos/Baku**	> 12,000 km	> 19-23 days	> Alternative for traffic to Southern Europe > Two times RoRo shipping[2)], limited capacity
6 **Via Khorgos/Tash-kent/Tehran**	> 12,500 km	> Hardly used	> Weak infrastructure, route has to be developed > Limited capacity
7 **Via Tehran/Baku/ Moscow**	> 13,500 km	> Hardly used	> Suitable route for traffic from India to Europe > Weak infrastructure, route has to be developed

Intercontinental Combined Transport Operators

- UIRR Members are active between Europe and China
- Expected traffic volume (export+import): **over 100.000.000 TEU**

Evaluation of success factors

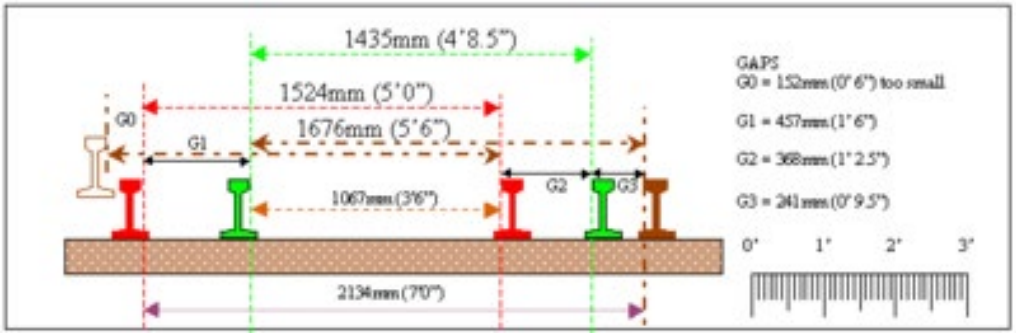
Parameter	Importance for rail link[2)]	Gap 2017	Comments regarding Southern Routes
Transport time			> Speed slower than Northern routes (e.g. 17-20 days China-Turkey) > Long distance, more border crossings/customs or mode changes
Reliability			> No established regular services yet > Trial services TRACECA (DHL 2016) with delays of more than 4 days each
Balanced quantities			> Smaller eastward transport volumes are expected > Need to examine possibilities for stepwise transports
Target goods			> Target goods in European O/Ds for Southern routes (East Europe) and in new O/Ds (Turkey, Iran) need to be specified and seasonality considered
Price			> Even bigger competition from sea freight through shorter distance and good accessibility of Middle East and East European countries > High network costs in Iran and Turkey
Frequency, flexibility			> Routes not established as regular services yet
Target geogra-phical coverage			> Routes not established as regular services yet
Availability			> Routes not established as regular services yet
Customs			> Many transit countries are not part of a customs unit (Ukraine, Iran, Azerbaijan and Turkmenistan)

Technical challenges

- Track gauge difference

Current solution: transhipment

Long-term solution: southern route on UIC gauge all the way



- Extreme temperatures

Current solution: diesel powered reefer units or lots of insulation + reliable transit times

Long-term solution: electric powere on wagons to maintain temperature and improved 'Eurasian containers'

Outlook

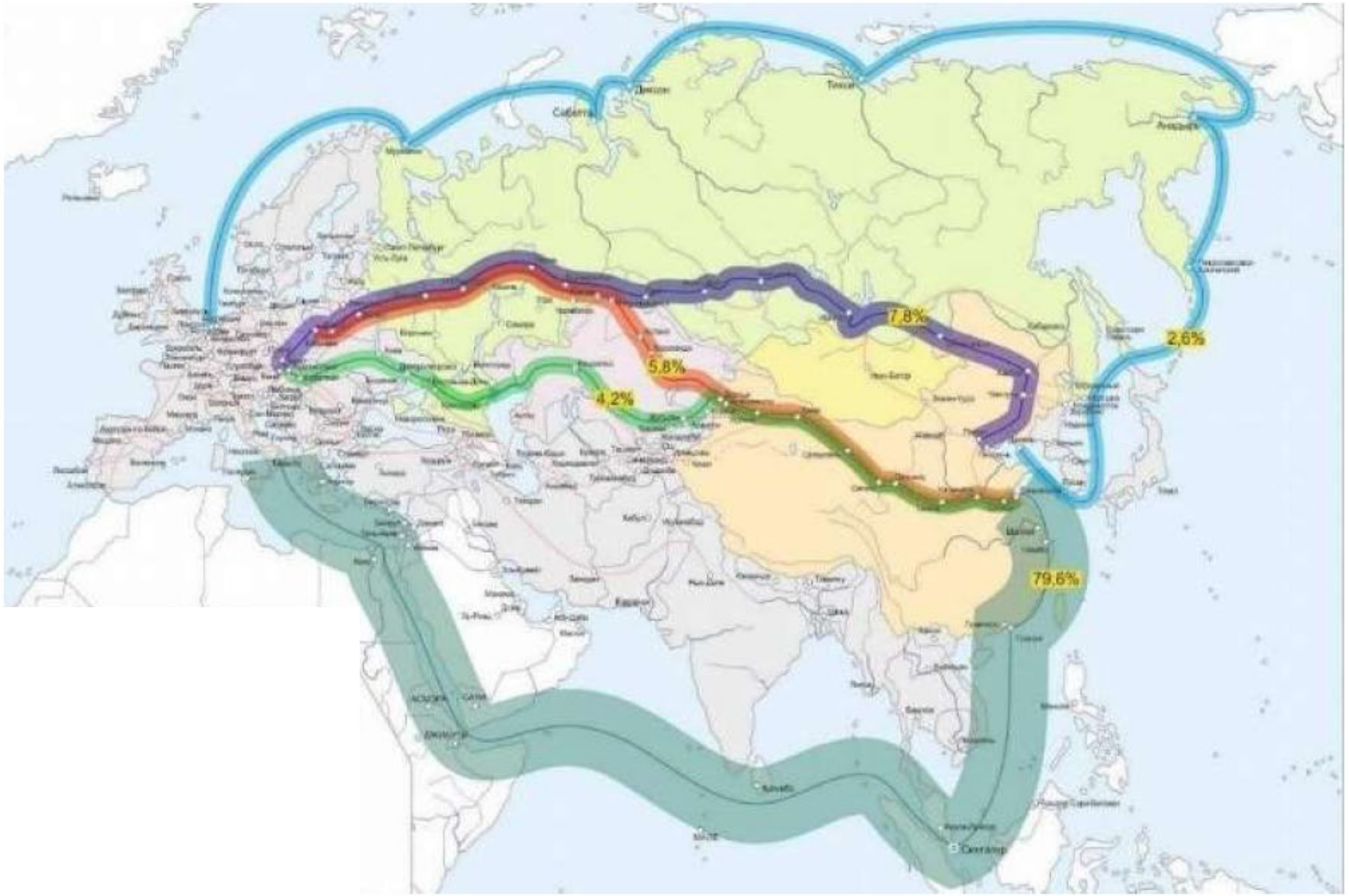
- From 28 cities is China, as well as several other points in South Korea
- To 29 cities in 12 EU Member States (2016)
- 1700 trains on 51 routes (2016)

and these numbers are rapidly growing

The declared goal of the Chinese government is to reach 500.000 TEU traffic in 2020.

---which is backed by $160 billion pledged to rail infrastructure developments

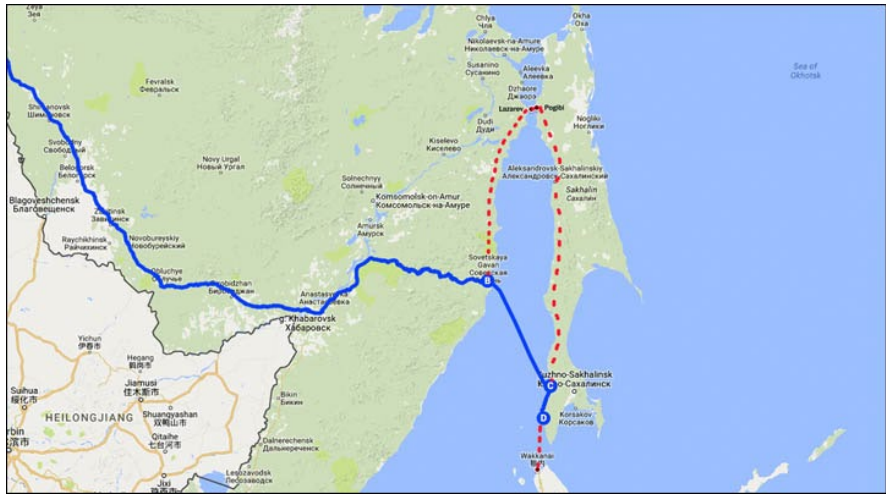
Projected market share of different routes in 2020



New horizons: via the Trans-Siberian to Japan

Russia proposed to extend the Trans-Siberian Railway from Vladivostok via a newly constructed railway bridge over the Shakhalin strait to Hokkaido.

(Eastern Economic Forum, 6-7 September 2017)



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THANK YOU

For your attention