

Swedish Road Administration (SRA)

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European Community, Road Transport-Technology, Weight and Dimensions for Road Traffic

- 85/3/EC was the first Directive to harmonise Vehicle Weight and Dimension for international traffic
- Is regarded as minimum provisions for weight
- Limits Truck + semitrailer length to 16.5 meter
- Limits Truck + full Trailer length to 18.35 meter
- Total authorised mass 40/44 tonnes
- Not for Type Approval of Vehicles (97/27/EC)

Aim of the Directive

To reflect a balance between the rational and economical use of vehicles and the cost for infrastructure maintenance, road safety and the protection of the environment

Common standards on vehicle dimensions should remain stable in the long term

Scope

1. Certain road vehicles circulating within the Community,
Categories: M2, M3, N2, N3, O3 and O4 (definitions in
70/156/EEC)
2. Controls maximum authorized dimensions in
 - national and
 - international traffic
3. Limits maximum authorized masses in
 - international traffic

In short:

The free circulation of a 40 tonne, standard five-axle vehicle and semitrailer combination is guaranteed throughout the EU, provided the load on the driving axle does not exceed 11,5 tonnes.

Equally, a standard two-axle bus or lorry of up to 18 tonnes can circulate freely.

44 tonnes in total is allowed when carrying 40 ft ISO container in combined transport (road/rail)

Member States are free to apply higher axle loads and vehicle height above 4 meter in national traffic

Standardised loading areas

13.6 meter

33 pallets

about 90 kubikmeter

or 2 ISO 20-fots container

or 1 ISO 40-fots container

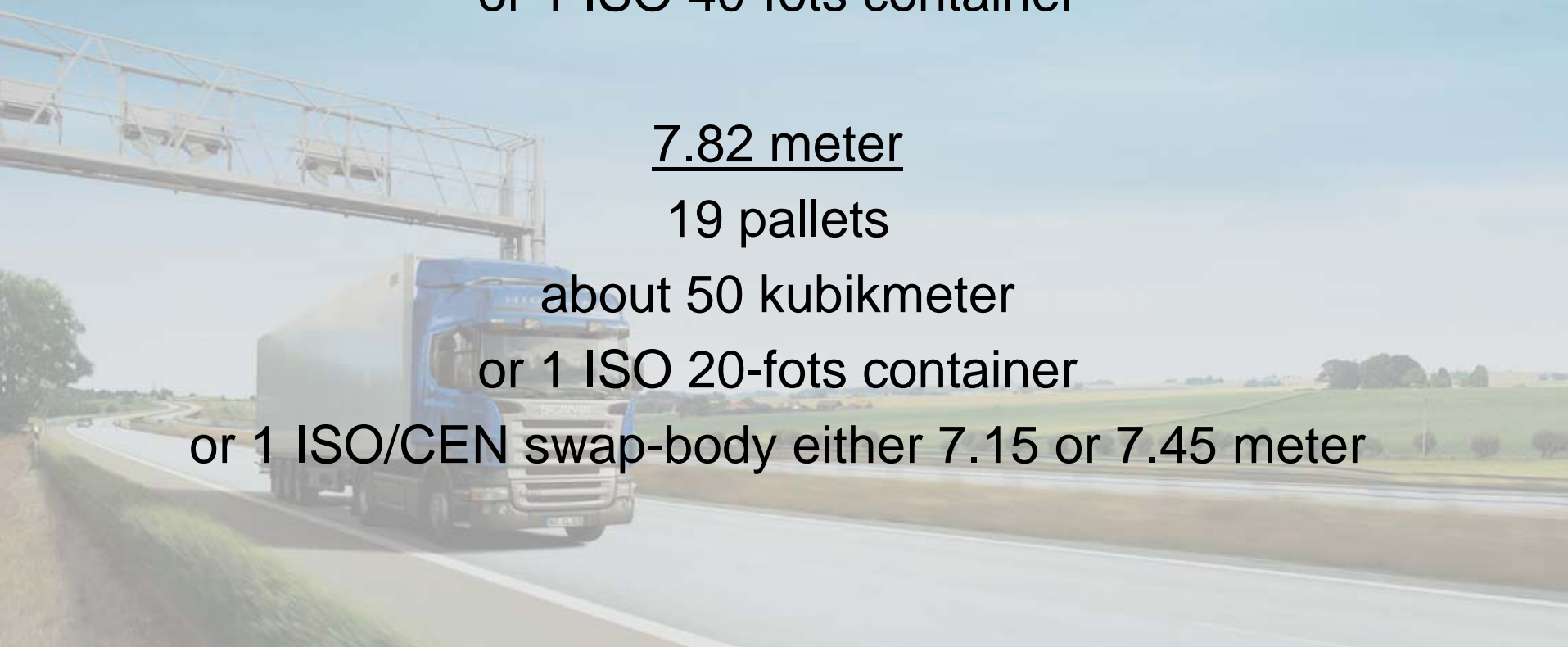
7.82 meter

19 pallets

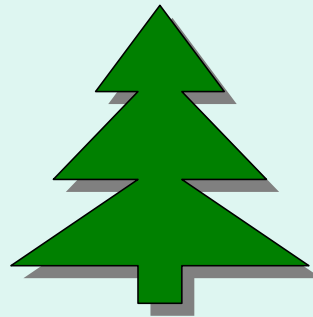
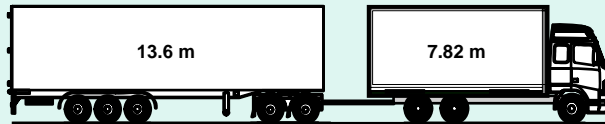
about 50 kubikmeter

or 1 ISO 20-fots container

or 1 ISO/CEN swap-body either 7.15 or 7.45 meter



Exemptions allowed



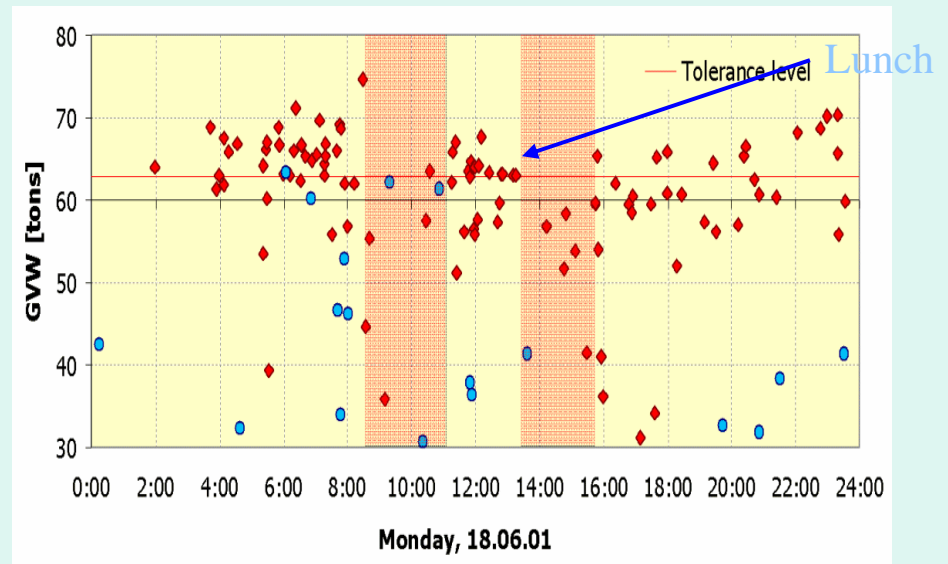
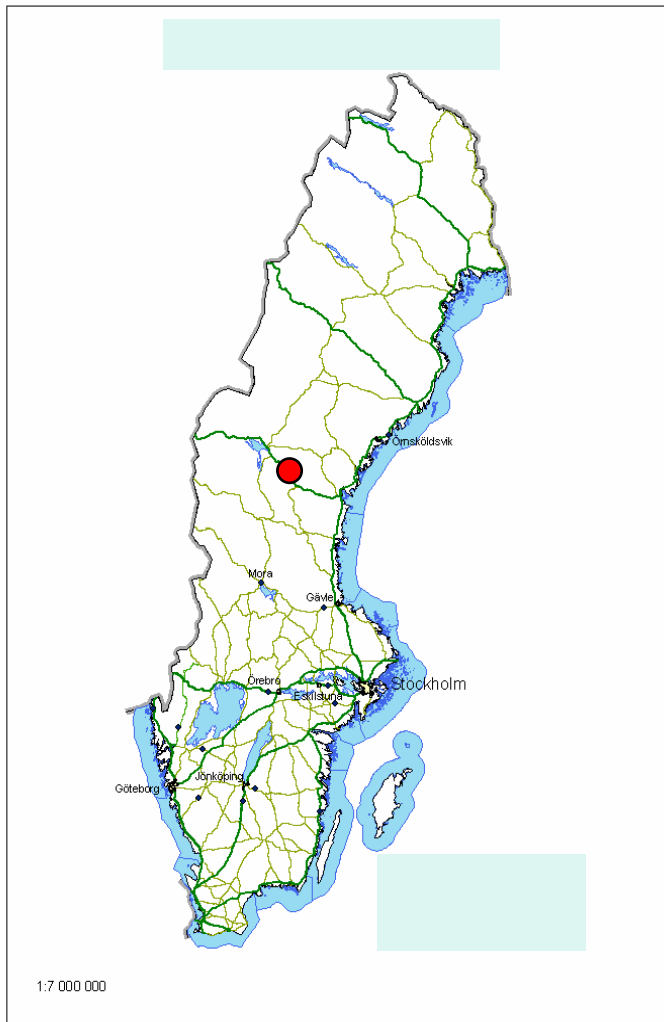
- Exceptional transports/loads
- Modular concept
- Special operations linked to logging and forestry industry
- Prototype Vehicles
- Grandfathers rights

Road Wear

- Axle loads and tyre inflation pressure affects the speed of road degradation
- Proportional to the fourth power of axle load of the vehicle
- Driving axles on tractors in international traffic are often overloaded (mainly 2X4)

KYRKDAL 2004

- 87 % of loaded heavy vehicles were overloaded, per axle or total mass



Special Provision in 96/53/EC

There is an option for an important exemption:

- the "modular concept" is mentioned in the Directive
National decision in Sweden and Finland define the modular concept to allow lorry combinations of up to 25,25m in length (e.g. a 7,82m long load carrier and a 13,6 m long semi-trailer) and thus is a concept built on existing vehicle types available in the Community

It is allowed on the basis that this exemption does not have a significant effect on international competition in the Member States

The Modular concept, 25.25 m

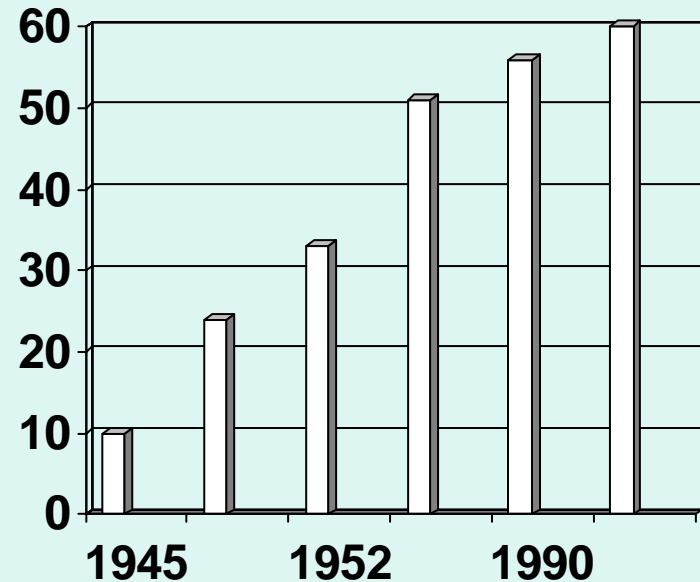
Some facts:

When 96/53/EC was adopted, all present transport ministers, except S and FIN, did commit themselves not to make use of the modular system until the Commission evaluated the system with long vehicle combinations. No report is yet issued.

Transport ministers from new MS and candidate countries were not present and thus may feel free to use the system for their domestic transport operation

Development of max. Roadtrain mass in Sweden

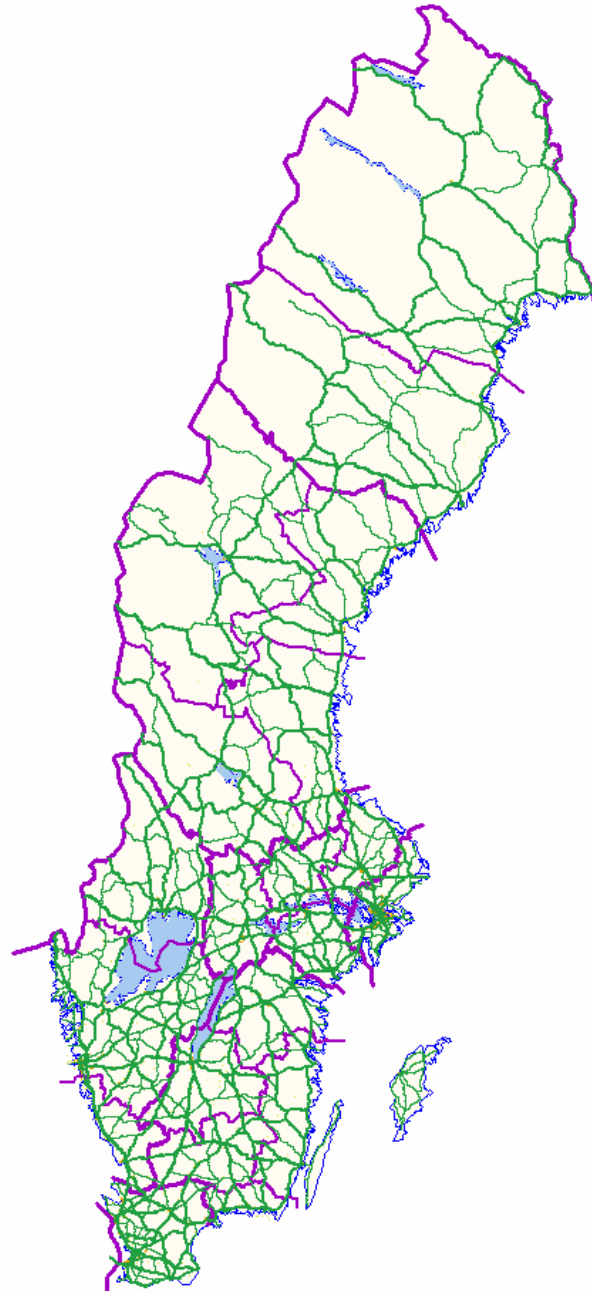
- 1930 12.0
- 1947 23.5
- 1951 32.0
- 1966 37.0
- 1974 51.0
- 1990 56.0
- 1993 60.0



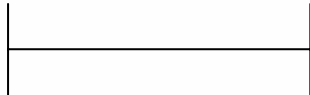
How does it work in practice ?

Following a national decision, at first in Sweden 1995, the Modular System EMS is now in operation since 1997

SWEDEN

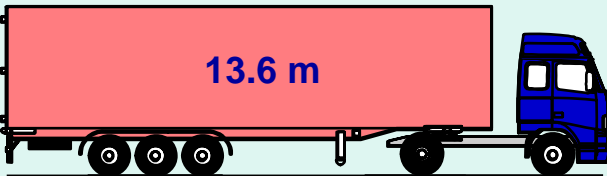
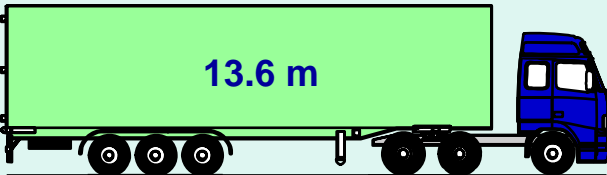
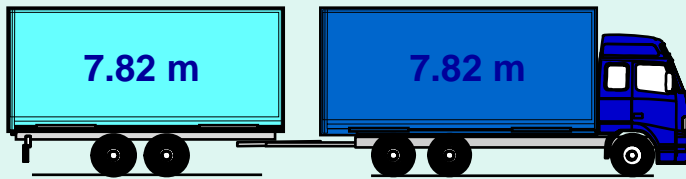


500 km

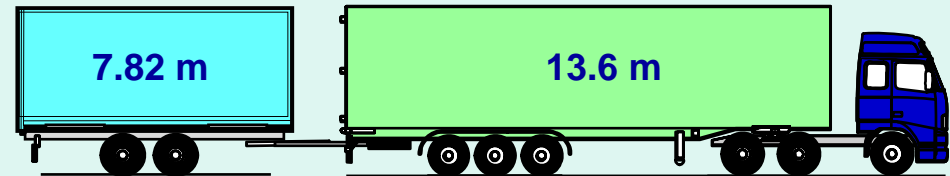
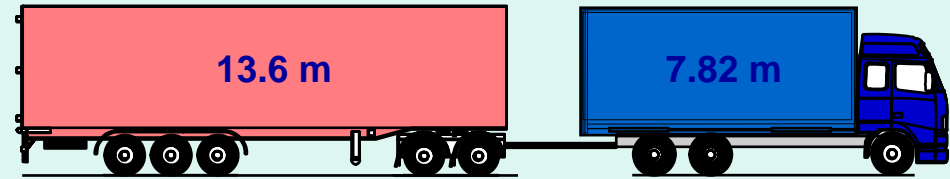


European Standard Vehicles vs. Module System

EU



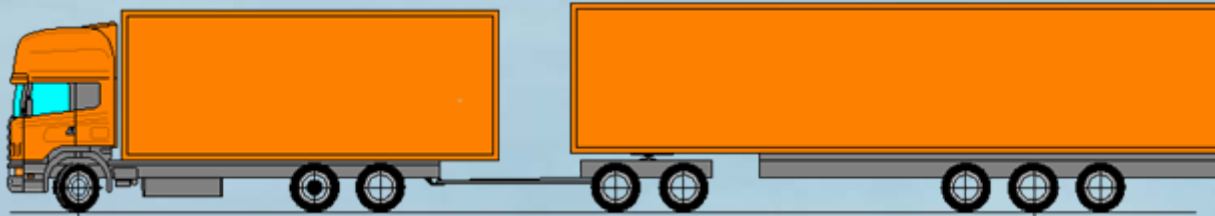
SWE & FIN



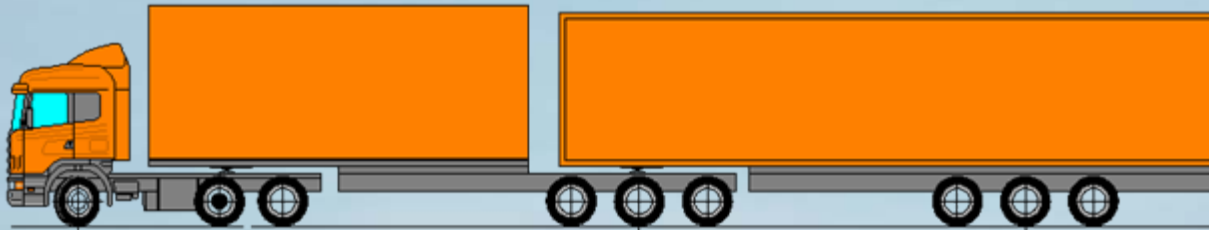
Two vehicles instead of three

- Possible to recouple to shorter combinations
- Standard loading units
- Same volume of cargo
- Less total fuel consumption
- Less emissions per tonkm
- Less total room on road
- Lower cost per tonkm
- Less road damage

Possible modular combinations



Truck plus dolly plus semitrailer



B-double: Tractor + short semitrailer with 5th wheel + semitrailer



Truck plus two centre-axle trailers

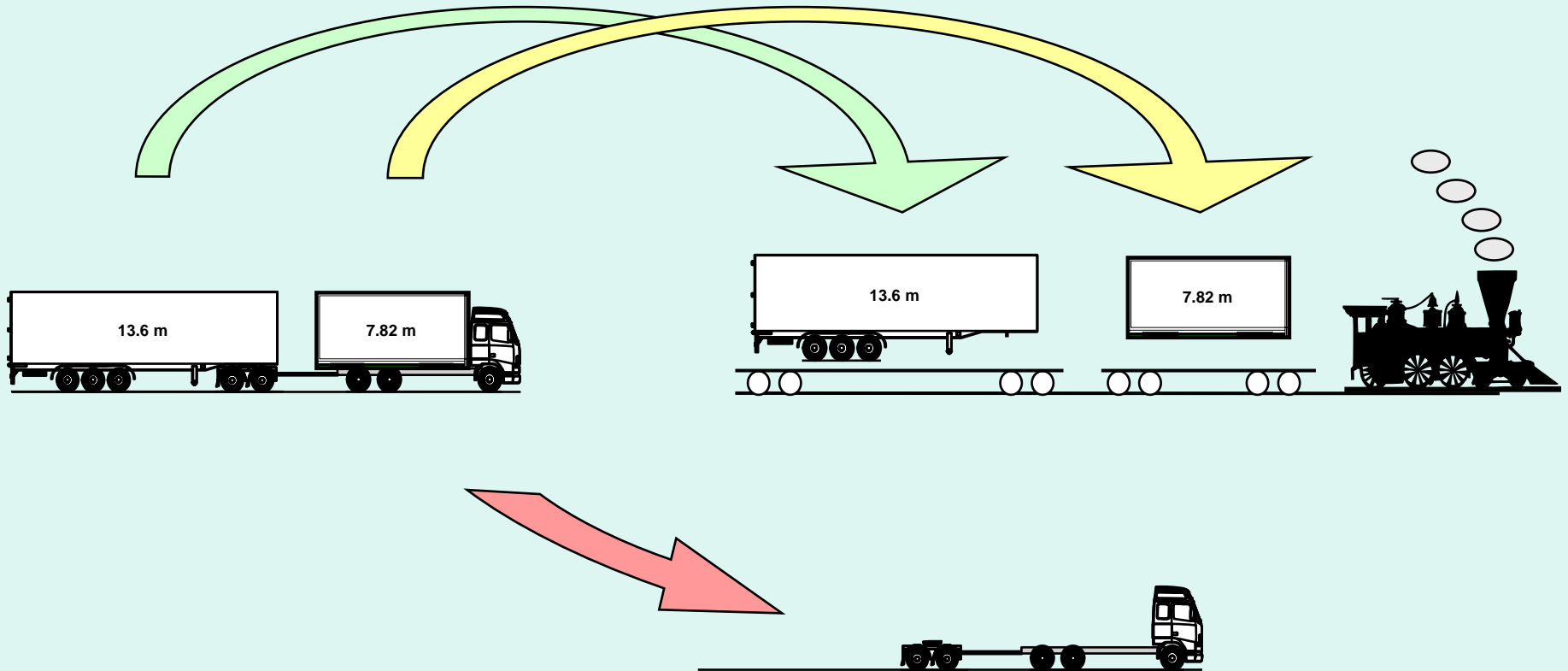


Tractor plus semitrailer plus centre-axle trailer

Intermodality



The Modular Concept is in favour of Intermodality when using semitrailer and swap body units or containers

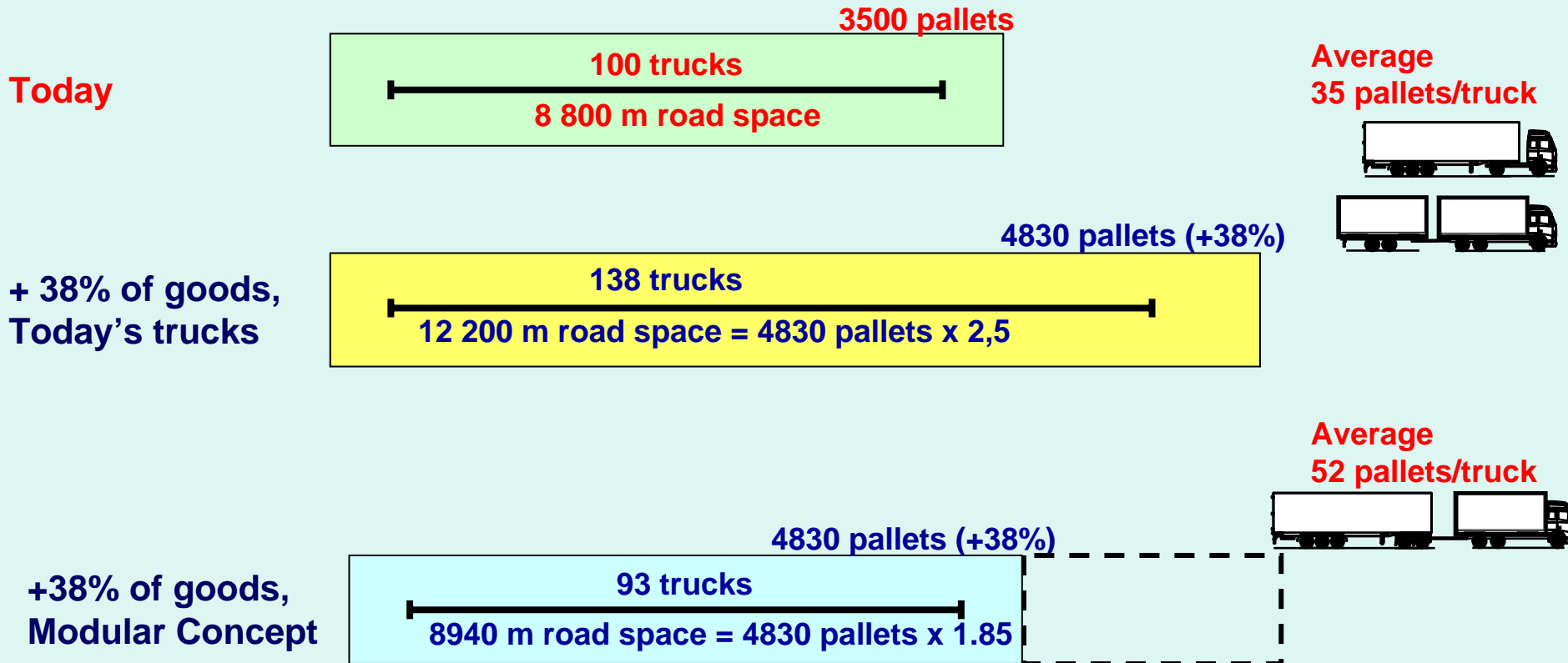








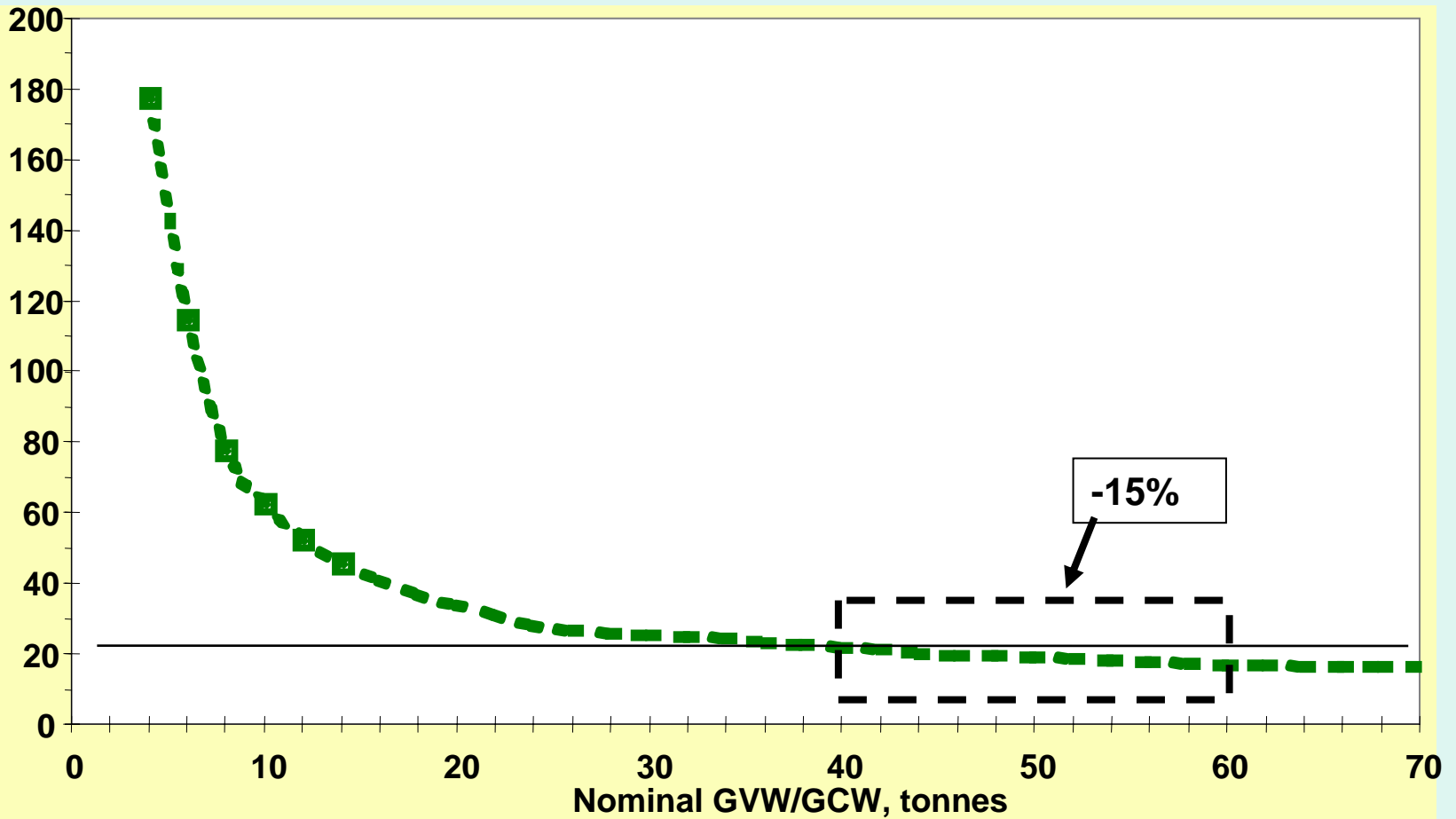
Effects of 38% transport increase (EU White Paper) When looking at the work of 100 trucks today



70 m safety distance between trucks

Larger vehicles = lower fuel consumption per tonkm

litres/1000tonkm



Experiences so far

- No specific limitations so far on the use of the road network
- Hauliers transporting volume sensitive goods prefer EMS
- Hauliers transporting heavy goods prefer 24 m roadtrain (2 extra tonnes of cargo)
- The dimensions of vehicles (length) are not considered to affect traffic safety (study by Vägverket 2002)
- Amount of transported cargo is steadily increasing, the number of vehicles in use remain fairly constant (national statistics)
- The use of EMS leads to lower axle loads, reducing road wear (8 axles)

Impact on transport market

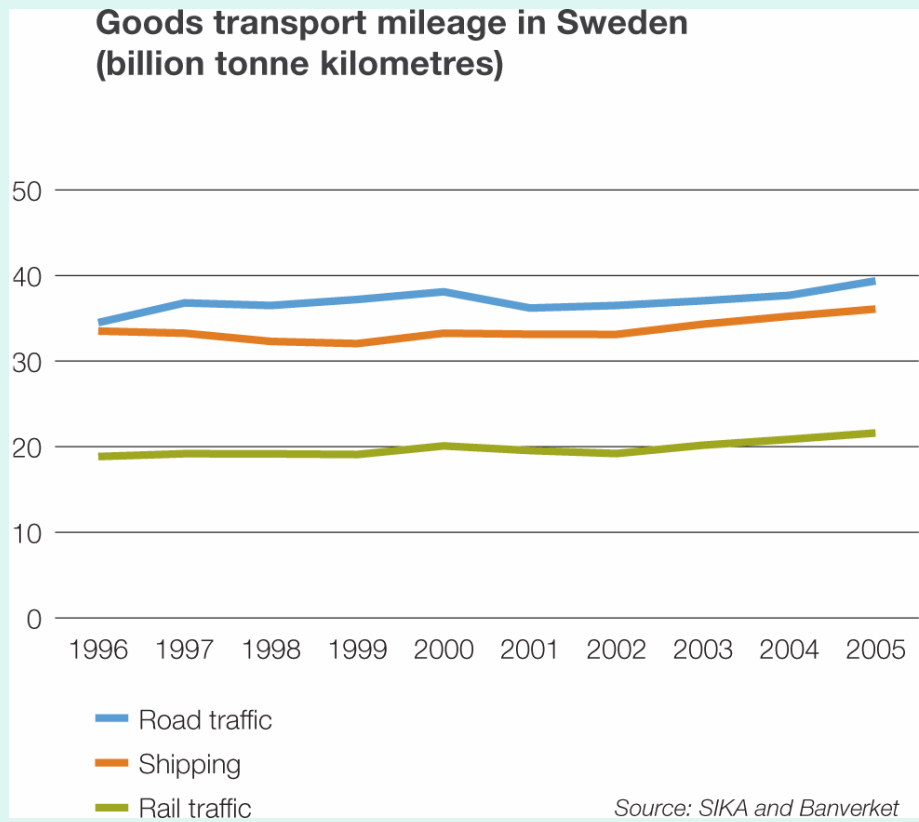
- Sweden has higher share of railroad transport than continental Europe, now 20 % of goods is on rail, out of 3 modes of transport
- Containers on trains increased 400% from port of Gothenburg since Year 2000
- From 1997 when 25.25 was introduced, the share of railroad transports is increasing
- Thus, the increase of mass and dimensions for road vehicles have had a marginal effect on modal split
- Possible explanation, Sweden was first in Europe to open up railway net for competition, road and rail handle goods of different value per unit of mass

The future for EMS in Sweden

- Government started a comprehensive study of the transport system in March 2007, to end in December
- Main question: how EMS affects the transport system, and what about competition between road and rail.

Some results of the study

- 94 % of road network is open for 60 tons, nearly 100% of roads are open for EMS
- European combinations (40 tonnes) have 11% market share
- EMS and 24m have 89 % market share in national transport
- Rail seem competitive for longer distances, 43% market share for distances over 300 km, 53% over 500 km
- If restricted to 40 tonnes/18.75m, would increase transport costs by 20% (650 M euro)



The problems

- Current directive allows many exceptions
- Update of directive required to meet market needs
- The commission has identified vehicle dimensions and loading standards to be reviewed in its Logistics Action Plan (17 oct. 2007)
- The Council conclusions 28 nov. adopted the Plan, but avoided any reference the controversial question to amend directive 96/53/EC

The future for longer (and heavier) vehicle combinations within the Community ?

- Business as usual, many derogations, no harmonisation, 45 feet sea containers only for national transport
- Adapt directive, no clear political signals yet
- Therefore, DG TREN launched a study to investigate four scenarios and policy options, through a project granted to Leuven Transport and Mobility with partners

In summary

- 96/53/EC is important for harmonizing International Transport within European Member States
- The non-harmonised dimensions and masses for national transport will prevail
- New direction in transport policy, multimodality, important for future developments, the reason is the present and future increase in goods flow
- Use long combinations when possible, shorter when necessary

Thank You !

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