



INTERNATIONAL UNION
OF RAILWAYS

unity, solidarity, universality

2016 Trends and challenges in Rail transport

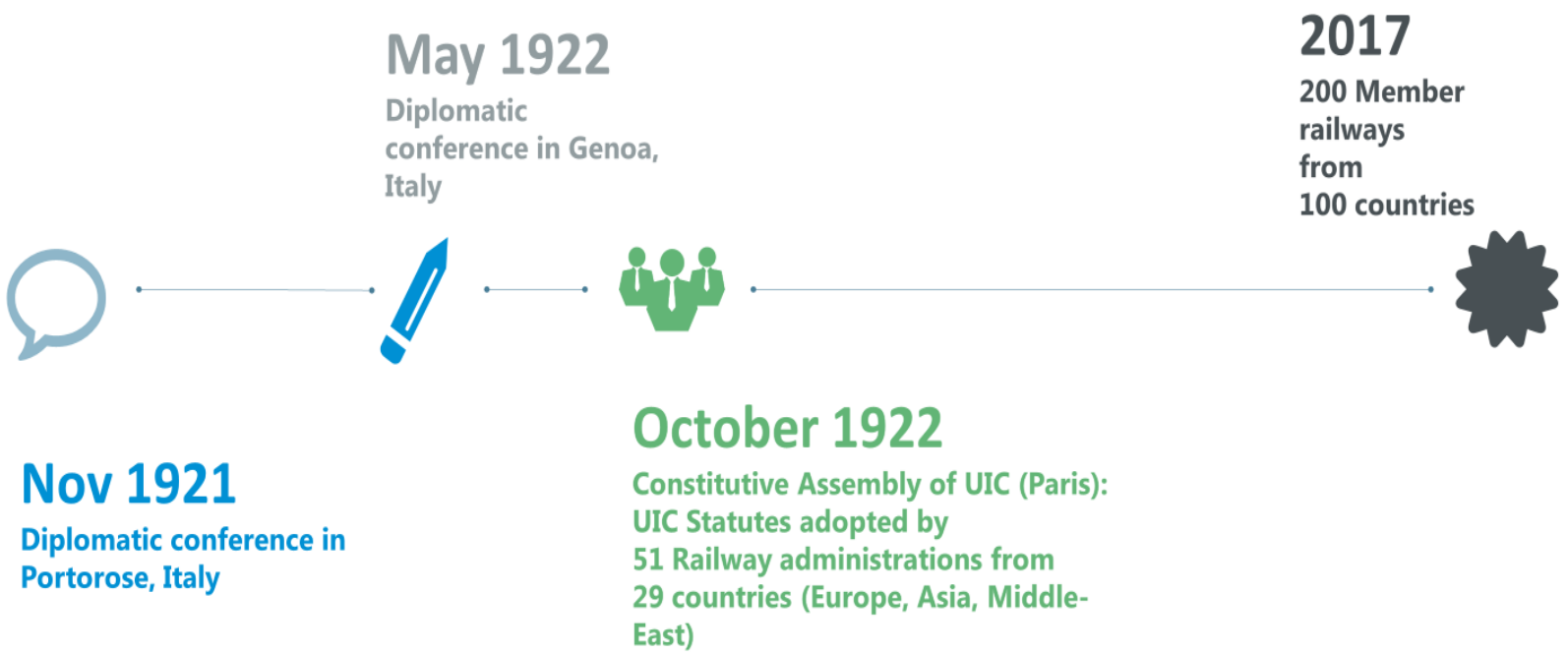
Snejana MARKOVIC-CHENAIS

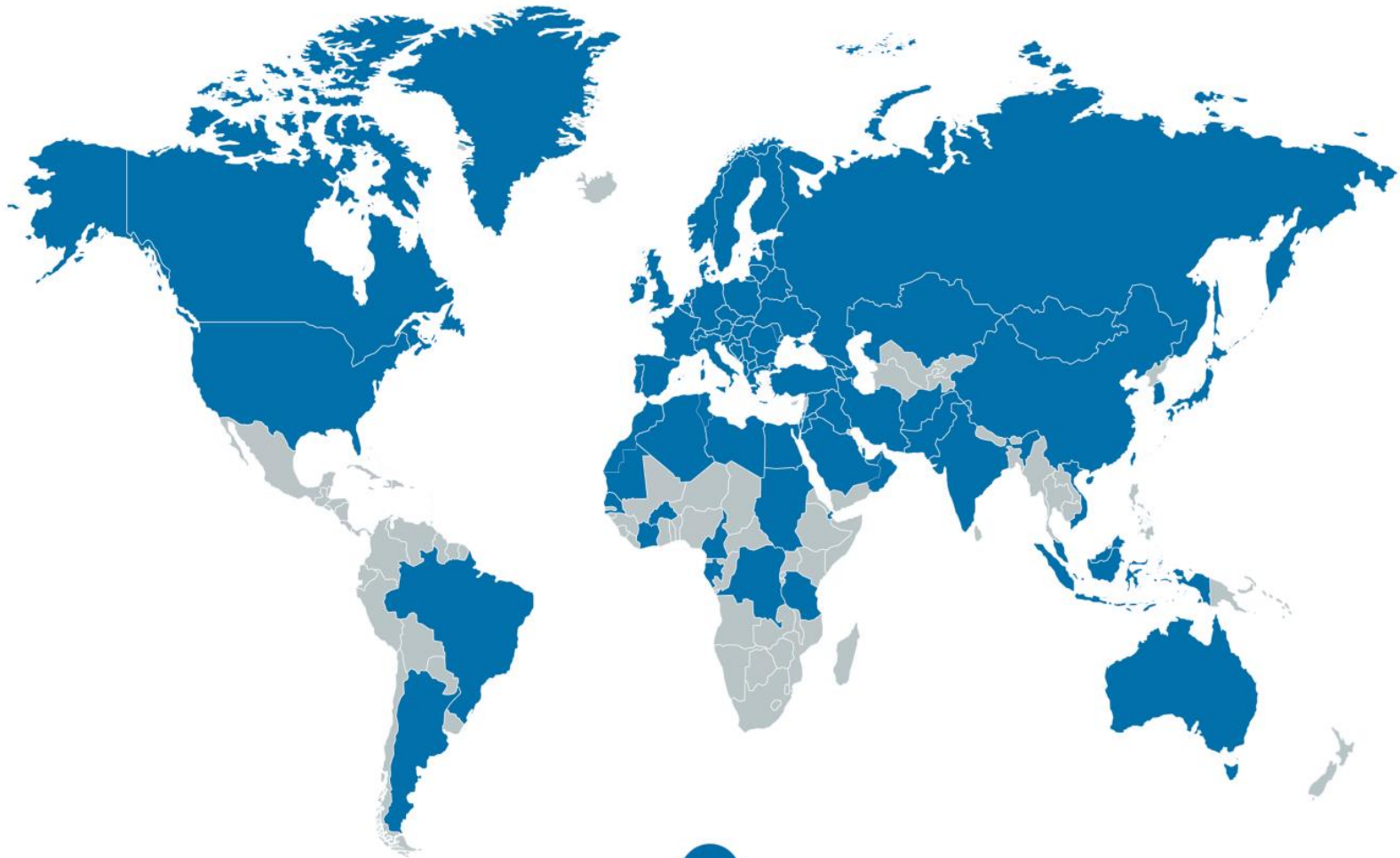
Economics Adviser

[*markovic@uic.org*](mailto:markovic@uic.org)

UNECE 4-6 September 2017 Transport and Economics

A long history at the service of international railway cooperation





UIC MEMBERS



UIC today

4

200
Members in
100 countries

3,000
billion
passenger
kilometres

10,000
billion tonnes
kilometres

1
million
kilometres of
lines

7
million rail
personnel

Cooperation
with over **100**
institutions

700
UIC Leaflets - New
International
Railway Solutions
(IRS)

85
congresses,
conferences,
workshops

UIC CONFERENCES – 2016



KEY CHALLENGES

Promoting the development of rail transport at world level,

in order to meet challenges of mobility and Sustainable Development.

INNOVATION

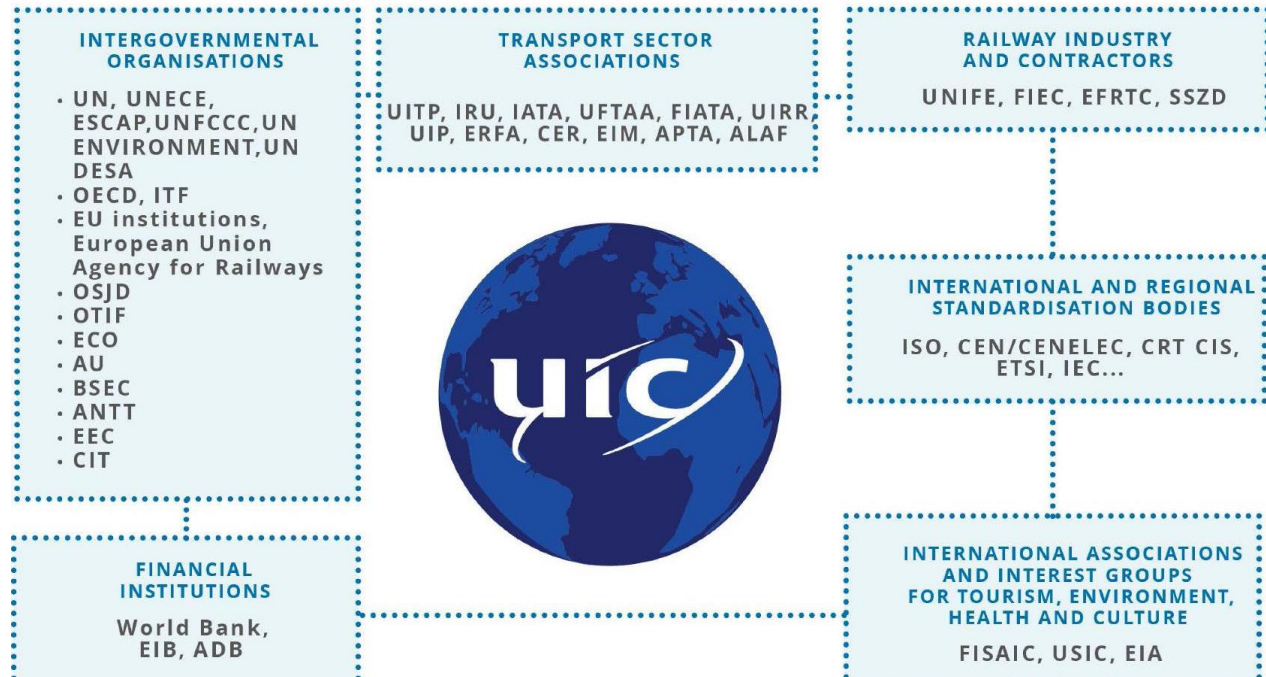
STANDARDISATION

TRANSMISSION

DISSEMINATION

STRATEGIC ADVICE

Close cooperation links with leading International organisations & associations




5 UIC Global cooperation issues Serving the entire Railway Community

 Environment & Sustainable Development
UN Climate Conferences COP

 Safety & Security

 Freight / Intercontinental corridors

 Railway Signaling & Control Command

 Standardisation, Harmonisation
UIC Leaflets,
International Railway Solutions
IRS



UIC Organisation Structure

9

RAIL SYSTEM

Signaling,
Rolling Stock,
Infrastructure, ...

PASSENGER

Stations,
Commercial &
Services,
High Speed &
Conventional, ...

FREIGHT

Corridors,
Combined
Transport,
IT, ...

FUNDAMENTAL VALUES

Research,
Safety, Security,
Environment,
Expertise
Development,...

COMMUNICATIONS · INSTITUTIONAL RELATIONS · HUMAN RESOURCES · FINANCE

Statistics publications

- Yearbook : final data (restricted to participants*)
- Synopsis : provisional numbers
- Time series indexes and values (to be restarted)

Also on-line data

- Quarterly
- Synopsis

Railisa data base is being redesigned and **soon available**

UIC Statistics are company based

>>> data given and validated by UIC members

visit our website at <http://uic.org>

* Since 2012 some data are confidential

Synopsis

Provisional annual data - All continents

uic		Railway Statistics - Synopsis					Statistik der Bahnen - Synthese					Statistique des chemins de fer - Synthèse					2016	uic				
		Provisional results					Vorläufige Ergebnisse					Résultats provisoires										
Country	Surface area km ² (1)	Population (1)	Population density	Railway company	Length of lines worked at end of year			Stock at end of year					Average staff strength		Train performance		Revenue net traffic (1)					
					Total	of which double track or more	of which electrified lines	Locomotives including Light Rail Motorcars	Rollcars and Multiple Units	Coaches & Trains (2)	Railway's own wagons	Thousands	% 16/15	Train kilometres	Gross train tonne-kilometres	Passenger carried	Passenger kilometres	Tonnes carried	Tonne-kilometres	% 16/15	% 16/15	% 16/15
Europe (including Turkey)	Europe				348 072	110 885	138 580	41 865	55 284	98 713	697 718	2 043	1 107	6 882 073	3 342	987 047	2 330	2 898 028				
EU					211 848	88 285	112 587	17 146	44 217	82 429	389 298	852	3 228	982 945	1 146	351 236	235	288 257				
Austria	84	8,57	102	ÖBB (2016)	91	0	0	15	13	25	na	na	41,96	23 478	3,80	147	na	na	na	na	na	na
Belgium	31	11,30	370	INFRABEL (2016)	3 602	na	na	31	na	na	na	na	na	na	na	na	4,80	14,89	590	3,69	na	na
Bulgaria	111	7,17	65	BDZ (2016)	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
Croatia	57	4,22	75	HZ INFRA (2016)	2 605	254	970	187	na	na	5 513	4,92	-2,21	4,43	3 825	na	na	na	na	na	na	na
Czech Republic	78	18,53	134	ČD (2016)	9 463	1 965	3 217	142	142	3 741	3 341	3,34	-2,79	3,98	3 816	229,08	-0,69	2 437	-0,01	na	na	na
Denmark	43	5,66	131	DSB (2016)	2 131	927	630	14	14	227	na	na	na	na	na	na	na	na	na	na	na	na
Estonia	45	1,31	22	EVR (2016)	1 018	na	132	na	na	na	na	na	na	na	na	na	na	na	na	na	na	na
Finland	338	9,48	16	VR (2016)	5 926	682	3 270	14	14	na	na	na	na	na	na	na	na	na	na	na	na	na

➤ Length of lines

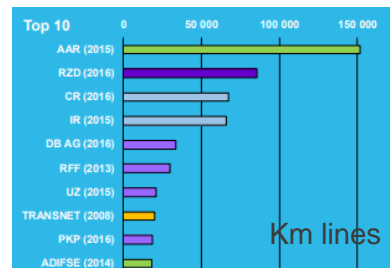
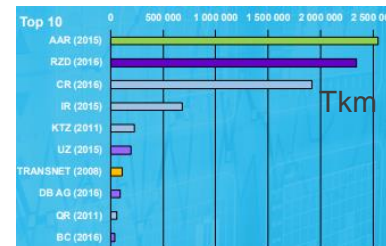
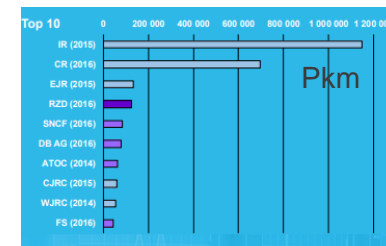
➤ Rolling Stock

➤ Average staff strength

➤ Train performance in train-km

➤ Rail Traffic in pass., pass-km, tonnes, tonne-km

➤ High speed traffic



Available mid year for n-1

download it at <http://uic.org/statistics>

International Railway Statistics

- Network
- Transport stock
- Staff
- Operation
- Passenger traffic
- Freight traffic
- Financial results
- Energy
- Accidents
- High-speed

+ 5 yearly tables

- Yearly published
- Public data ?



Cautious reading : we search solutions

Passenger-kilometres (billions)

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Δ%
Europe including Turkey	469,2	483,8	470,5	472,8	485,6	480,0	476,1	475,3	463,3	463,5	0,0%
Russian Federation	173,4	175,9	153,6	139,0	139,8	144,6	144,6	128,8	120,4	124,5	3,3%
Africa	61,6	62,0	62,2	62,3	49,3	49,3	49,3	63,5	62,8	23,0	-172,7%
America	13,3	14,0	13,5	12,0	20,8	20,9	22,3	21,7	27,5	27,5	0,1%
Asia Oceania and Middle East	1 788,6	1 950,9	2 012,0	2 079,3	2 187,8	2 171,7	2 173,0	2 380,9	2 280,2	2 195,0	-3,9%
WORLD estimates	2 506,1	2 686,6	2 711,9	2 765,4	2 883,4	2 866,6	2 865,3	3 070,2	2 954,3	2 833,5	-4,3%

NO !

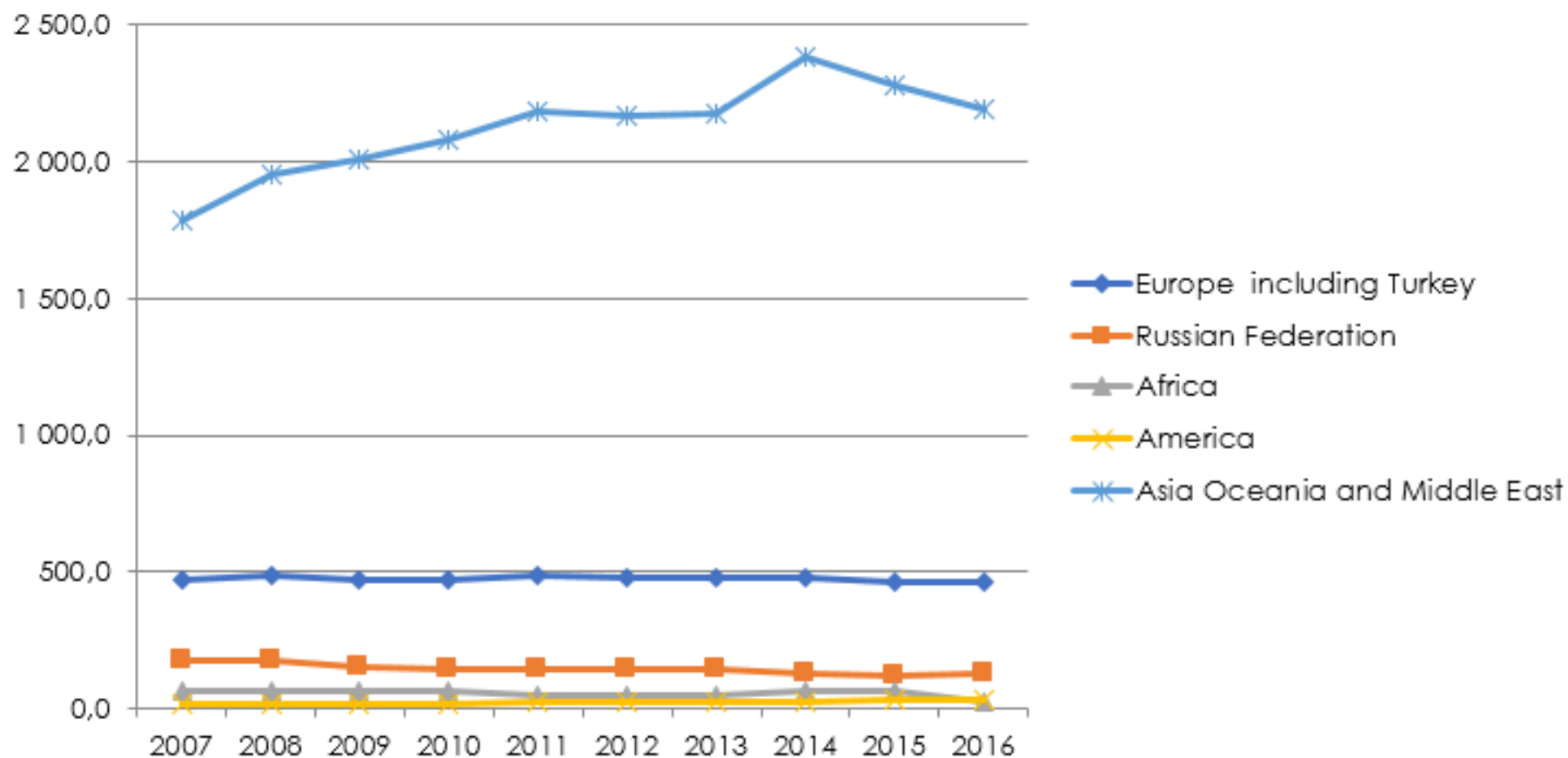
Tonne-kilometres (billions)

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Δ%
Europe including Turkey	723,2	986,8	546,0	700,6	648,6	621,4	604,1	569,6	529,1	556,9	5,0%
Russian Federation	2 090,3	2 116,2	1 865,3	1 903,2	2 127,2	2 222,4	2 222,4	2 298,6	2 304,8	2 342,6	1,6%
Africa	139,2	138,4	137,1	139,2	139,1	139,1	139,4	158,7	136,5	133,5	-2,3%
America	3 540,2	3 513,8	2 973,2	3 076,1	3 132,6	3 231,0	3 231,0	3 252,5	2 524,6	2 547,3	0,9%
Asia Oceania and Middle East	3 095,9	3 452,7	3 466,2	3 462,0	3 621,2	3 593,1	3 592,3	3 410,7	3 072,5	3 034,6	-1,2%
WORLD estimates	9 588,9	10 207,9	8 987,9	9 281,2	9 668,6	9 807,0	9 789,2	9 690,2	8 567,5	8 614,9	0,6%

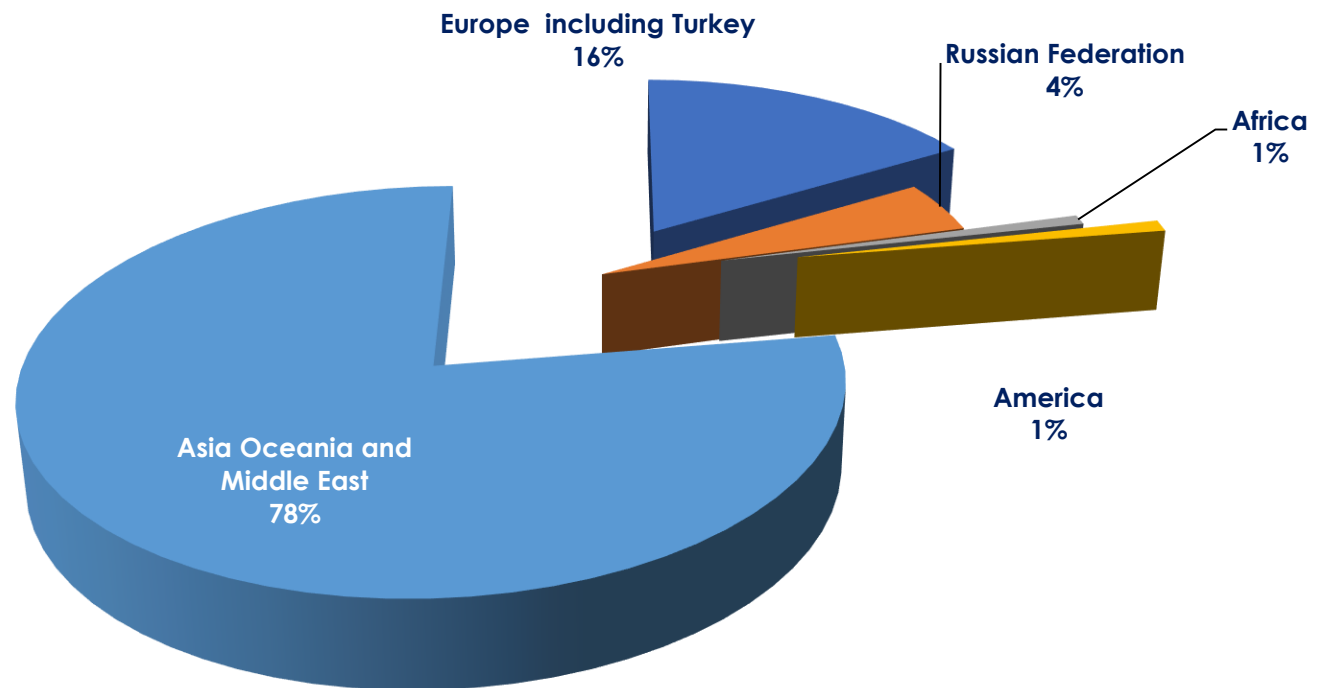
Length of lines (kilometres)

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Δ%
Europe including Turkey	264 630	263 806	268 466	285 408	270 342	265 116	265 231	263 248	258 270	263 197	1,9%
Russian Federation	84 158	85 194	85 281	85 292	85 167	84 249	84 249	85 266	85 262	85 375	0,1%
Africa	52 400	52 482	52 299	50 275	70 505	70 505	70 505	50 959	55 600	55 560	-0,1%
America	389 863	386 773	383 079	375 774	369 222	369 222	381 538	371 114	240 155	170 131	-41,2%
Asia Oceania and Middle East	222 645	221 827	224 151	224 205	233 570	232 366	227 707	229 702	232 714	232 223	-0,2%
WORLD estimates	1 013 696	1 010 082	1 013 276	1 020 953	1 028 806	1 021 457	1 029 230	1 000 289	872 001	806 486	-8,1%

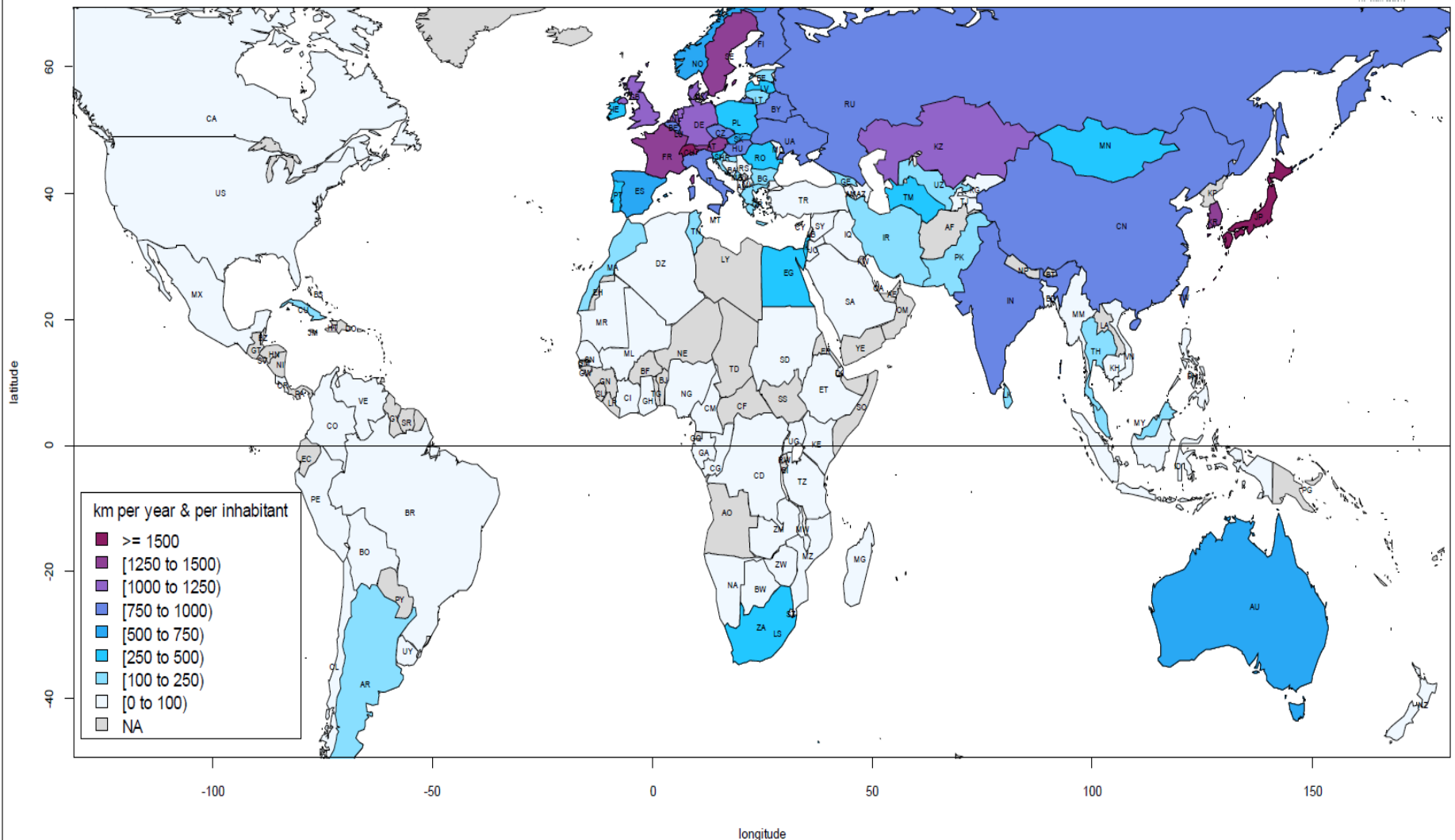
Passenger-kilometres (billions)



Passenger-kilometres Share in 2016



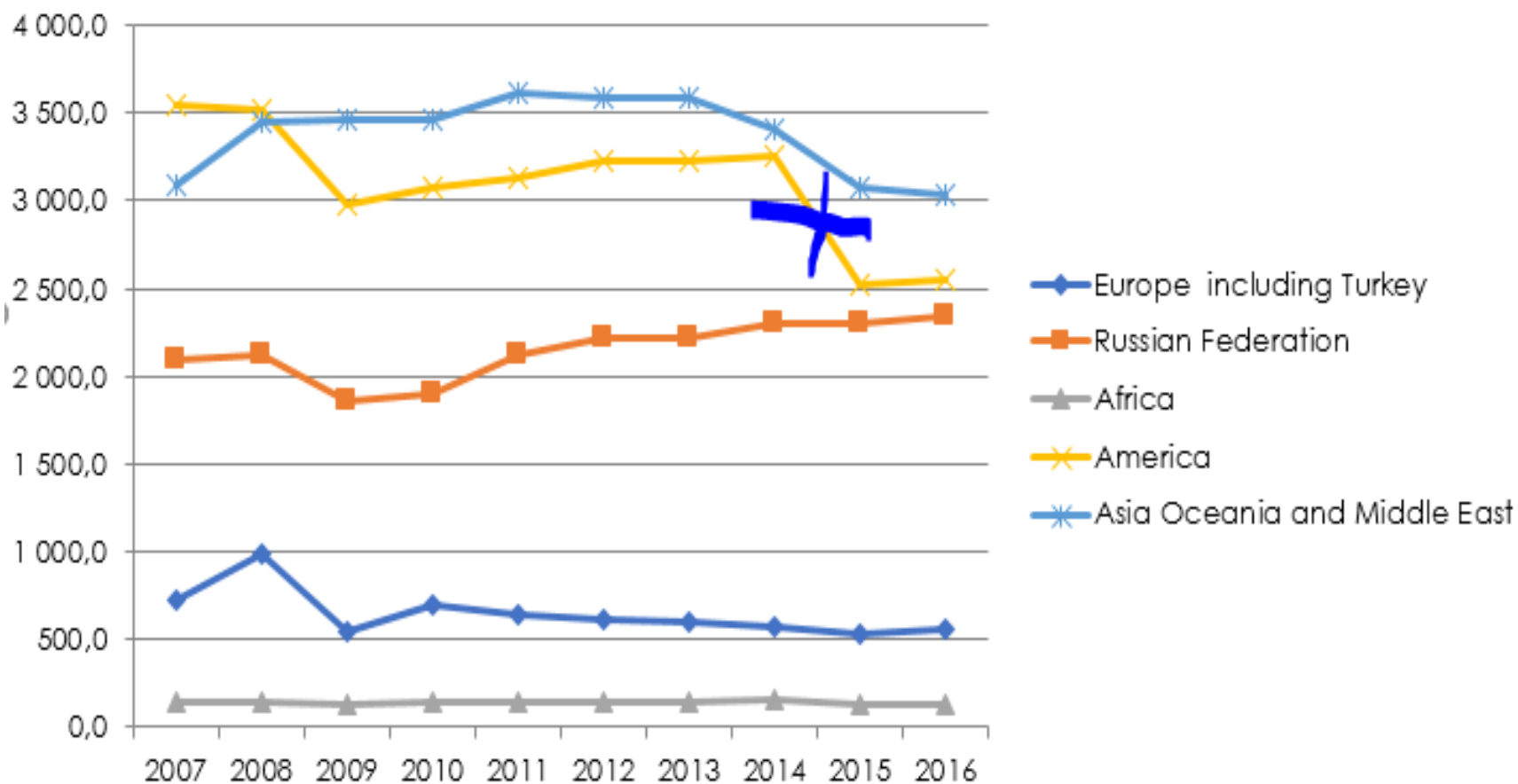
Railway Transport: Annual distance run per inhabitant



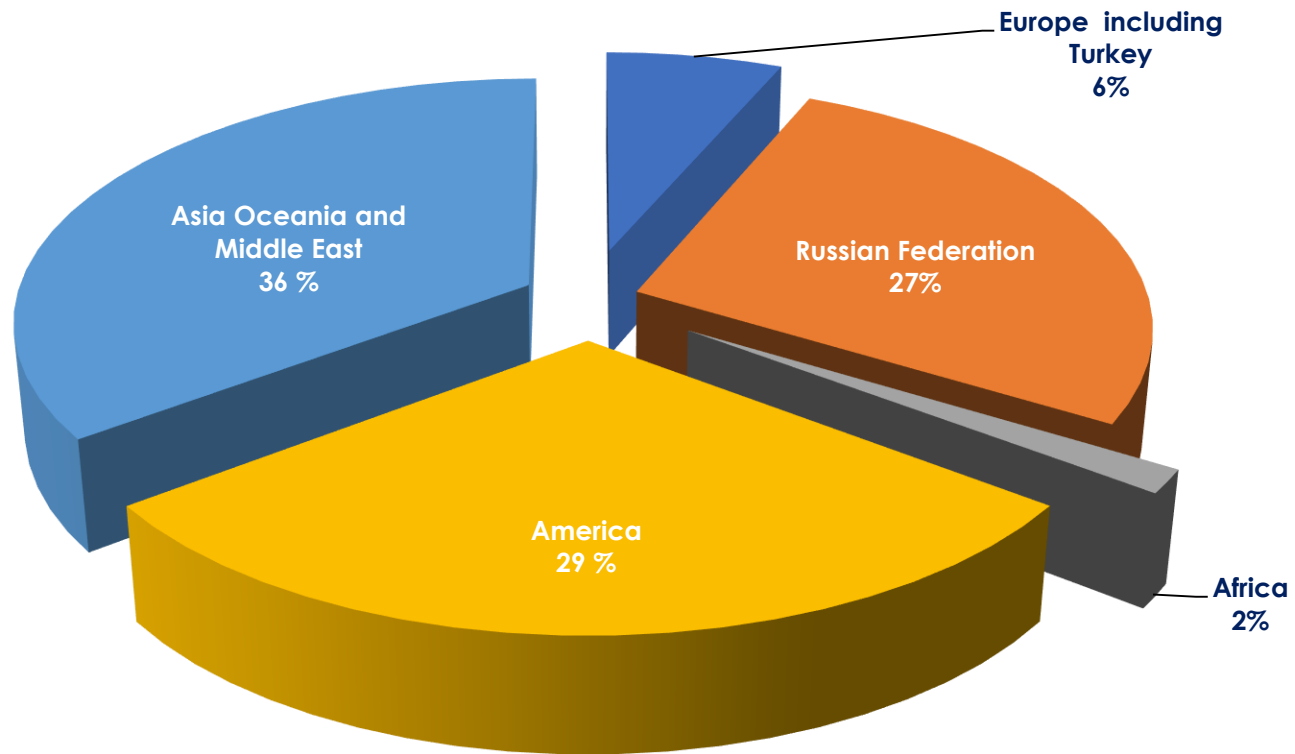
Data source: UIC, OECD, World Bank



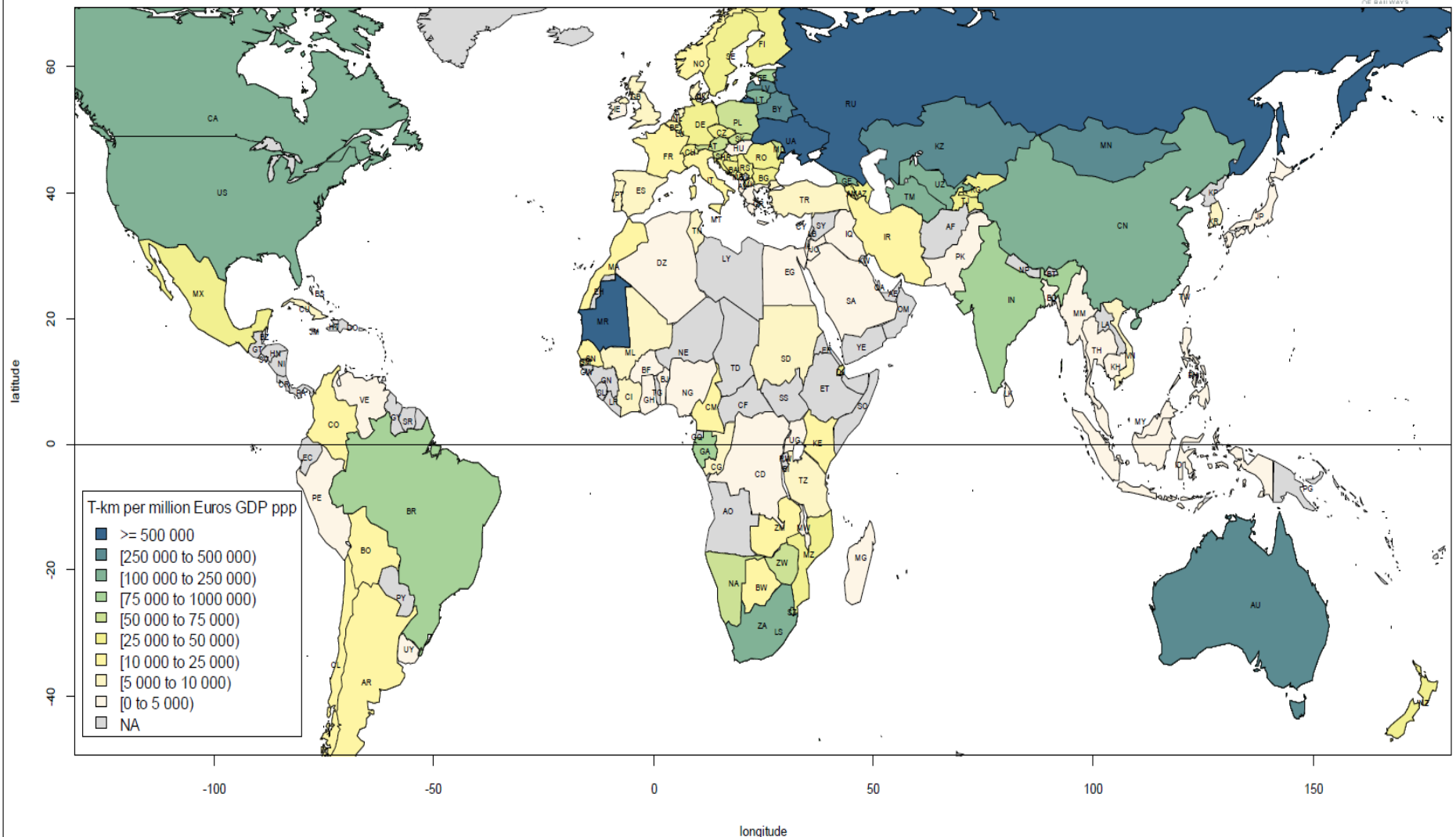
Tonne-kilometres (billions)



Tonne-kilometres Share in 2016



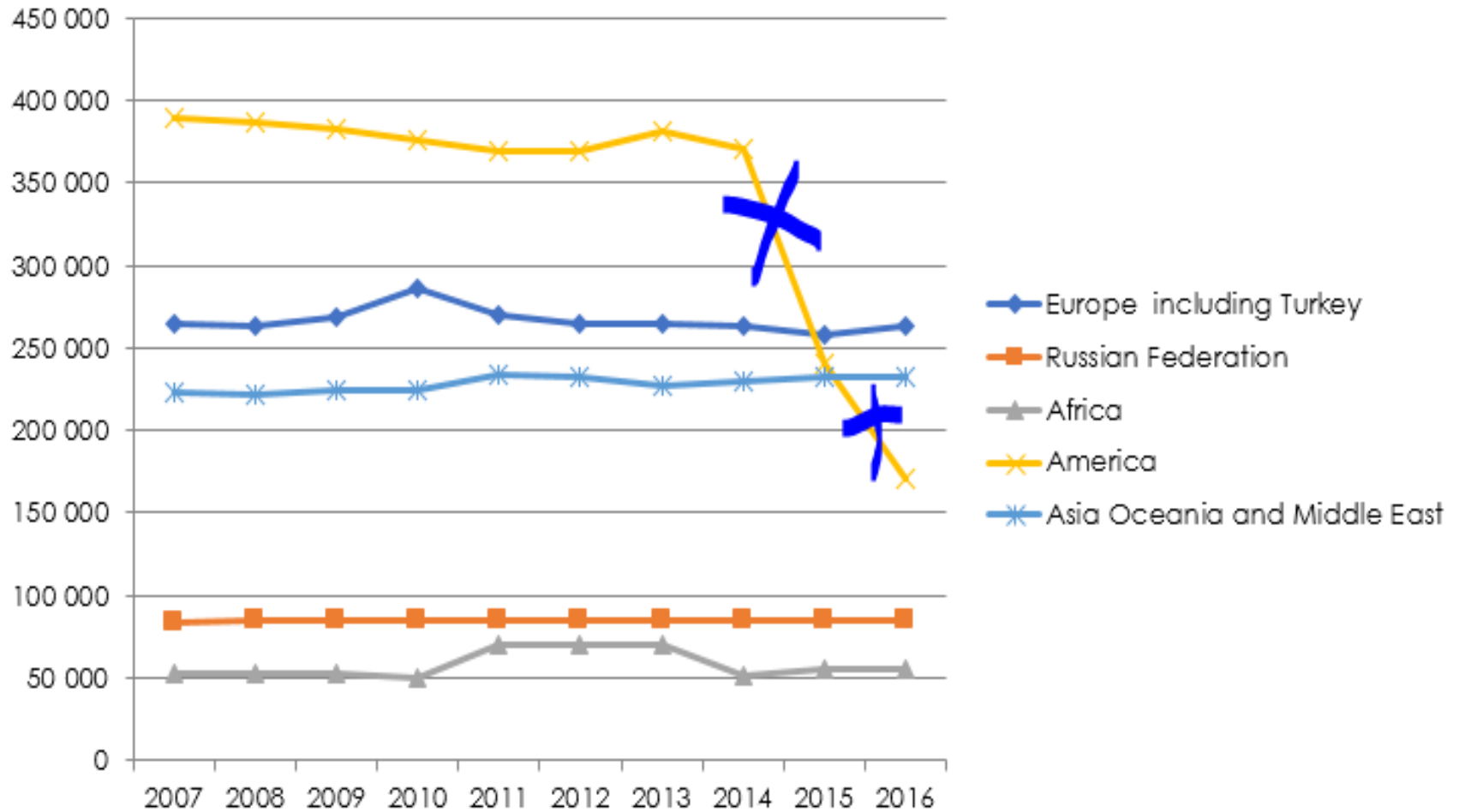
Railway Transport: Freight performance per GDP ppp



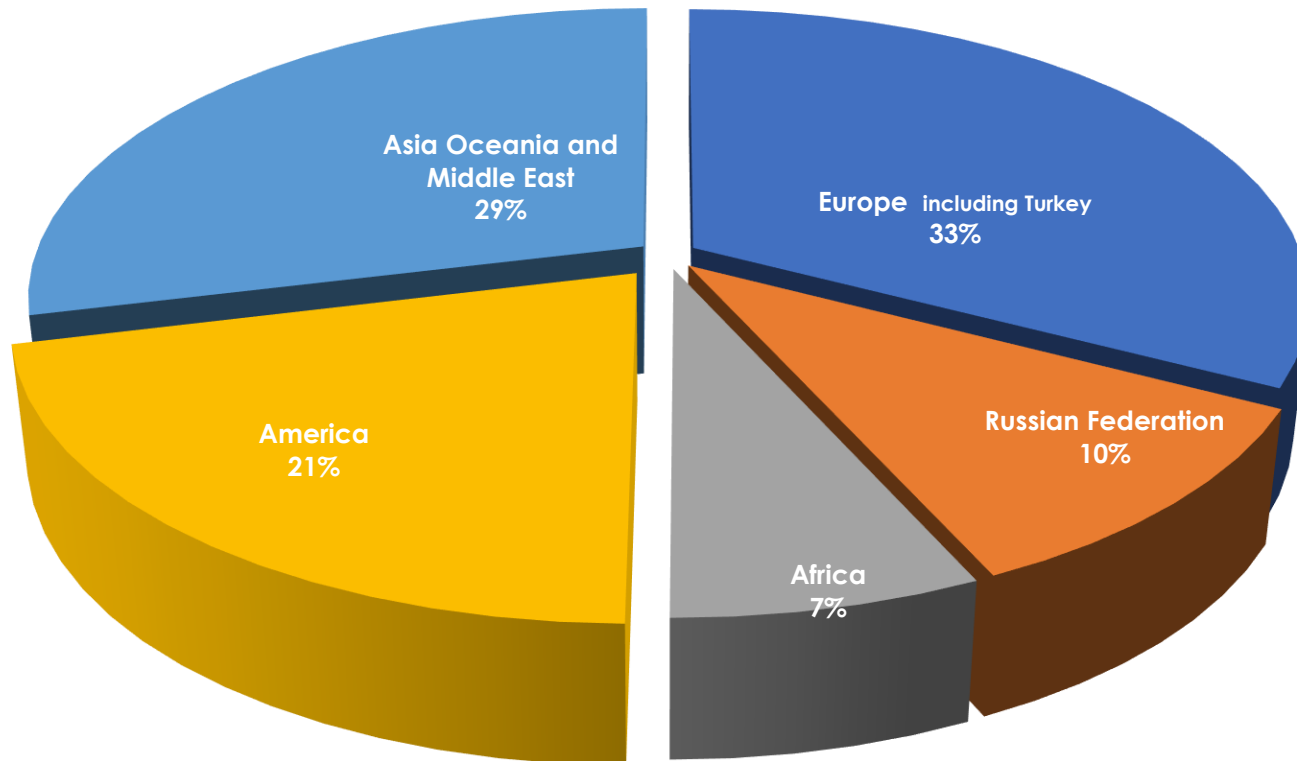
Data source: UIC, OECD, World Bank



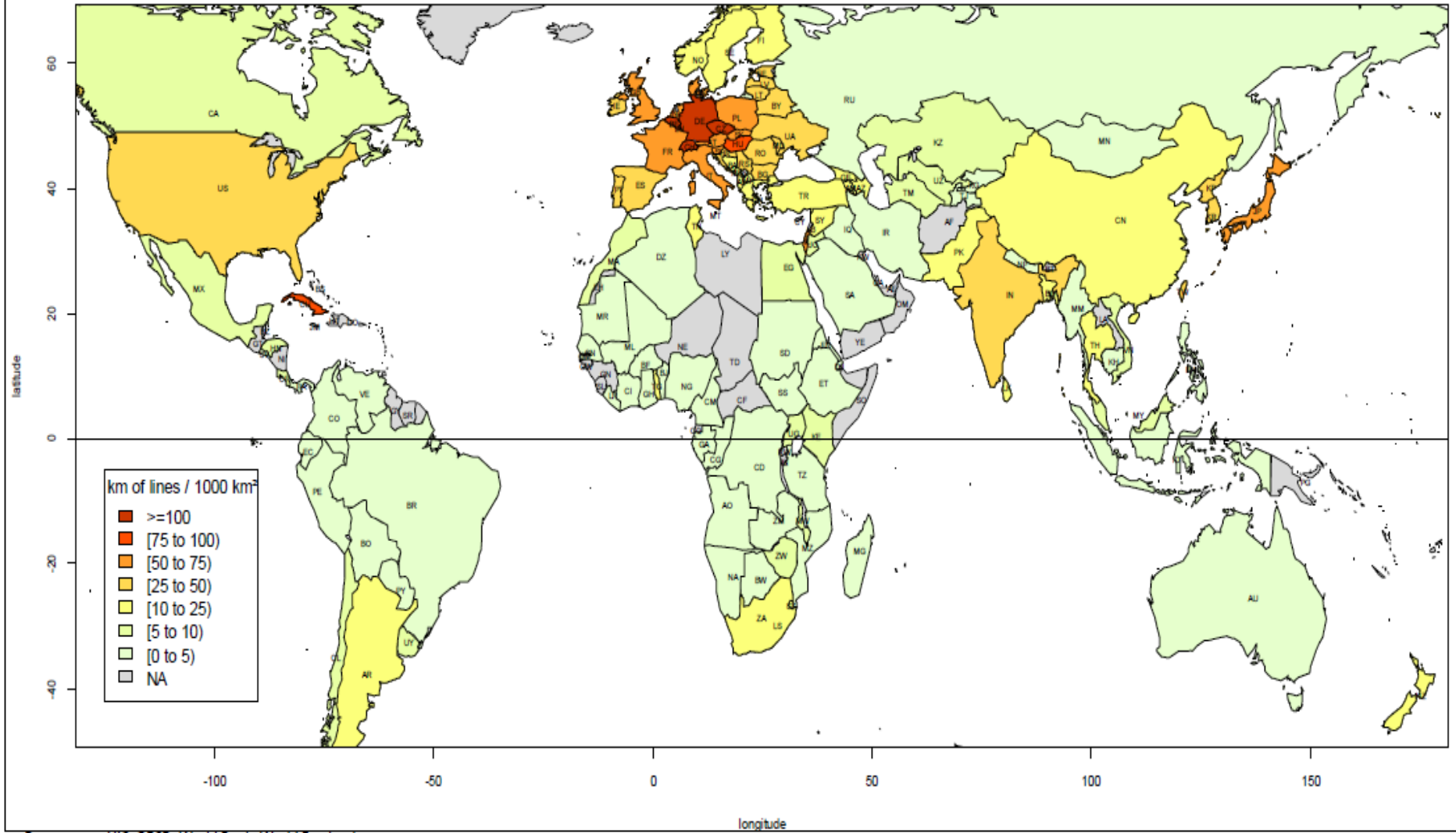
Length of lines (kilometres)



Length of lines Share in 2016



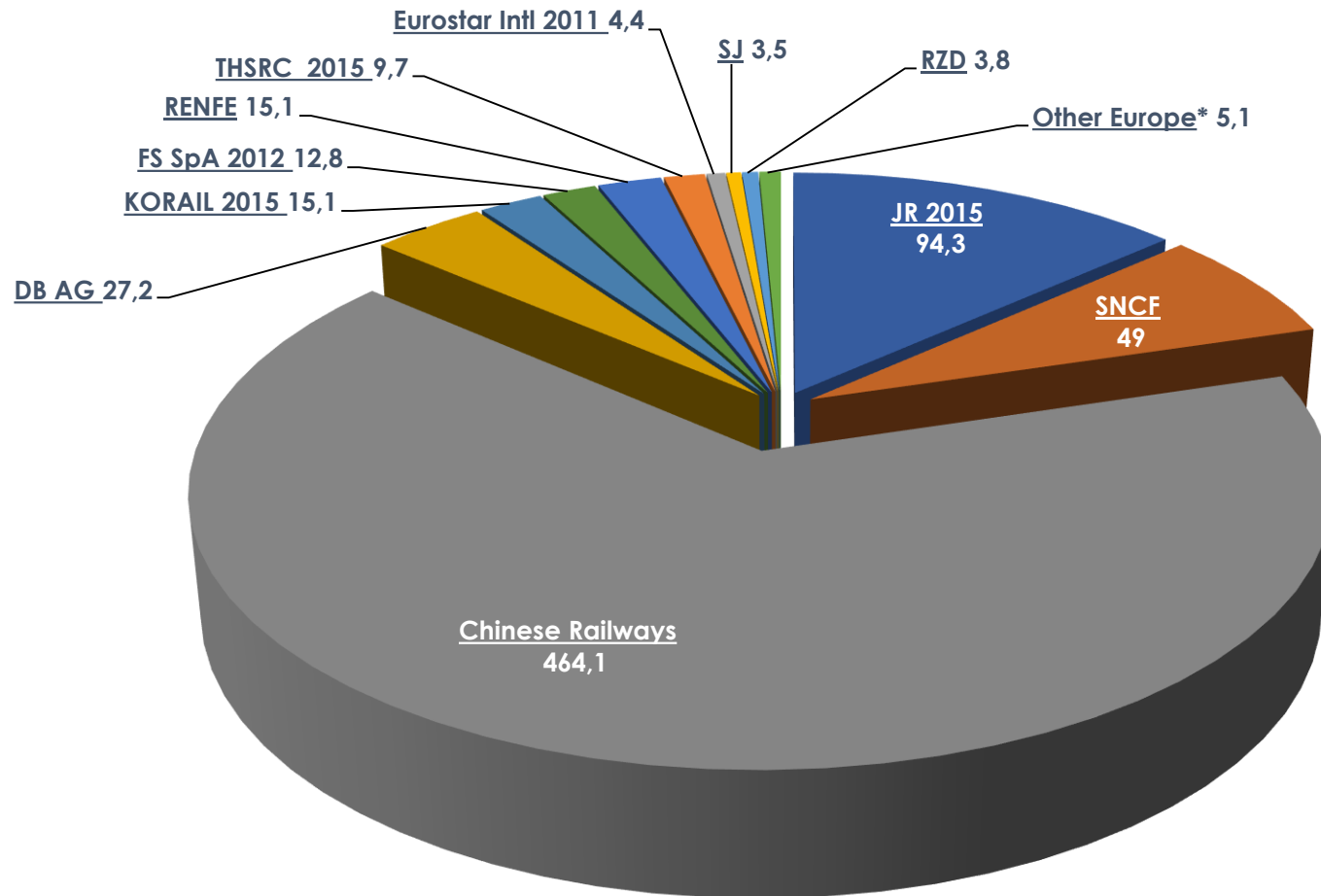
Railway Transport: Density of the Network (km of lines per 1000 km²)



Data source: UIC, OECD, World Bank, World Factbook

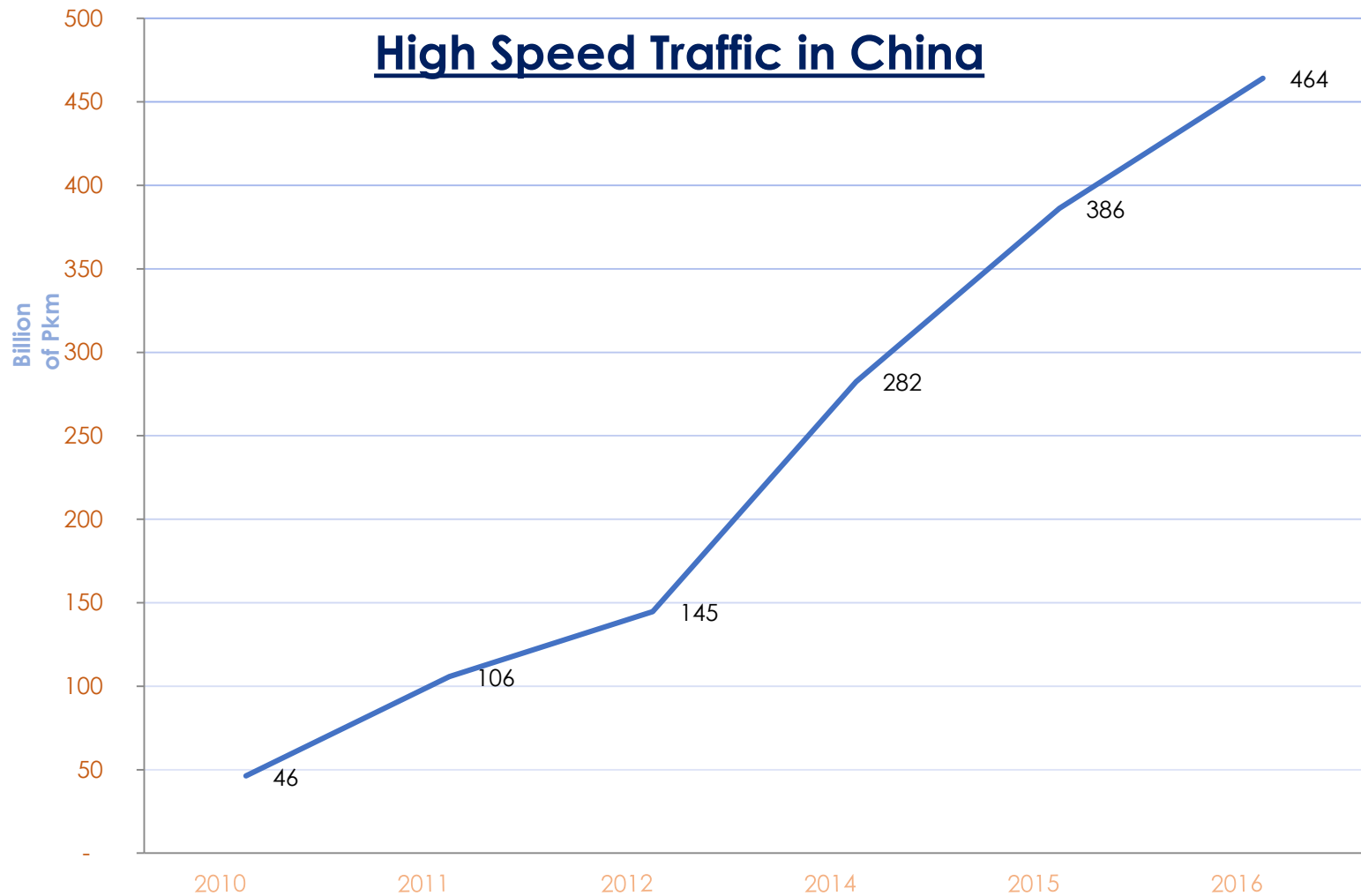


High Speed Traffic 2016 passenger-kilometres in billions

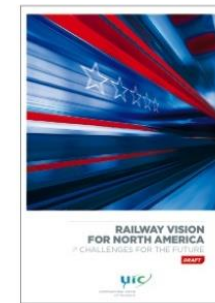
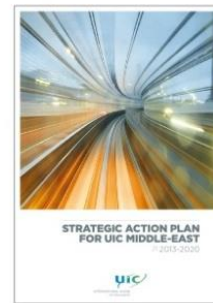
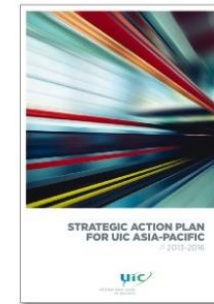
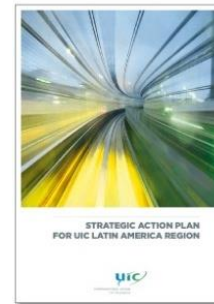
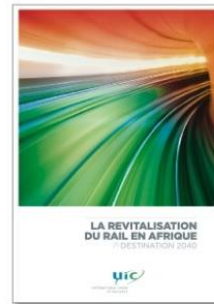


Other Europe * : CD 2013, CP, NS, PKP 2015, SNCB 2011, SZ, TCDD, VR

High Speed Traffic in China

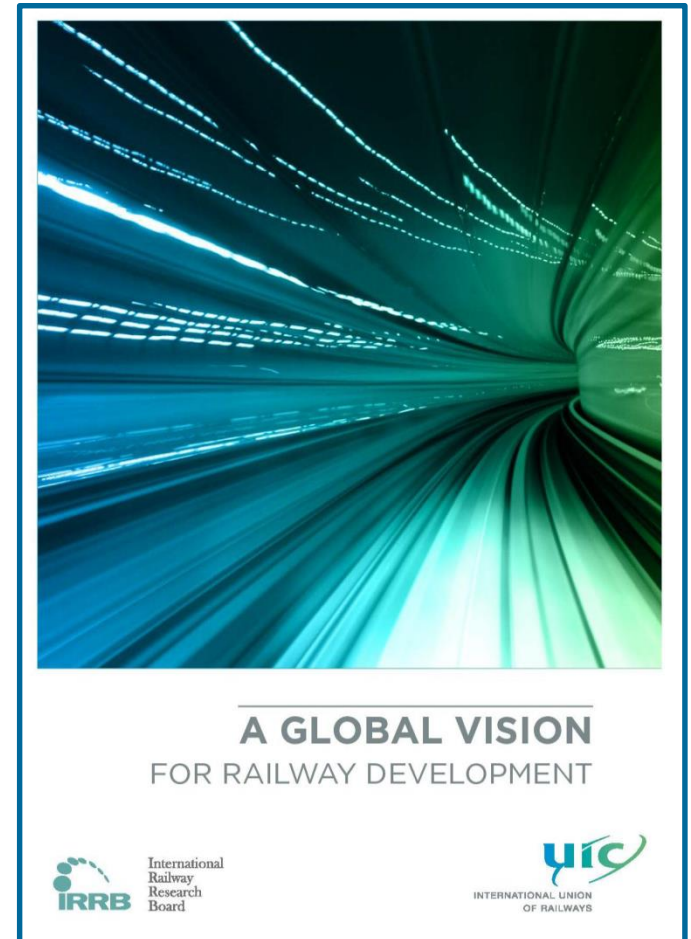


A strategic vision for the rail development in every region of the world



- http://africa.uic.org/squelettes/AFRICA_Strategic_Vision.pdf
- http://asia.uic.org/squelettes/SAP_Asia-Pacific%202016-2019_light.pdf
- http://latin-america.uic.org/squelettes/LATIN-AMERICA_Strategic_Vision.pdf
- http://europe.uic.org/IMG/pdf/europe_challenge2050.pdf
- http://europe.uic.org/IMG/pdf/rail_technical_strategy_europe.pdf
- http://north-america.uic.org/squelettes/NORTH-AMERICA_Strategic_Vision.pdf

Global Vision for railway development



http://www.uic.org/IMG/pdf/global_vision_for_railway_development.pdf

ACCESSING UIC RESOURCES: PUBLIC

The screenshot shows the UIC website homepage. At the top, there is a browser address bar with 'uic.org' and a search bar. The navigation menu includes 'ABOUT', 'ACTIVITIES', 'REGIONS', and 'PRODUCTS & SERVICES'. The hero banner features a blurred image of a train with the text 'UIC THE WORLDWIDE RAILWAY ORGANISATION'. Below the banner is a horizontal menu with icons for 'E NEWS', 'PUBLICATIONS', 'LEAFLETS', 'VIDEOS', 'MEETINGS', and 'UIC MEMBERS'. The 'EVENTS' section displays four event cards: '1st TRAINING ON COMMUTER AND REGIONAL TRAIN SERVICES' (28-30 September, Rome), '9th APNRTC Seoul Korea' (29th September - 01st October 2016), 'INTERNATIONAL RAILWAY SAFETY COUNCIL' (Paris, 2-7 October 2016), and 'DIGITAL DAYS' (7-8 October 2016, Paris UIC Headquarters). The 'CRITIS 2016' card indicates the 11th International Conference on Critical Information Infrastructures Security (10-12 October 2016, UIC HQ Paris, France). Below the events are sections for 'E NEWS ARTICLES' and 'UIC PUBLICATIONS', each with several article and publication thumbnails.

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3331 Publication(s) Sort by: Reference Sub categories: 0 - Statutes and Regulations

Page: 1 2 3 4 5

Language	Title	Description	Price
DE	STA 6/90	Regeln für die Erstellung der Statistik der Internationalen Personenverkehrsströme	€24.00
EN	STA 6/90	Rules for compiling flow statistics for international passenger traffic	€24.00
FR	STA 6/90	Règles à suivre pour l'établissement d'une statistique par flux du trafic international voyageurs	€24.00
DE	STA 4/84	EDV-mäßig erstellte Statistik des internationalen Güterverkehrs (STIMTRI) - EDV-mäßige Erstellung detaillierter...	€0.00
EN	STA 4/84	Computerised international freight traffic statistics (STIMTRI) - Preparation of detailed statistics on international...	€0.00
FR	STA 4/84	Statistique Internationale Marchandises par Traitement Informatique (STIMTRI) - Etablissement de Statistiques...	€0.00

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■ ■ ■ Thank you for your kind attention

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