

The Future of European Road Transport







Width (m) / Breite (m) All vehicles / Alle Fahrzeuge

Superstructures of conditioned vehicles / Überbauten von

Kraftfahrzeug (außer einem Bus)

2.6 2.6 2,6 2.6

16,5

11,5

26 ¹

32 ²

 42^{3}

38 ³

38 ²

44 ¹

16,5 16,5

18,75 18,35 18,75

2.6 2.6 2.6 2,6 2,6 2.6 2,6 2.6 2,6 2,6

18 | 20

25 1 26 ¹

> 32 ² 32 ² 32 ² 32 ² 32 ²

34 ⁶

34 ⁶

27 1 24 24 25.5 24

18 20

24 26 24

> 26 ¹ 26 ¹ 26 ¹ 26 ¹ 26 ¹

45 *

44 ²

45*

38 ² 38 ² 38 ² 38 ²

12 | 12 | 12 |

angepassten Fahrzeugen

Length (m) / Länge (m) Motor vehicle (other than a bus)

Trailer (Königszapfen bis

Road train / Straßenzug

single axle / einzelne Achse

tandem axle / Tandemachse

with air suspension / mit

motor vehicle / Kraftfahrzeug

trailer / semi-trailer / Anhänger

Maximum permitted weight (t)

drive axle / Antriebsachse

Hinterkante)

Axle weight (t

Luftaufhängung

Sattelanhänger

tridem axle

Motor vehicle

Trailer

2 axles / 2 Achsen

- 3 axles / 3 Achsen

4 axles / 4 Achsen

- 2 axles / 2 Achsen

- 3 axles / 3 Achsen Articulated vehicle

3 axles (2+1) / 3 Achsen (2+1)

- 4 axles (2+2) / 4 Achsen (2+2)

5 axles (2+3) / 5 Achsen (2+3)

- 5 axles (3+2) / 5 Achsen (3+2)

- 6 axles (3+3) / 6 Achsen (3+3)

4 axles (2+2) / 4 Achsen (2+2)

5 axles (2+3) / 5 Achsen (2+3)

 5 axles (3+2) / 5 Achsen (3+2) - 6 axles (3+3) / 6 Achsen (3+3)

container transport (3+2/3) /

Containertransport (3+2/3)

Road train

Articulated vehicle

2.6

10,5

26 ¹ 25 ¹

32 2 32 2

38 ²

40 ¹

18 18 2

18 18,35

12 12 14

16,5 16,5 16,5 16,5

11,5

38 ²

43 ¹

49 ¹ 2,6 | 2,6 | 2,6

20 | 18,75 | 18,75 | 18,35

12 1 11,5

24 | 26.5 | 27 1 | 24

32 ²

20 ¹

24 | 30 1 | 24

38 ²

16,5 16,5 16,5

11,5

2,5 | 2,5 | 2,55 | 2,55 | 2,55 | 2,5 | 2,5 | 2,5 | 2,5 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,55 | 2,

21.5

 2,6 2,65

16,5 16,5 22 16,5

11,5

 10 10

11,5

26 ¹

38 ²

11,5 11,5 11,5

18,75 | 18,75 | 18,75 | 18,75 | 20 | 25,25 | 18,75 | 18,75 | 18,75 | 22 | 18,75

26 ¹

32² 32²

11,5

26 ¹ 26 ¹

38 ²

2.6 2.6 2,6 2.6 2.6 2,6 2,6 2,6 2.6

12 12,4

18,5

11,5 11,5

19,5

31 ² 32 ²

29,5

22 29.5²

12 12 14 12,4

16,5 16,5 16,5 16,5 16,5 16,5

18 16 4 16

24 22 4 24

18 ²

38 ²

24 24

29,5

10 4 10

AT AL BE BG4BABY4 CH CY CZ DE DK ES EE FR F UK GE GR HU HR IT15 IL IR IE KZ LU LT LV4 MD MK NO NL PT15 PL4 RO4 RU SE SK SI TF	₹ UA	E
ne (m) 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	. 4	

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Stand 2006/2007	AT	AL	BE	BG ⁴	ВА	BY ⁴ CI		Y CZ	DE	DK	ES	EE	FR	F	UK	GE	GR	HU	HR	IT ¹⁵	IL	IR	IE	KZ	LU	LT	LV ⁴	MD	MK	NO	NL	PT ¹⁵	PL ⁴	RO ⁴	RU	SE	SK	SI	TR	UA
Height (m) / Höhe (m)	4	4	4	4	4	4 4	4 4	4	4	4	4	4	7	4,2	7	4	4	4	4	4	4	4,5	4,25	4		4	4	4	7	4	4	4	4	4	7	4,5	4	4	4	4

2,6 2.6 2.6 2,6 2.6

16,5

13 2

32² 32 ² 32 ² 32²

27 1

38 ² 38 ²

43 1

37 ¹

53 1. 9

16,5 16,5

11,5 11 11 11,5

18 16 12 18

18,75 | 18,75 | 18,75 | 18,75 | 18,75

26 ¹ 26 ¹ 26 ¹

19 ¹

45¹

16,5

16,5 20

11,5

11,5

18,75 | 18,75 | 18,75 | 18,75 | 18,75 | 25,25 | 18,75 |

53 9 44 2

16,5 16,5 16,5 16,5

11,5 11,5

2.55 | 2.5 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55 | 2.55

* F&L * * * *	Future of	tne European	Road	iransport

Future	of the	European	Road	Transpo



Stand 2006/2007	FI ⁸
Height (m) / Höhe (m)	4,2
Width (m) / Breite (m)	
All vehicles / Alle Fahrzeuge	2,55
Superstructures of conditioned	
vehicles / Überbauten von	
angepassten Fahrzeugen	2,6
Length (m) / Länge (m)	
Motor vehicle (other than a bus) /	
Kraftfahrzeug (außer einem Bus)	12
Trailer (Königszapfen bis	
Hinterkante)	12
Articulated vehicle	16,5
Road train / Straßenzug	25,25
Axle weight (t)	
single axle / einzelne Achse	10
drive axle / Antriebsachse	11,5
tandem axle / Tandemachse	
- motor vehicle / Kraftfahrzeug	18
with air suspension / mit	
Luftaufhängung	19
- trailer / semi-trailer / Anhänger	
Sattelanhänger	20
tridem axle	24

Maximum permitted weight (t)	
Motor vehicle	
- 2 axles / 2 Achsen	18
- 3 axles / 3 Achsen	26 ¹
- 4 axles / 4 Achsen	32 ²
Trailer	
- 2 axles / 2 Achsen	20
- 3 axles / 3 Achsen	30
Articulated vehicle	
- 3 axles (2+1) / 3 Achsen (2+1)	28
- 4 axles (2+2) / 4 Achsen (2+2)	38
- 5 axles (2+3) / 5 Achsen (2+3)	42
- 5 axles (3+2) / 5 Achsen (3+2)	46
- 6 axles (3+3) / 6 Achsen (3+3)	48
- container transport (3+2/3) /	
Containertransport (3+2/3)	48
Road train	
- 4 axles (2+2) / 4 Achsen (2+2)	36
- 5 axles (2+3) / 5 Achsen (2+3)	44
- 5 axles (3+2) / 5 Achsen (3+2)	44
- 6 axles (3+3) / 6 Achsen (3+3)	53 9
	60

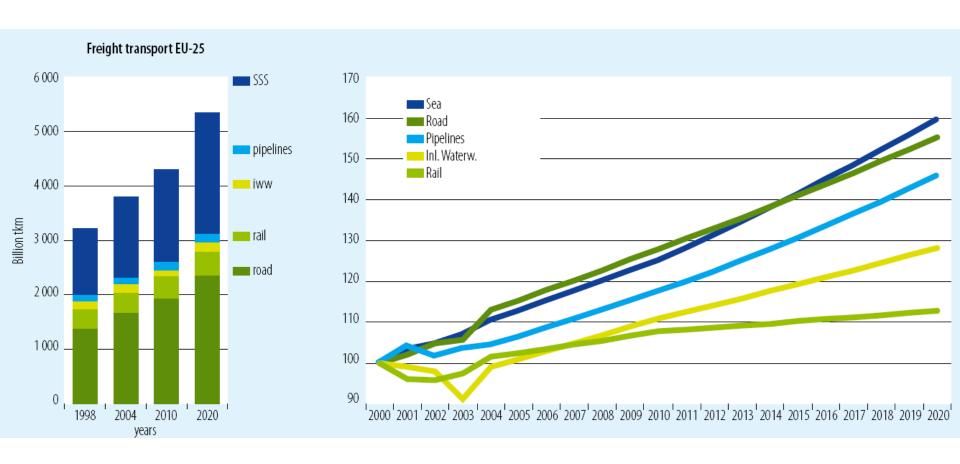


Stand 2006/2007	RF
Height (m) / Höhe (m)	7
Width (m) / Breite (m)	
All vehicles / Alle Fahrzeuge	2,55
Superstructures of conditioned vehicles	
/ Überbauten von angepassten	
Fahrzeugen	2,6
Length (m) / Länge (m)	
Motor vehicle (other than a bus) /	
Kraftfahrzeug (außer einem Bus)	12
Trailer (Königszapfen bis Hinterkante)	12
Articulated vehicle	20
Road train / Straßenzug	20
Axle weight (t)	
single axle / einzelne Achse	10
drive axle / Antriebsachse	
tandem axle / Tandemachse	
- motor vehicle / Kraftfahrzeug	
with air suspension / mit	
Luftaufhängung	
- trailer / semi-trailer / Anhänger	
Sattelanhänger	
tridem axle	

Maximum permitted weight (t)	
Motor vehicle	
- 2 axles / 2 Achsen	18
- 3 axles / 3 Achsen	25
- 4 axles / 4 Achsen	30
Trailer	
- 2 axles / 2 Achsen	
- 3 axles / 3 Achsen	
Articulated vehicle	
- 3 axles (2+1) / 3 Achsen (2+1)	28
- 4 axles (2+2) / 4 Achsen (2+2)	36
- 5 axles (2+3) / 5 Achsen (2+3)	38
- 5 axles (3+2) / 5 Achsen (3+2)	38
- 6 axles (3+3) / 6 Achsen (3+3)	38
- container transport (3+2/3) /	
Containertransport (3+2/3)	
Road train	
- 4 axles (2+2) / 4 Achsen (2+2)	36
- 5 axles (2+3) / 5 Achsen (2+3)	38
- 5 axles (3+2) / 5 Achsen (3+2)	38
- 6 axles (3+3) / 6 Achsen (3+3)	38

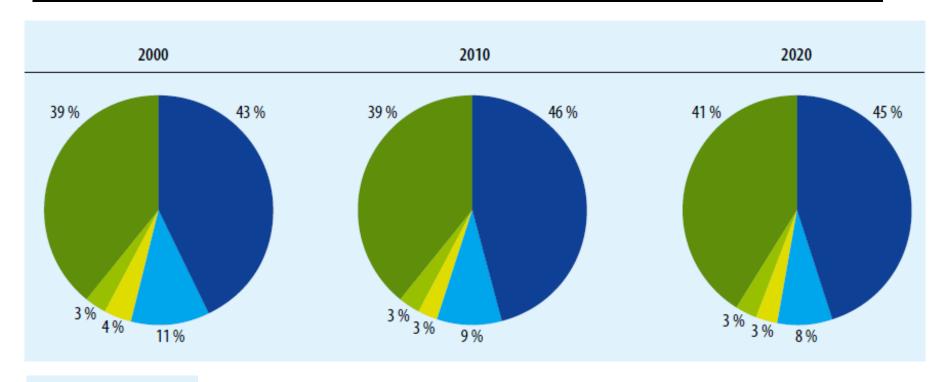


Traffic growth in Europe 2000-2020





Evolution of modal split in freight transport 2000-20







All modes must become more environmentally friendly, safe and energy efficient.

Finally, <u>co-modality</u>, i.e. the efficient use of different modes on their own and in combination will result in an optimal and sustainable utilisation of resources. This approach offers the best guarantees to achieve at the same time a high level of both mobility and of environmental protection.









Source: VDA, Design Award 2008











Source: VDA, Design Award 2008

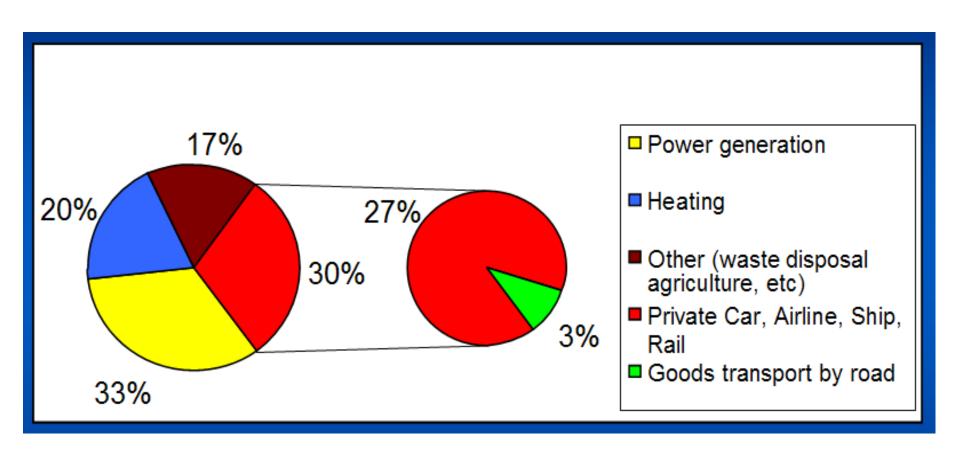




Source: VDA, Design Award 2008

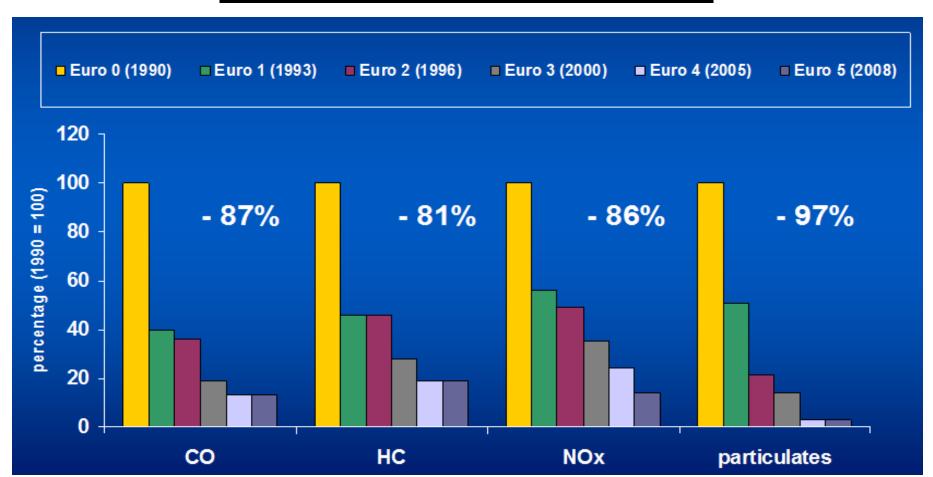


Who produces CO₂



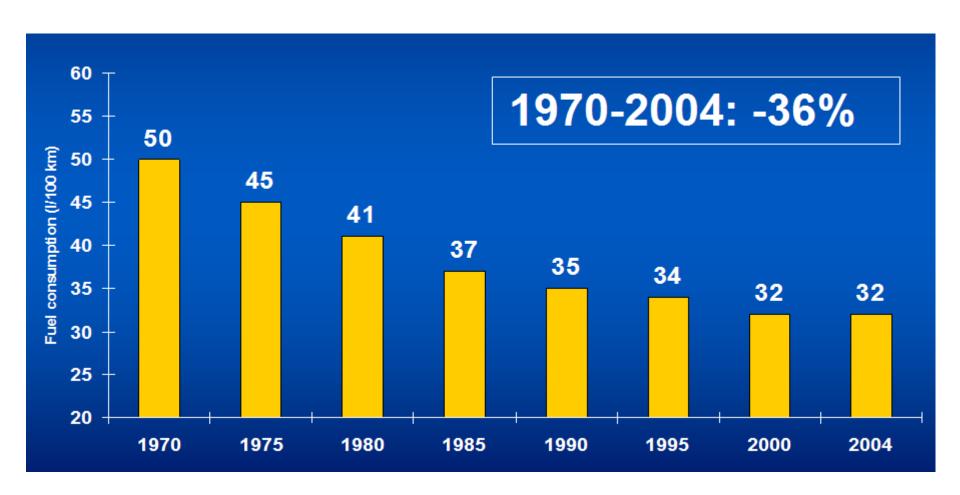


Evolution of Commercial Vehicle Emission Standards in the EU





Evolution of fuel consumption 40-tonne truck











Four scenarios for 2020

- Scenario 1: "Business as usual". This first scenario assumes no changes to the Directive. All other scenarios take this one as the reference/base case.
- ★ Scenario 2: "LHV Full option": Europe-wide permission to use 25.25 m 60 t trucks. The usage of LHVs on regional roads may be restricted.
- Scenario 3: "Corridor/Coalition": LHVs of 25.25 m 60 t are allowed in some countries, while Europe-wide only 16.5/18.75 m 40 t trucks are allowed. The coalition of 6 European countries: NL, BE, DE, SE, FI, DK was included in the calculation.
- Scenario 4: "Intermediate": Europe-wide permission for up to 17.8m/20.75 m, 44 t trucks (thus allowing a longer semi-trailer or trailer and retaining the traditional two-vehicle combination). This scenario represents a relaxation in vehicle constraints giving around 10% increase in volume and 15% increase in gross weight.

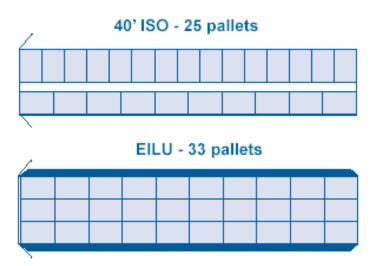




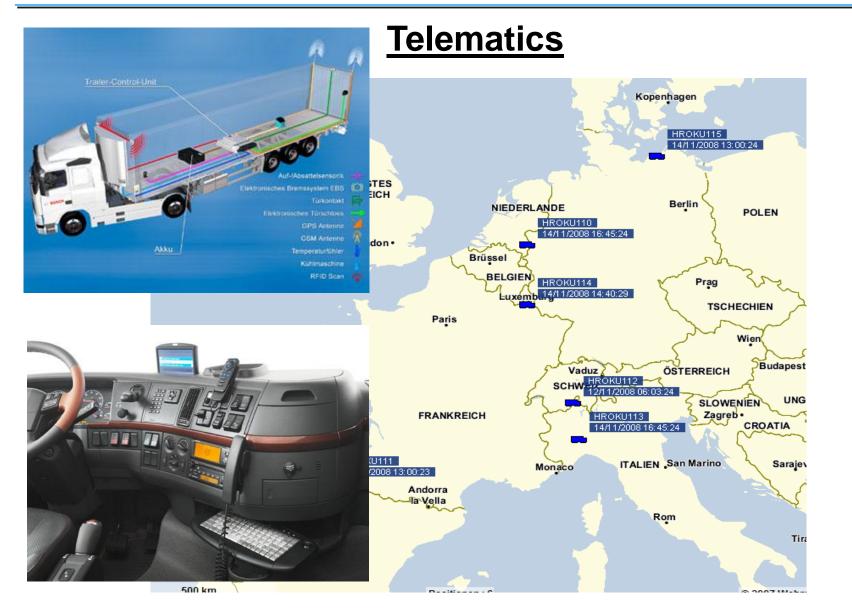


45ft Pallet wide container

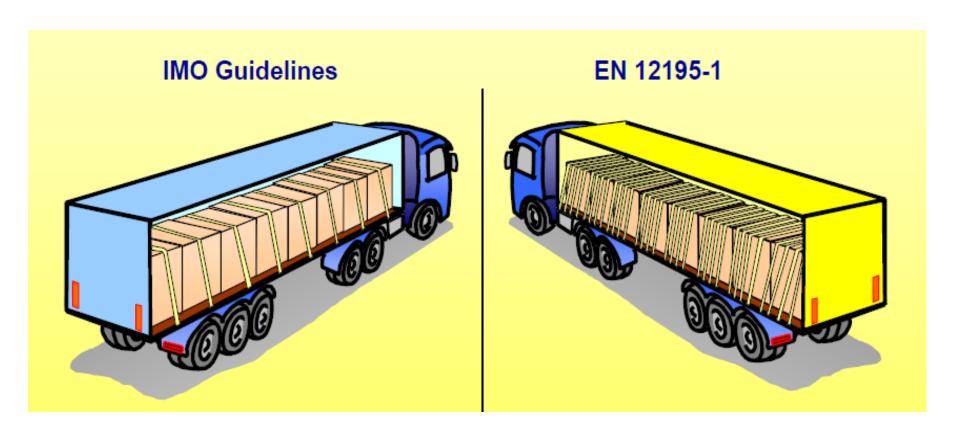
Below designs shows you the difference between an iso (standard 40ft) container and the 45ft pallet wide container.





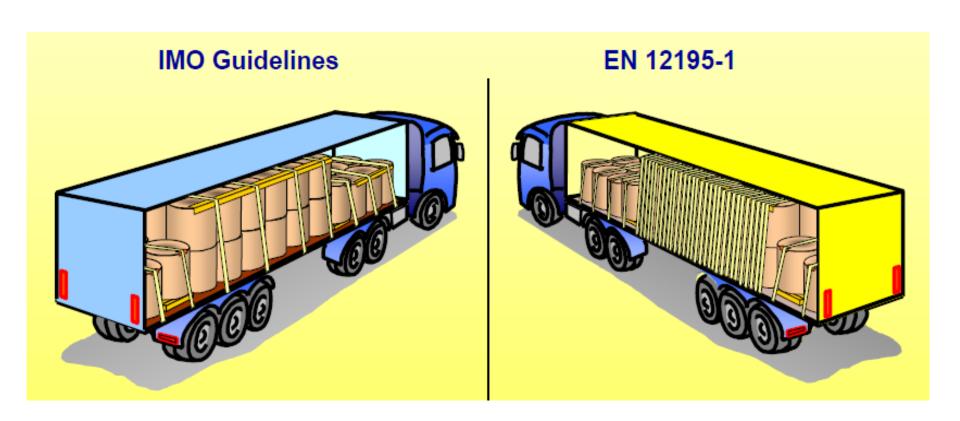






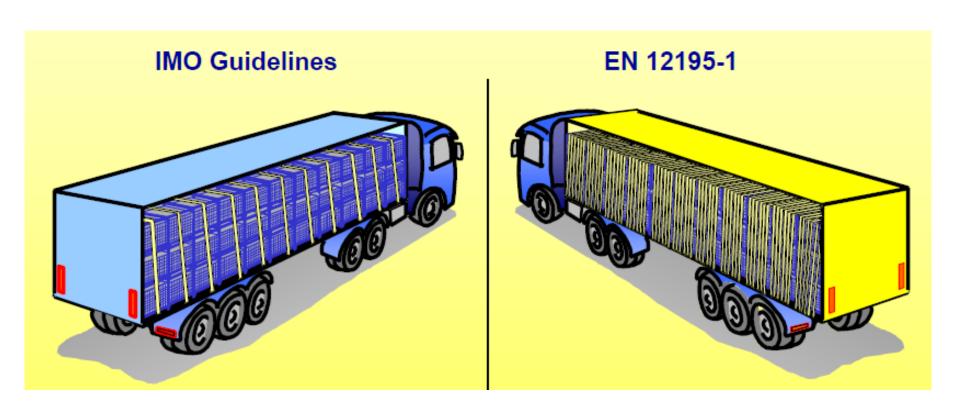
8 belts 32 belts





9 belts 36 belts





11 belts 66 belts



IMO Guidelines



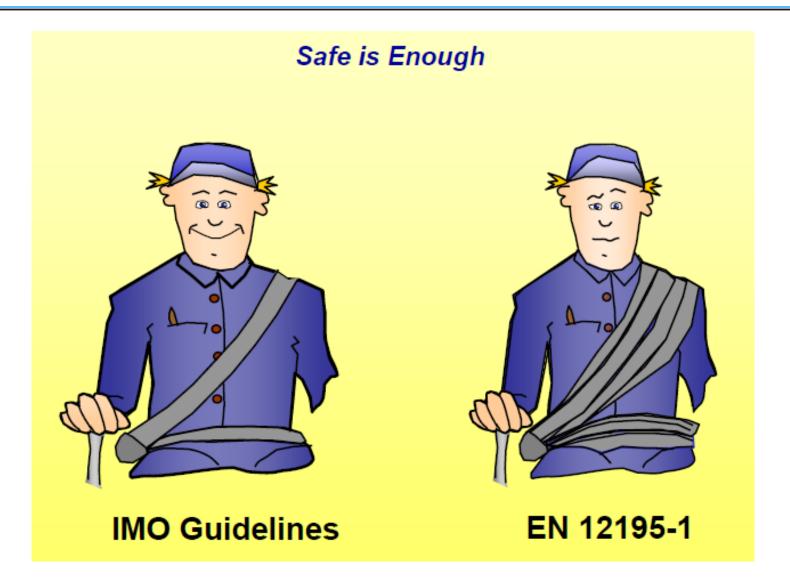
EN 12195-1



2 belts

30 belts



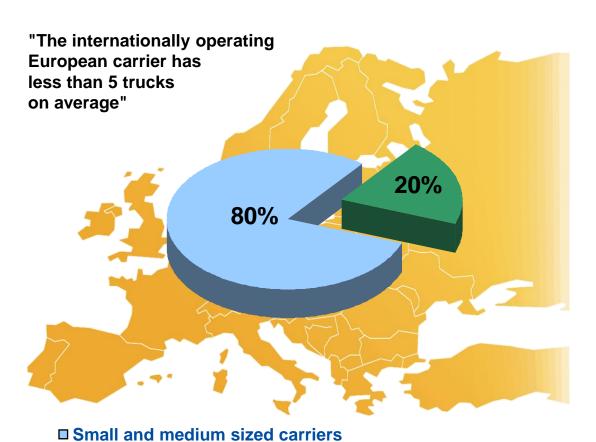








Average fleet size



- up to 20 trucks
- Carriers with more than 20 trucks

Source: IRU



Advance Truck Load Firms (ATLF)

- Single point of entry
- Central planning
- Full geographical coverage
- Economies of scale
- Telematics and navigation
- Driver get tired, trucks don't



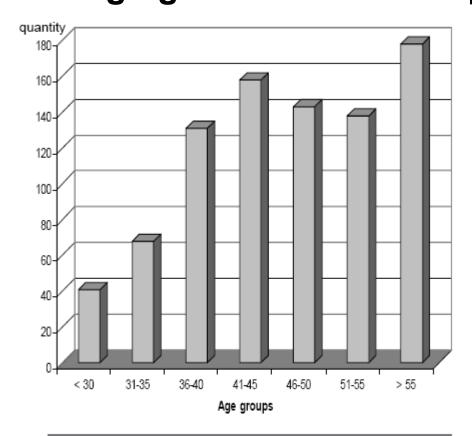


A young Elvis Presley was once advised:

"Stick to driving a truck, because you'll never make it as a singer."



Cost Driver - Labour Drivers' aging structure in Europe



Lack of younger drivers

Source: ECTA





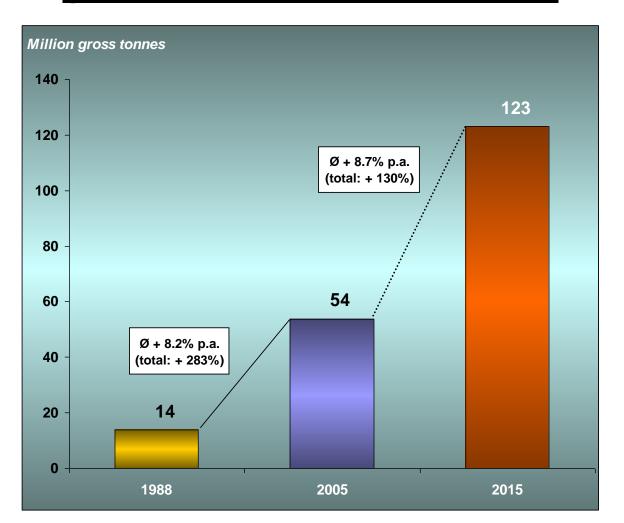


Unaccompanied Intermodal Transport



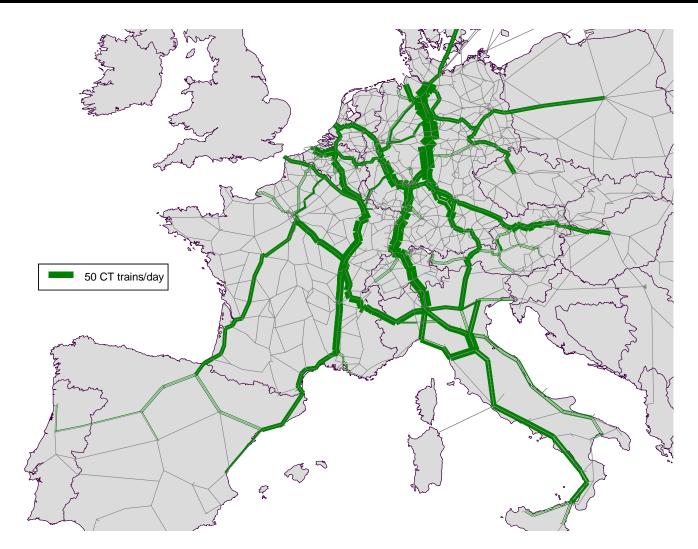


International intermodal traffic in Europe: goods moved 1988/2005/2015





Intermodal trains on the European rail network: 2015







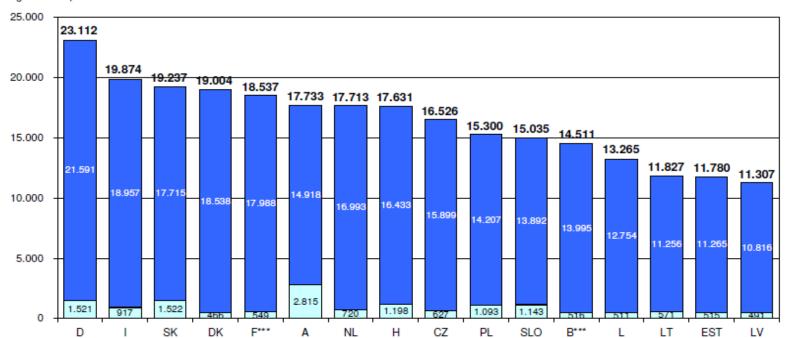


Jahresabgabenbelastung eines 40 t-Lastzuges

(EURO II mit Luftfederung im Deutschlandverkehr)
Jahresfahrleistung: 135.000 km; Kraftstoffverbrauch: 34 Liter/100 km

□ Kraftfahrzeugsteuer *
■ Mineralölsteuer **

Angaben in € pro Jahr



Quellen: Europäische Kommission, EU-Mitgliedstaaten, Berechnungen des BGL

- Stand: August 2004
- ** Stand: Januar 2006 (in B, L, PL auf schwefelarmen Diesel; in D, H, NL, auf schwefelfreien Diesel; in DK einschl. CO₂-Steuer)
- *** Unter Berücksichtigung der Mineralölsteuerermäßigung auf gewerblich genutzten Dieselkraftstoff in B = 3,64 Cent/Liter, in F = 2,5 Cent/Liter

© Bundesverband Güterkraftverkehr Logistik und Entsorgung (BGL) e.V.; Alle Angaben ohne Gewähr! Verwertung und Vervielfältigung nur mit Quellenangabe gestattet.

The Commission's own impact assessment states on page 59:

"Charging freight transport might have negative effect on industry and services."



Ari Vatanen, report to the European Parliament:

The main objective of the European transport policy should be to ensure that road transport operates smoothly, because it meets the overwhelming majority of Europe's traffic requirements.



· Raise awareness among all parties involved

• The future of the European road transport, in one way or the other, is also our future.

Mid term review 2006:

The mobility of goods and citizens, <u>apart from</u> <u>being a right</u>, also creates cohesion and is an essential element of the competitiveness of European industry and services.



The Future of European Road Transport