



**United Nations Economic Commission for Europe  
(UNECE)**



## **Working Party on Intermodal Transport and Logistics (WP.24)**

**Martin Magold  
Sustainable Transport Section**

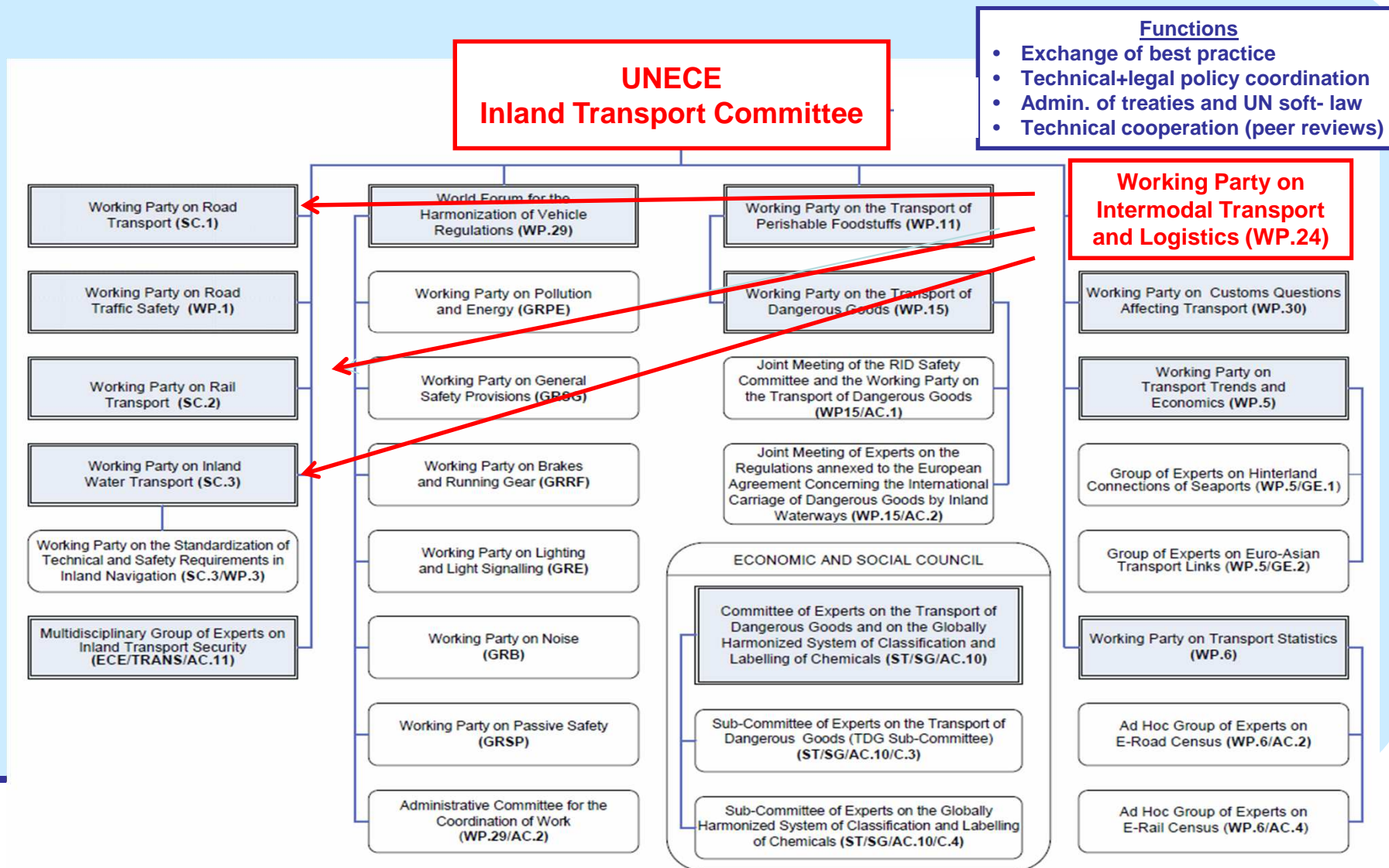
**ITPD & T&L Domain  
Mini-Conference on Multi-Modal Trade  
Corridors  
Geneva, 10 April 2014**

**UNECE Transport Division**



## UNECE

### Inter-governmental machinery in transport





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**Terminology (UNECE–EC–ECMT/ITF)**

**Multimodal transport (legal concept)**

Carriage of goods by two or more modes of transport

**Intermodal transport (functional concept)**

Movement of goods in one and the same loading unit using two or more modes without handling the goods

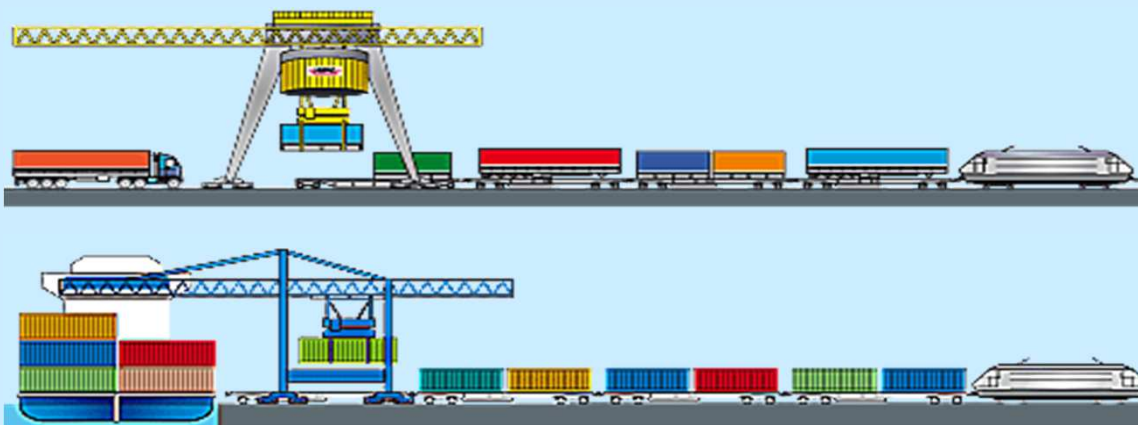
**Combined transport (political concept)**

Intermodal transport of which major part of European journey being rail, IWT or short- sea whereby initial/final haulages by road are as short as possible



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**Intermodal transport concepts**

**Unaccompanied transport**  
(maritime/European containers, swap-bodies, semi-trailers)



**Accompanied transport (Rolling Highway–RoLa)**





# UNECE Performance in intermodal transport

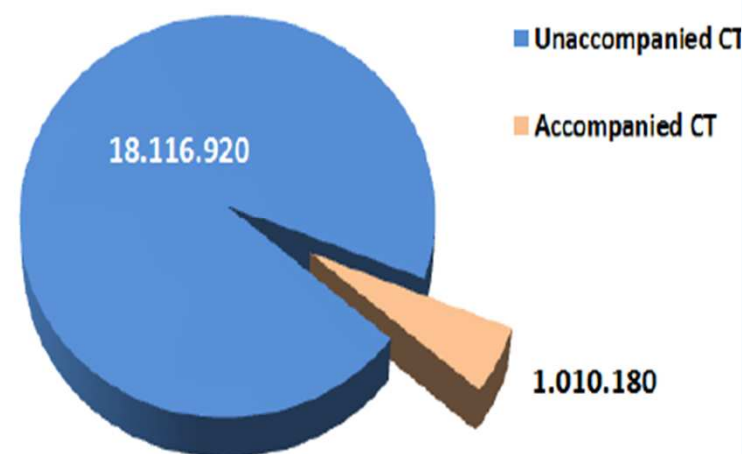


## Road-Rail intermodal transport (TEU)

### Total TEU carried, 2011

CT market segment	Unaccompanied		Accompanied		Total	
	TEU	%	TEU	%	TEU	%
Domestic CT	10.928.140	96,9%	347.530	3,1%	11.275.670	100%
International CT	7.188.780	91,6%	662.650	8,4%	7.851.430	100%
Total CT	18.116.920	94,7%	1.010.180	5,3%	19.127.100	100%

Source: UIC

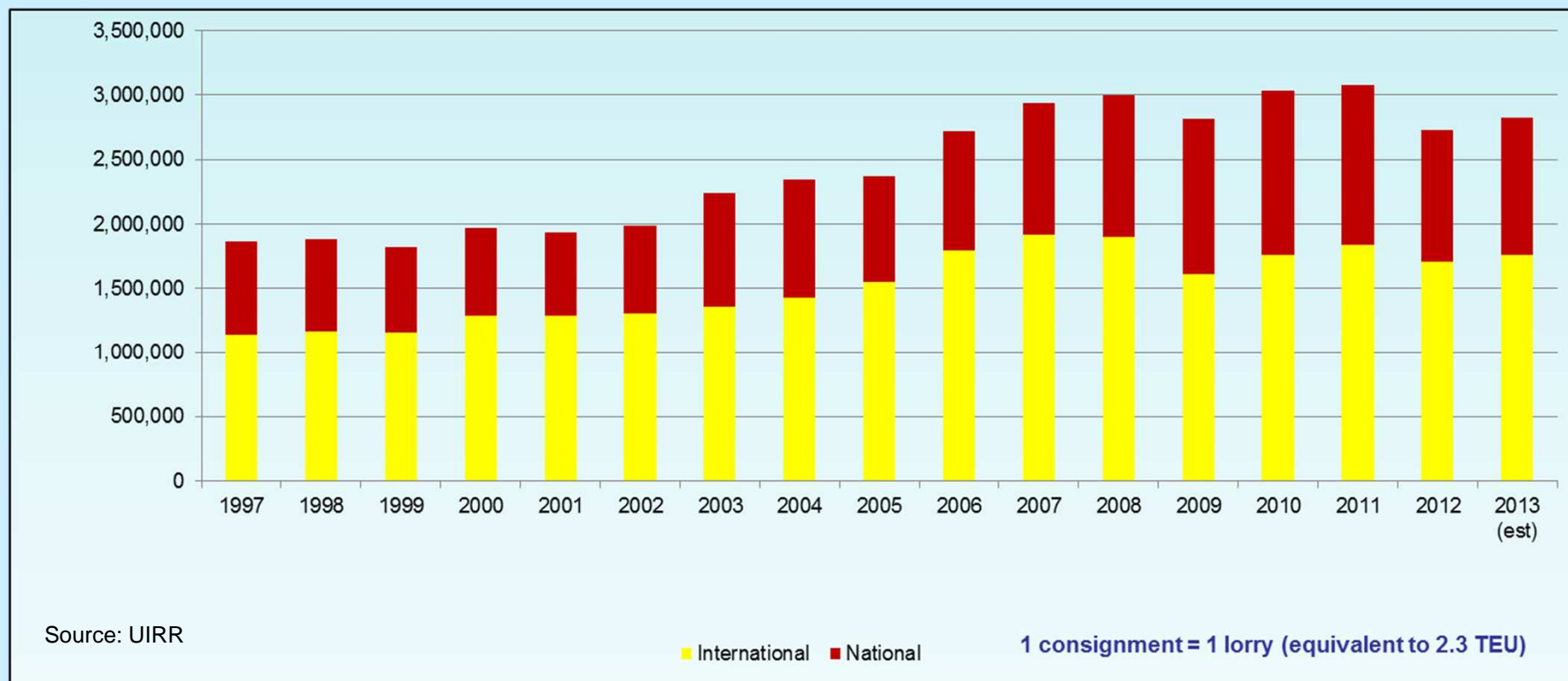


**Domestic traffic 59% - International traffic 41%**



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**Performance in intermodal transport**

**Road-Rail intermodal transport**  
(number of consignments)





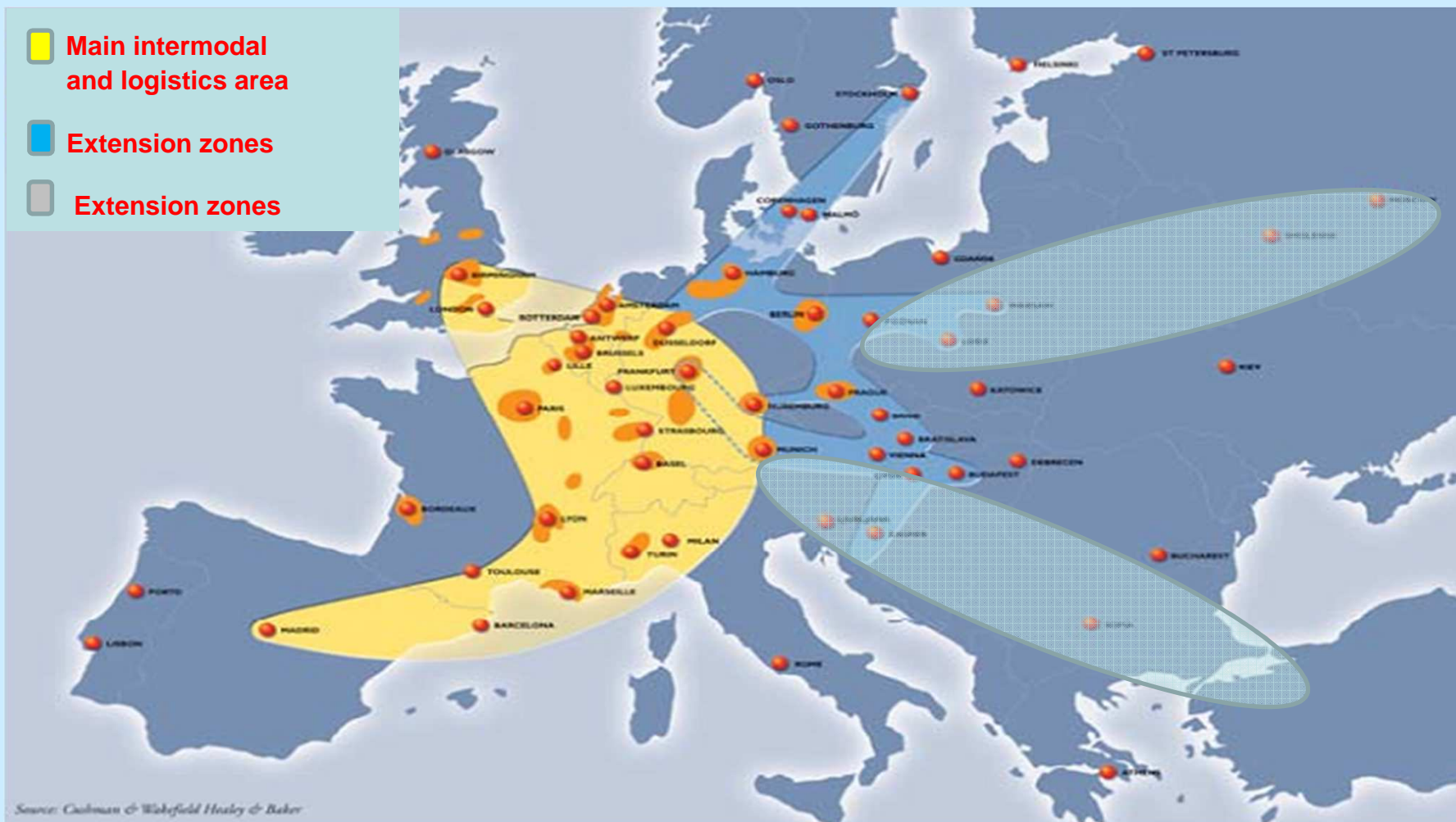


## UNECE Intermodal and logistics zones in Europe

 Main intermodal  
and logistics area

 Extension zones

 Extension zones

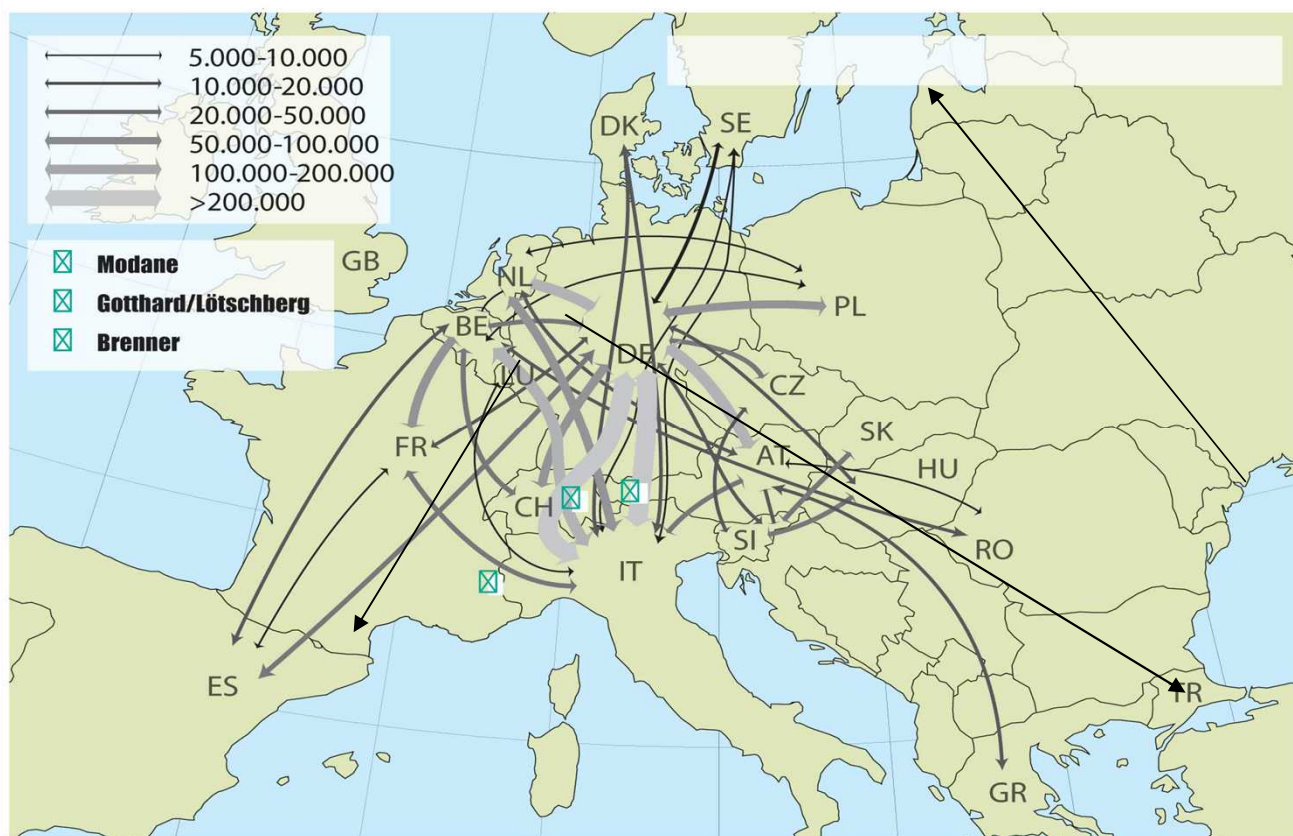


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Intermodal transport corridors

## Road-Rail intermodal transport corridors in Europe



- 100+ corridors
- mainly North-South
- 2/3 transalpine traffic
  - Brenner (Austria)
  - Gotthard-Lötschberg (Switzerland)
  - Modane (France-Italy)





## UNECE Intermodal challenges

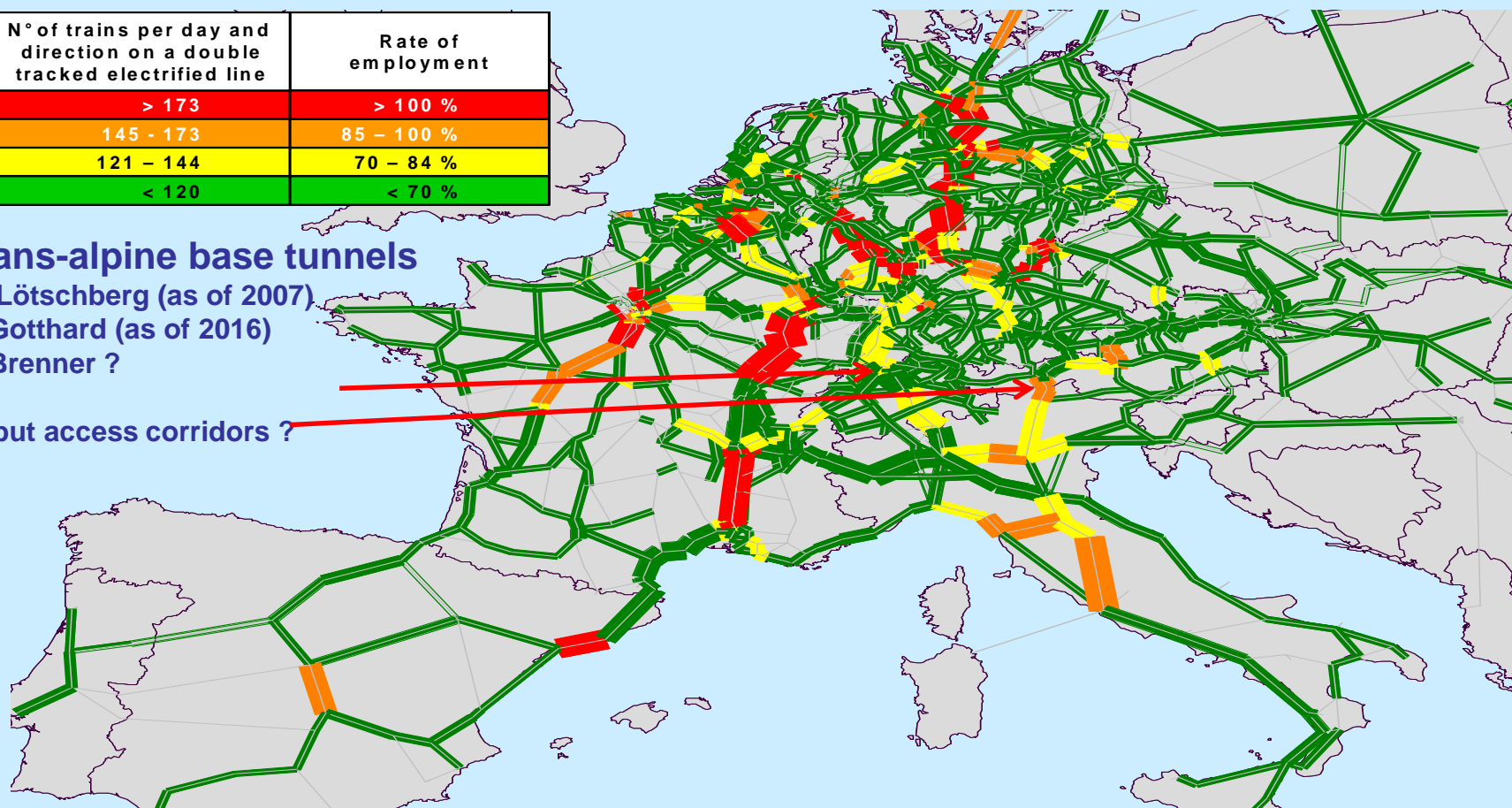
### Major bottlenecks in 2015 (UIC DIOMIS study)

N° of trains per day and direction on a double tracked electrified line	Rate of employment
> 173	> 100 %
145 - 173	85 - 100 %
121 - 144	70 - 84 %
< 120	< 70 %

#### Trans-alpine base tunnels

- Lötschberg (as of 2007)
- Gotthard (as of 2016)
- Brenner ?

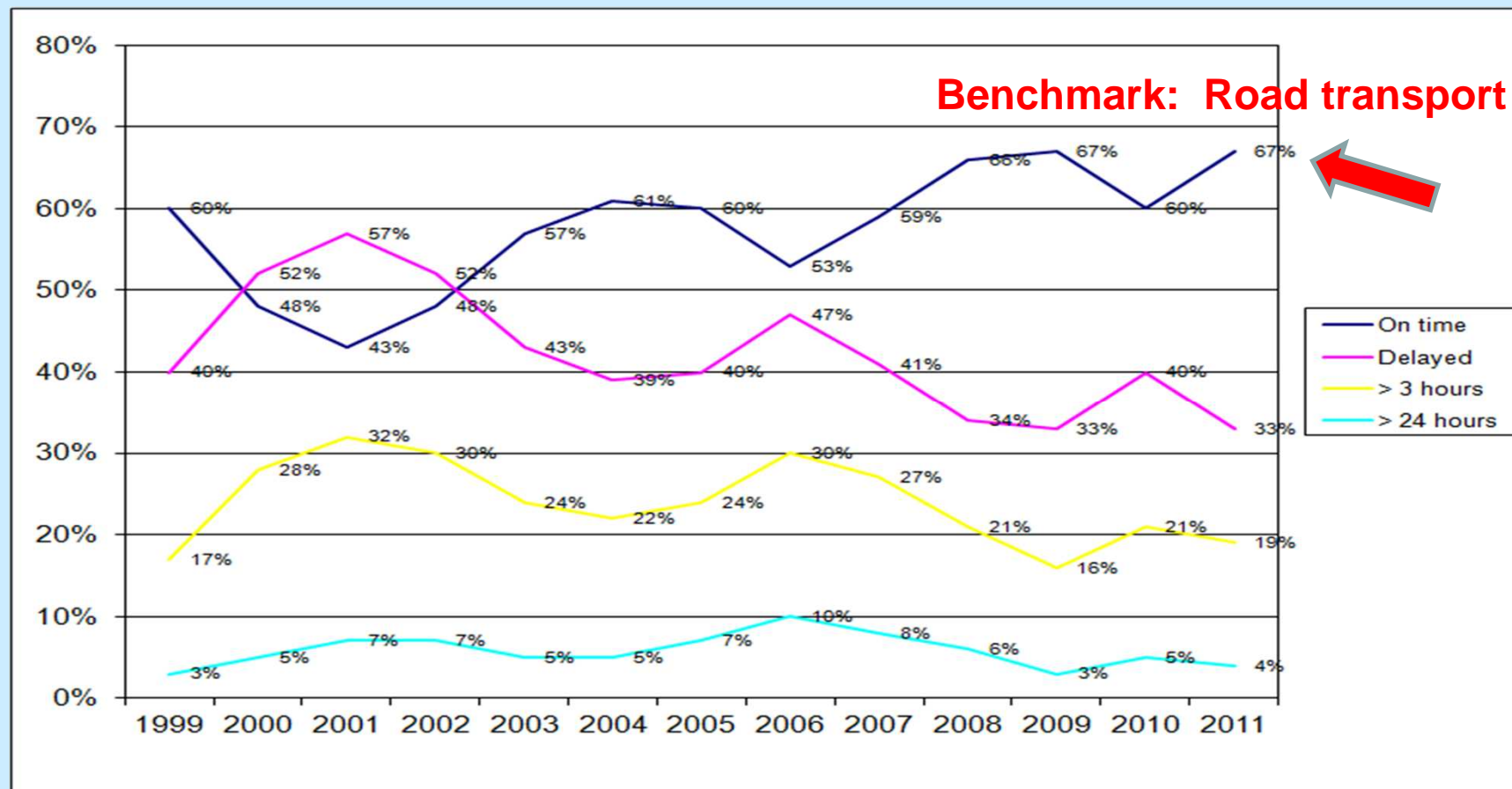
... but access corridors ?





## UNECE Intermodal challenges

### Punctuality of intermodal transport trains



Since 2004: Without Brenner/Austria

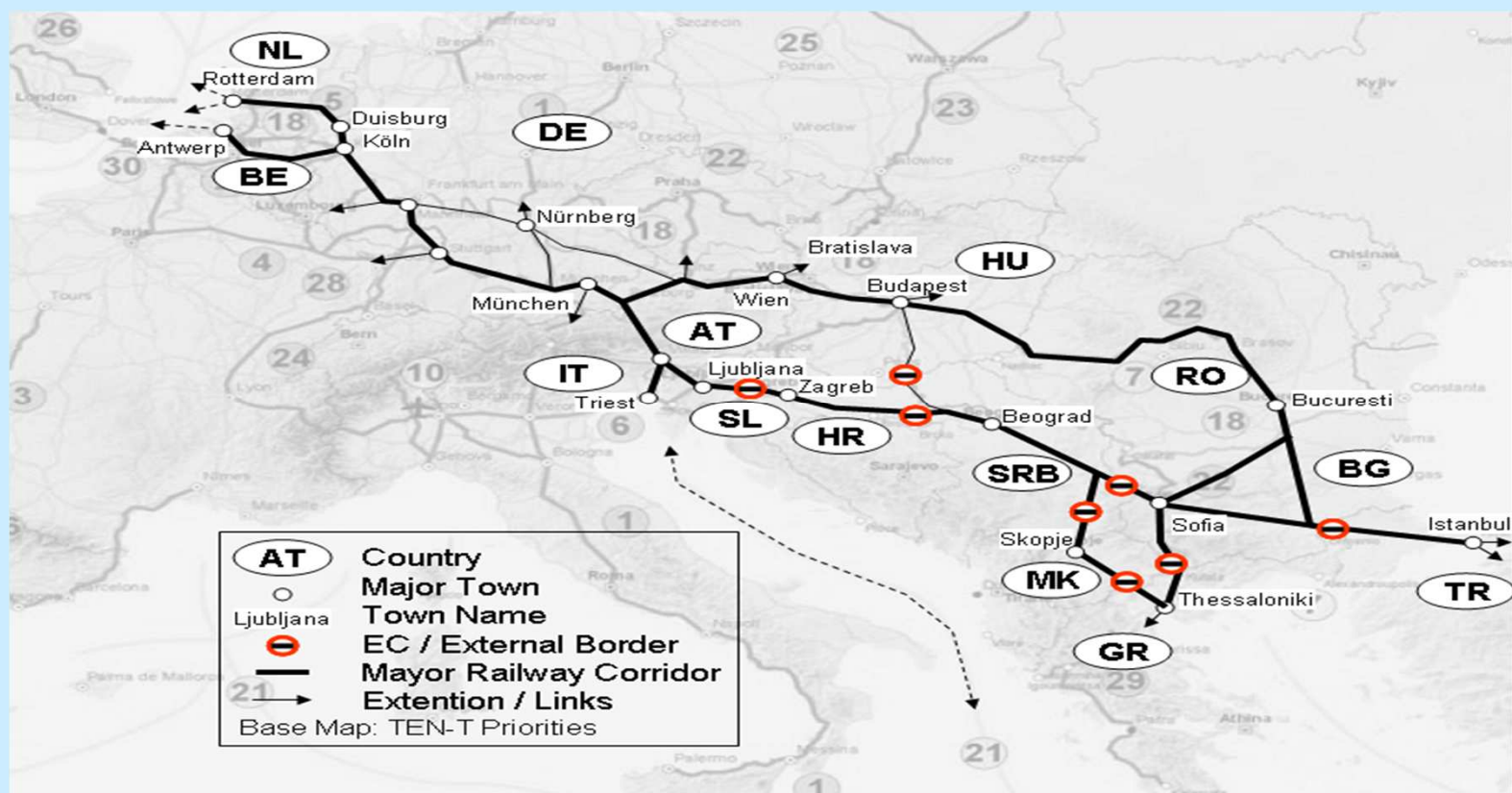
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Since 2009: Without Brenner/Austria, F-I,  
Eastern countries

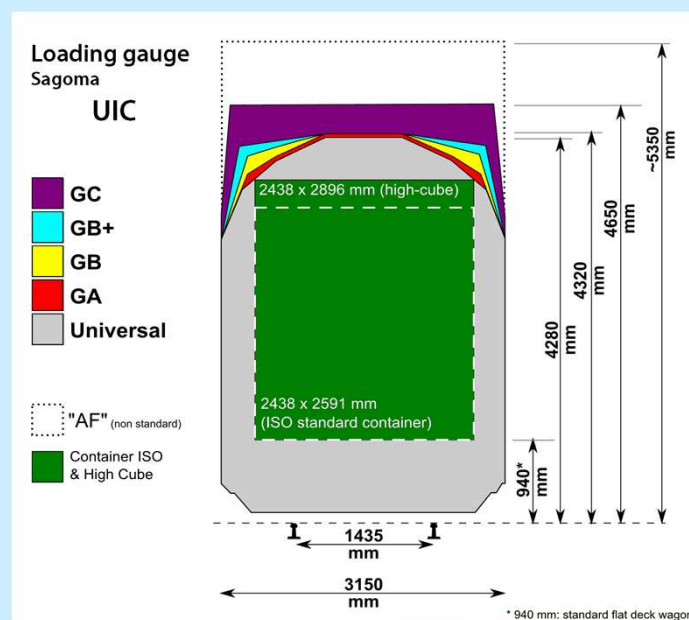


## UNECE Intermodal challenges

### Administrative, technical and legal barriers (Example: Balkan corridor)









## UNECE Intermodal challenges



### Expensive equipment and maintenance

Small wheels for transport of high volume mega-trailers

Very low pocket platform  
(270 mm above rail)

for the transport of 4 m high semi-trailers





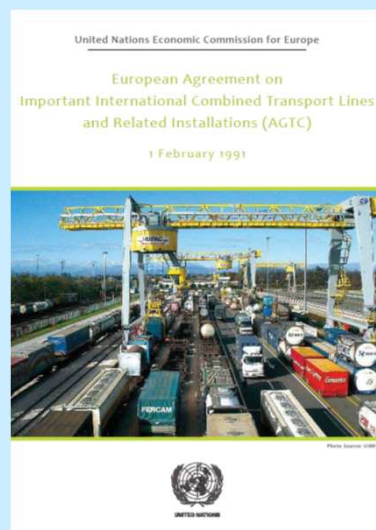
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Working Party on Intermodal Transport and Logistics

## European Agreement on Important International Combined Transport Lines and Related Installations (**AGTC Agreement**)

- Network infrastructure standards
- Performance parameters and benchmarks for trains and terminals

Albania, Austria, Belarus, Belgium, Bulgaria, Croatia, Czech Republic, Denmark, France, Georgia, Germany, Greece, Hungary, Italy, Kazakhstan, Latvia, Lithuania, Luxembourg, Republic of Moldova, Montenegro, Netherlands, Norway, Poland, Portugal, Romania, Russian Federation, Serbia, Slovakia, Slovenia, Switzerland, Turkey, Ukraine



INFRASTRUCTURE PARAMETERS FOR THE NETWORK OF IMPORTANT INTERNATIONAL COMBINED TRANSPORT LINES			
	A		B
	Existing lines which meet the infrastructure requirements and lines to be improved or reconstructed		New lines
	at present	target values	
1. Number of tracks	(not specified)	(not specified)	2
2. Vehicle loading gauge		UIC B <sup>2/</sup>	UIC C <sup>2/</sup>
3. Minimum distance between track centres <sup>1/</sup>		4.0 m	4.2 m
4. Nominal minimum speed	100 km/h <sup>1/</sup>	120 km/h <sup>1/</sup>	120 km/h <sup>1/</sup>
5. Authorized mass per axle:			
Wagons ≤ 100 km/h	20 t	22,5 t	22,5 t
≤ 120 km/h	20 t	20 t	20 t
6. Maximum gradient <sup>1/</sup>	(not specified)	(not specified)	12.5 mm/m
7. Minimum useful siding length	600 m	750 m	750 m

<sup>1/</sup> Not of immediate relevance for combined transport, but recommended for efficient international combined transport.  
<sup>2/</sup> UIC: International Union of Railways.  
<sup>3/</sup> Minimum standards for combined transport trains (see annex IV).



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**AGTC intermodal network (road-rail)**



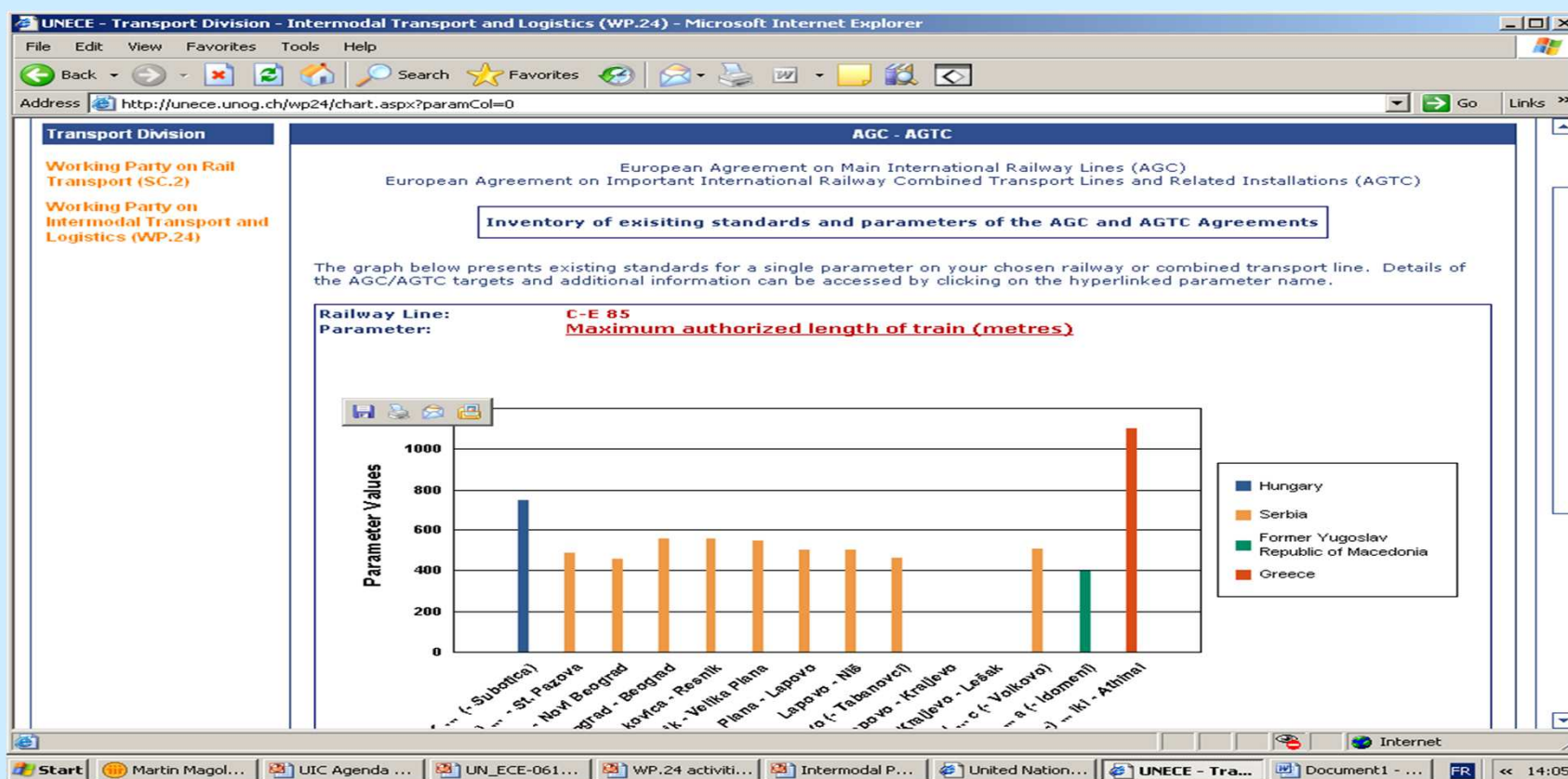


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## AGTC intermodal network (raod-rail)

### On-line monitoring of infrastructure and performance benchmarks





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**IMO/ILO/UNECE**  
**Code of Practice for Packing of Containers**  
**- CTU Code -**

- **Not mandatory – but may become part of cargo insurance contracts**
- **Prepared in 2011-2013 by Governments with industry and insurance experts**
- **Adopted by UNECE in February 2014**
- **Adoption by IMO and ILO before end of 2014**



**[www.unece.org/trans/wp24/guidelinespackingctus/intro.html](http://www.unece.org/trans/wp24/guidelinespackingctus/intro.html)**