Which performance indicator is valuable for each stakeholder and how are they measured ?

12th European Rail Transport Regulation Forum
2nd of May 2016, Florence (IT)

Gilles Peterhans
Secretary General UIP

Quotes from William Edwards Deming

“In God we trust; all others must bring data.”

“Without data you’re just another person with an opinion.”

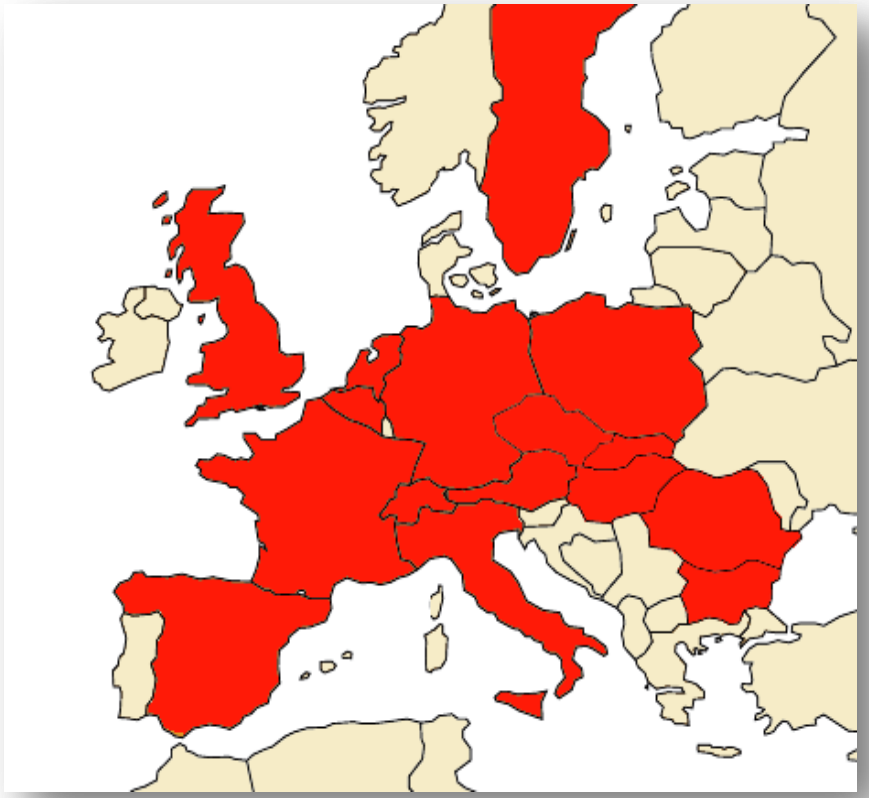
UIP – International Union of Wagon Keepers
Some indicators

Founded in 1950

Represents the interests of Wagon Keepers and ECMs via 14 National Associations around Europe

Represents a European fleet of about 200.000 rail freight wagons producing more than 50% of all tonne-kilometres around Europe.

Seat in Brussels



12bio EUR and yearly 400 - 500mio EUR private investments in the European rail freight market

Valuable statistics data used by wagon Keepers

- From **RMMS reports**: modal split, information of services facilities, freight traffic types and volumes by Member States

⇨ Assess market developments and future investments opportunities

- From **UIC Synopsis, UIRR**: number of freight wagons from incumbents, traffic volumes by RUs, infrastructure issues and CT traffic volumes

⇨ Assess market size and future investments opportunities

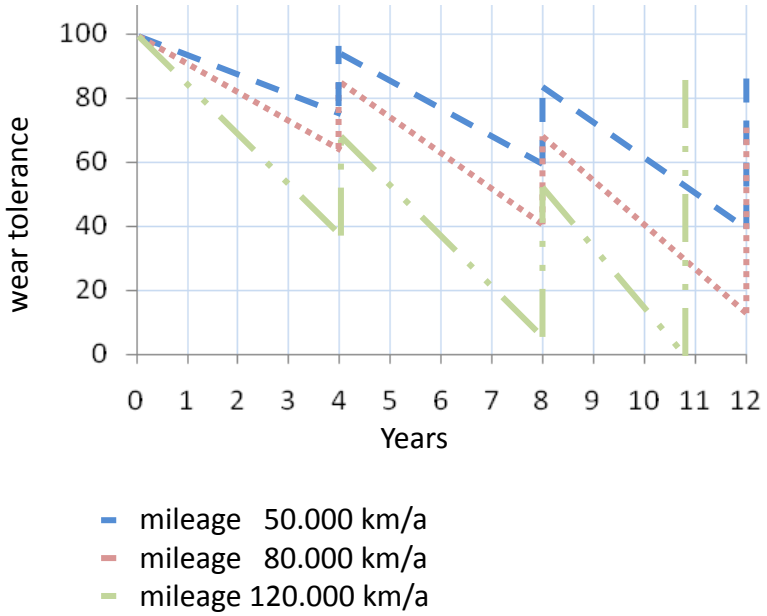
- From **ERA Interoperability and Safety reports**: performance and issues on VA at MS level, safety performance and issues traffic volumes

⇨ Assess best practices for VA, identify safety issues to be addressed in priority

+ Studies (PWC wagonload, Sci Verkehr, UNIFE Rail market study)…

Wagon Performance*: mileage travelled vs the gross weight of the vehicles (in to/km)

"Work Potential" of a Freight Wagon

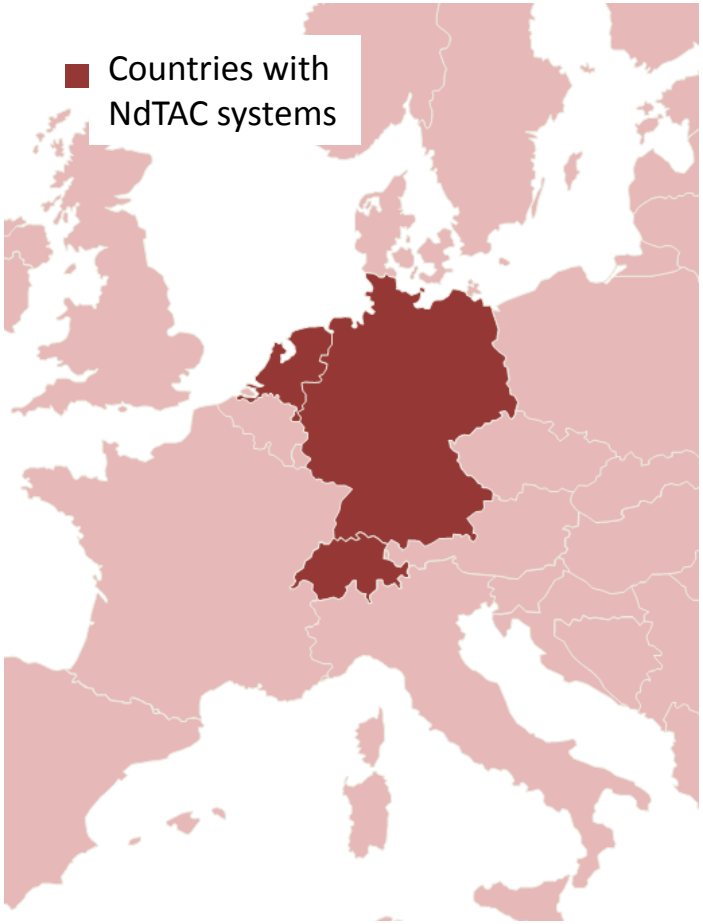


WAGON PERFORMANCE MATTERS

- Enables fine-tuning of maintenance regimes to actual wear and tear
- Improves probability of detection of depleted work potential
- Improves operating performance/ minimisation of downtimes
- Permits more refined monitoring of vehicle components

*** Track and environmental transport conditions can further have a material impact on vehicle wear and tear but are not at the focus yet**

Wagon performance data must include geographical trip information



And SO DOES
ROUTE (Geographical) INFORMATION

- Consistent vehicle performance over time under multi-RU vehicle usage requires RU interchange dates and locations
- ECMs can derive environmental and infrastructure conditions from more detailed route information
- Various European countries demand national vehicle mileage data for calculation of subsidies under noise differentiated track access charge systems (NdTAC)

Since 2014 a standardised XML wagon performance message exists. Moving towards implementation…

"Information itself is worthless unless the recipient knows how to employ it." - Jim Puplava

Some factors may limit the meaningfulness of performance indicators at European level :

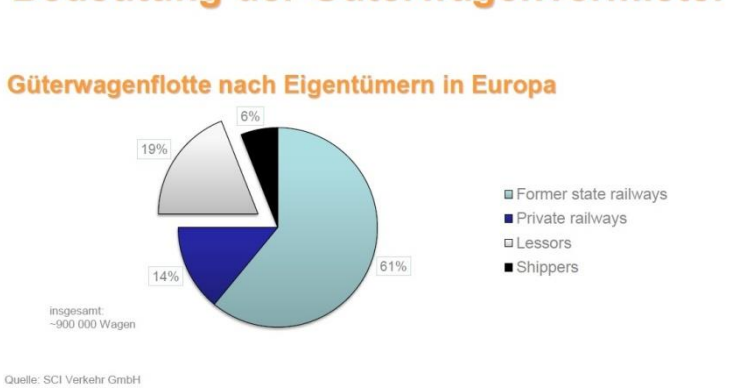
- Industrial and environmental policy at national level
- Heterogeneity of national system (technical/oparational)
- Economic dependency product/market
- Traffic and network density
- Competition between passenger - freight
- Strategy and financial situation of the incumbants
- National laws on working hours, administrative workload, taxes,..
- …..

Performance indicators not always conclusive
Assessment & benchmarking of performance very difficult
Concentrate on collection of reliable and simple data!

Issue of data consistency and performance assessments linked to freight wagons

+ Studies from:

- SCI Verkehr
- Roland Berger
- AT Kearney



TRANSPORT
MEANS OF TRANSPORT 2.6.17

Rail:
GOODS TRANSPORT WAGONS

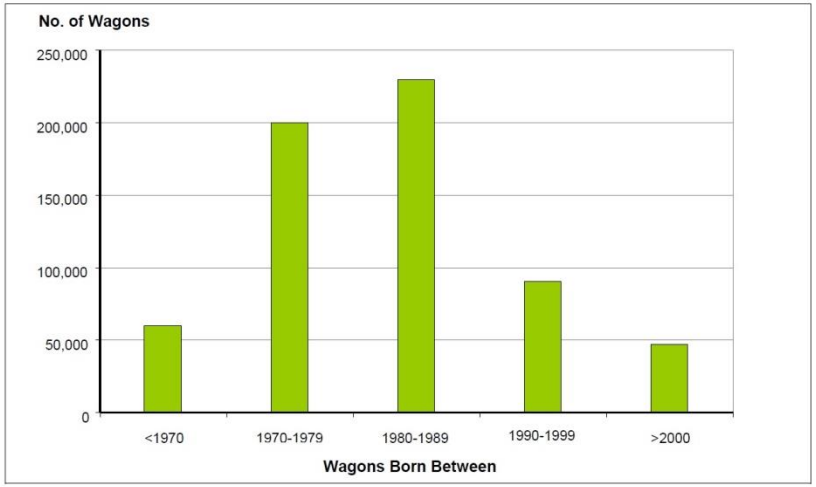
STOCK OF VEHICLES

	1990	2000	2005	2010 (*)	2011 (*)	2012 (*)	2013 (*)
EU-28							
BE	30 332	18 790	17 375	11 612	*11 612*	*11 612*	*11 612*
BG	42 459	29 720	16 511	11 751	16 458	16 576	5 483
CZ		58 524	44 545	27 416	27 314	27 066	26 281
DK	4 632	2 236					
DE	366 724	189 558	158 247	108 840	106 727	104 460	96 868
EE		5 857	18 971	2 958	2 981	2 931	*2 931*
IE	1 830	1 856	926	502	502	*502*	450
EL	10 967	3 453	3 491	3 158	3 158	3 158	*3 158*
ES	37 687	26 452	23 842	14 337	13 732	14 148	14 900
FR	148 100	94 789	95 738	25 314	20 322	17 830	16 333
HR	13 720	9 986	7 330	6 674	6 063	*6 063*	5 959
IT	99 728	70 115	45 730	30 331	28 493	22 140	20 625
CY	-	-	-	-	-	-	-
LV	11 085	9 146	8 871	6 038	6 126	6 320	6 815
LT	*12 860*	13 155	13 192	9 238	9 212	9 112	9 202
LU	2 719	2 626	3 222	3 895	*3 895*	*3 895*	*3 895*
HU		23 528	19 130	*11 700*	*11 700*	*11 700*	*11 700*
MT	-	-	-	-	-	-	-
NL	6 697	4 700					
AT	34 330	23 970	22 655	28 605	17 412	18 104	17 477
PL	275 582	130 116	75 164	68 151	65 102	63 269	62 255
PT	4 579	4 162	3 495	3 194	3 170	*3 170*	*3 170*
RO	166 086	117 982	65 175	72 605	69 285	72 638	42 571

COWI Impact Assessment on Noise:
the age structure of the wagon fleet from the Virtual Vehicle Register indicates that in 2013, approximately ***one third of the wagons were 40 years or older****.*

Item	Fraction	UIP + non-UIP	UIP only
Total number of freight wagons in Europe		600,000	180,000
Percentage of all tank cars	25%	150,000	45,000
➔ Percentage of RID tank cars only	80%	120,000	36,000
Percentage already under TE 22	25%	30,000	9,000
Percentage due to Dutch proposal (remaining gases and most liquids)	50%	**60,000**	**18,000**
Percentage remaining	25%	30,000	9,000

Figure 19: Age Distribution of the Fleet (2005)



Source: KCW/ SDG/ TUB elaboration based on PWC 2005

Our contribution:
Collect reliable fleet data at European scale

Wagon Type
Open box wagon
Open hopper wagon
Covered wagon
Flat wagon
Car carrier wagon
Intermodal wagon
Coil wagon
Covered hopper wagon
Covered box wagon
Powder wagon
Non- RID Tank wagon
RID without class 2 Tank Wagon
RID class 2 Tank Wagon
Other Wagon

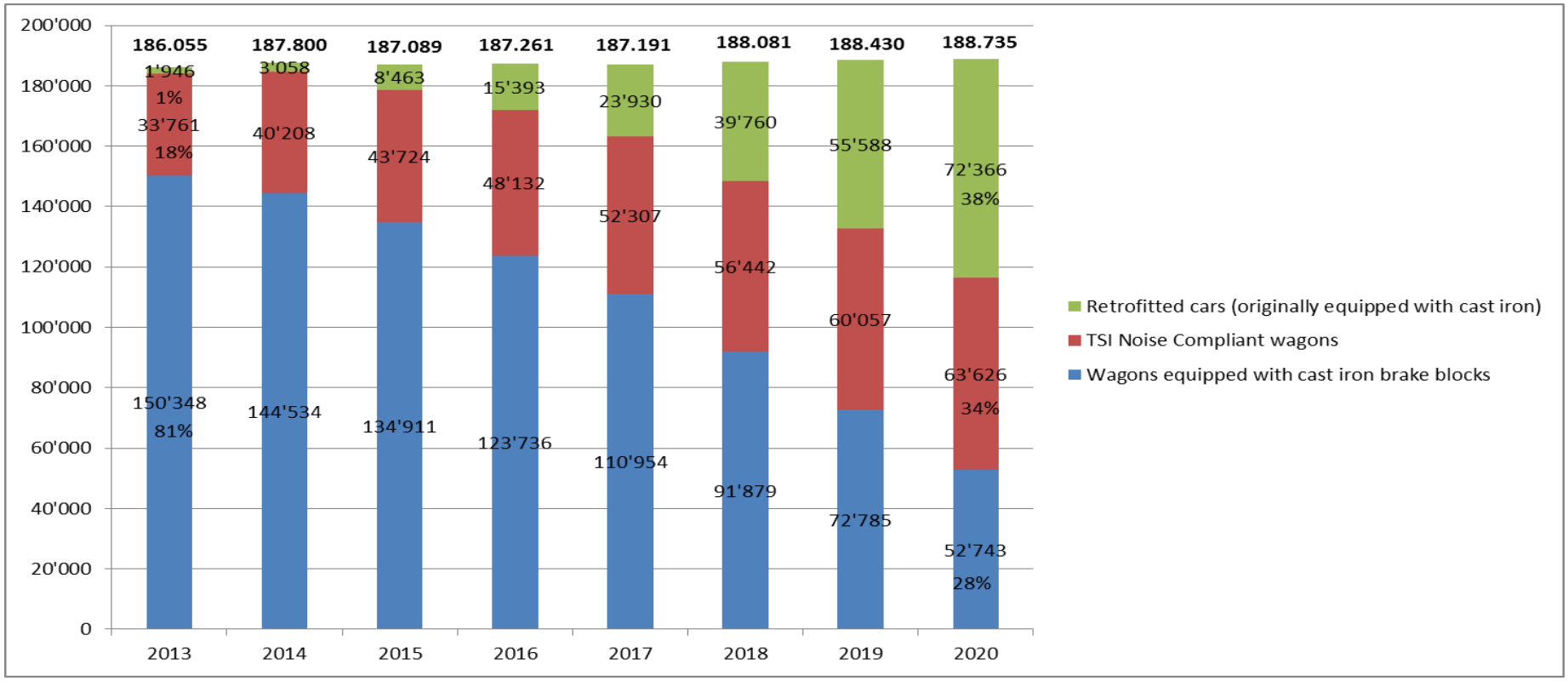
Age	Payload	Brake Type
0 – 5 years		Cast Iron
6 – 15 years	Payload = D	K
16 – 30 years		LL
> 30 years	Payload ≠ D	DISC

Objective:

- Provide comprehensive data **to support policy-makers in shaping the future of transport policies**
- **Increase credibility and awareness** about independent Wagon Keepers' businesses
- **Avoid distortions and amalgams** in data analysis
- Provide good practices and encourage other associations (CER / UIC / UIRR**) to collect similar and reliable data** from their members as well

Our contributions
Collect fleet development data on NOISE

- Main retrofitting activities starting in 2018 (probably triggered by announcements from CH & DE)
- Lack of certainity regarding development in other Countries (NDTAC, ban, operational restriction)
- Lack of sufficient funding (especially for the higher operational cost after retrofitting)



Our contributions
Costs assessment linked to ECM certification

Comparison Questionnaire / Final Report	Cluster 1 < 1'000	Cluster 2 < 5'000	Cluster 3 < 10'000	Cluster 4 > 10'000
Wagons (average):	221	2'698	6'000	20'364
Additional Staff (w.a.):	2,5	2,7	3,0	5,5
Cost 1 FTE (w.a.):	31'177	53'026	50'000	74'636
Cost initial Certification – 5 years validity of Certificate (w.a.):	13'829	23'343	3'600	31'388
Cost initial certification per year (20% of above figure):	2'766	4'669	720	6'278
Surveillance per year (w.a.):	4'600	7'047	2'250	21'550
Cost Staff per year:	77'423	143'929	150'000	410'500
Total Cost per year:	**84'789**	**155'644**	**152'970**	**438'328**
Total cost per wagon and year:	**384**	**58**	**25**	**22**
Total Cost per wagon and day (average):	**1,05**	**0,16**	**0,07**	**0,06**
Final Report (November 2011)	**1'000 wagons**	**5'000 wagons**	**10'000 wagons**	
Total cost per year:	**78'750**	**155'875**	**233'500**	
Total cost per day:	**0,22**	**0,09**	**0,06**	

Numbers presentedt to ERA economic unit as input to ex-post assessment and revision ECM regulation

Conclusion – LESS IS MORE!

Define the objective and the use of the performance indicator:

1) Measure it to improve ?
2) Measure it to communicate ?
3) Measure it to compare ?

Define the methodology:

1) What are the data we need to measure ?
2) Are the data (parameters, variables,..) available and simple to collect ?
3) Are the data «harmonised» at European level ?
4) Who are the data owner ?
5) Can we solve the confidentiality issue ?

- Concentrate on very few but reliable KPIs for which the data owner is known, the collection workload is small and the confidentiality issue can be easily solved

«The price of light is less than the costs of darkness»
But too much light blinds…

Thanks for your attention

Austria | Belgium | Czech Republic | France | Germany | UK | Hungary

Italy | Netherlands | Poland | Slovak Republic | Spain | Sweden | Switzerland

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Introduction

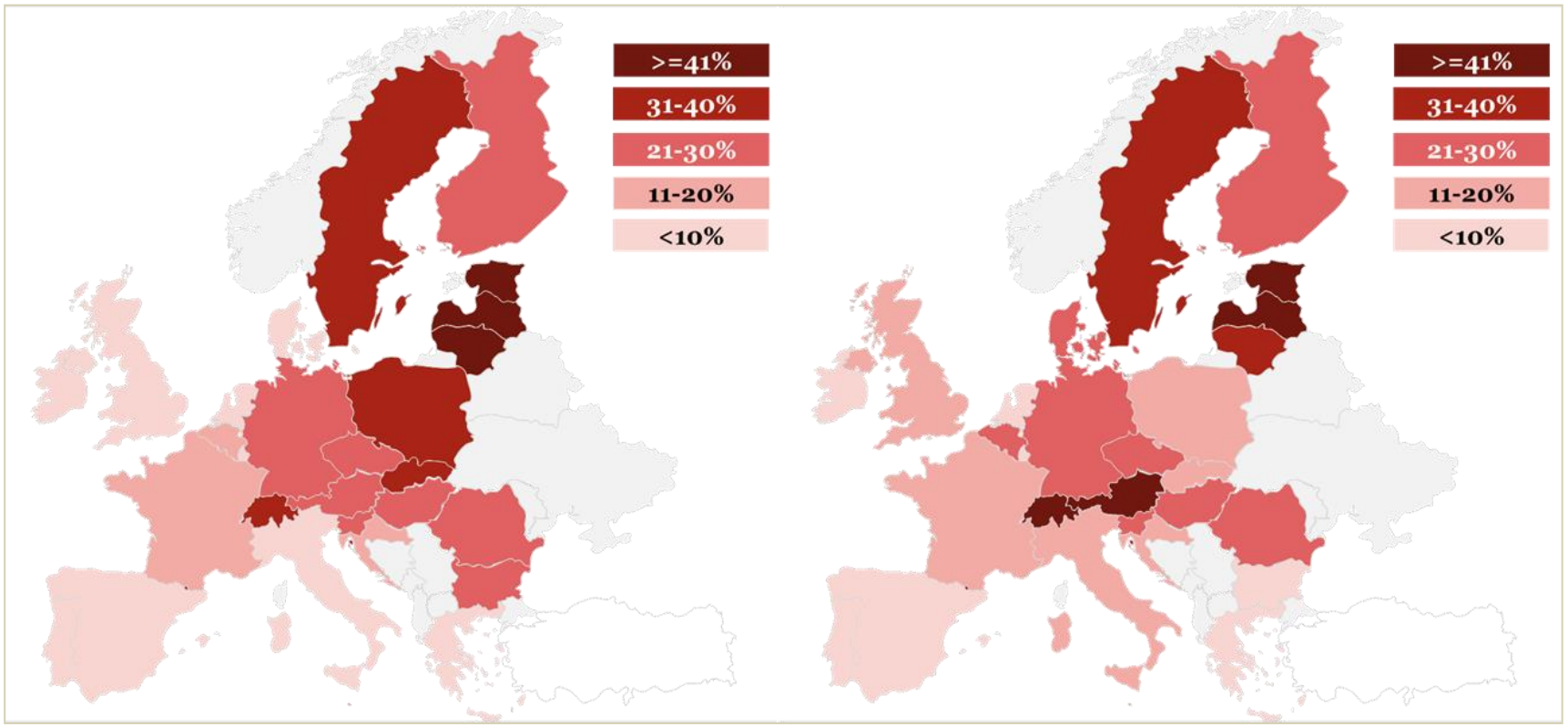
The freight wagon is one of the most important resources for rail freight transportation to achieve higher economic performance and adapt to modern logistic chains requirements.

UIP aims to support all efforts towards a step change to achieve efficiency gains in rail freight services

- Promote an European harmonisation of maintenance rules
- Promote European solutions for noise abatement and retrofitting
- Increase awareness of rail freight performance in safety terms
- **Ensure the collection and exchange of consistent data between the actors**
- **Get statistics ready**

*Asset investments will only be attracted for projects with revenue streams that are **isolated from risks over which we have little or no control.***

Example: evolution of wagon load traffic at European level



Sources: Donnée en tonnes*km, Eurostat 2003- 2012 , Etude PWC sur le trafic par wagons isolée, 2014