

Economic Commission for Europe

Inland Transport Committee

Working Party on the Transport of Dangerous Goods

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Item 9 of the provisional agenda

Any other business

16 May 2023

In Finland trucks tow up to 100% bigger loads

Transmitted by Finland

TRAFICOM

Finnish Transport and Communications Agency

In Finland trucks tow up to 100 % bigger loads

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Finnish road traffic act allows versatile high capacity and high efficiency combinations

High volume

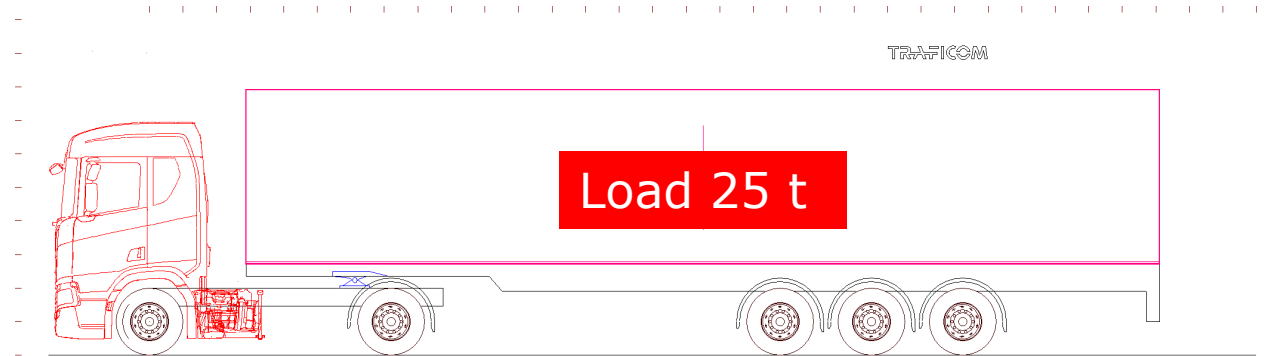


High payload

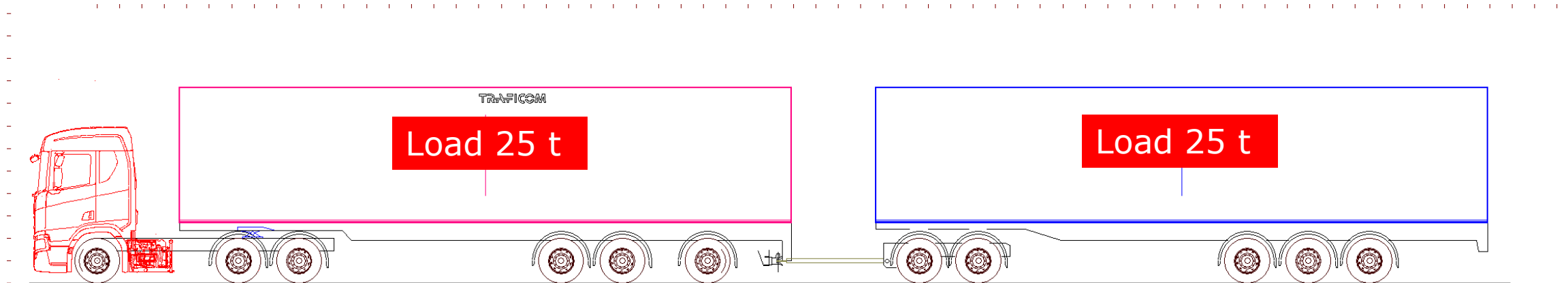
76 t Finnish A-double Road friendly solution for heavy loads

Compared to 2x standard semitrailers
one axle more and 4 t less weight

14 % less weight / axle
The important number is road load
compared to payload



Truck 8 t + trailer 7 t
Standard 40 t truck



Truck 9 t + trailer 7,5 t + dolly 2,5 t + trailer 7 t
Standard Finnish 76 t A-double

76 t trucks since 2013
60 t trucks since 1997
56 t trucks since 1990
48 t trucks since 1982



**50 000 000 t
annually**

Average load 50 t

**Average transport
distance 100 km**



**Winter is the
high season for
timber transport**



1500 Timber trucks

4 common solution for 76 t bulk transport



Own rules for heavy ADR-trucks

- ▶ Since 2013 76 t
 - ▶ With ADR risk are higher
 - ▶ Basic rule for ADR 60 t
- 4 exceptions
- ▶ 4+4 Truck and fulltrailer 68 t
 - ▶ B-double with 3 axle truck 68 t
 - ▶ 3+5 Truck and semitrailer 64 t
 - ▶ 4+5 Truck and semitrailer 68 t

Most common ADR combination in Finland



B-double is common in container transport



3+5 semitrailer is suitable in seasonal needs



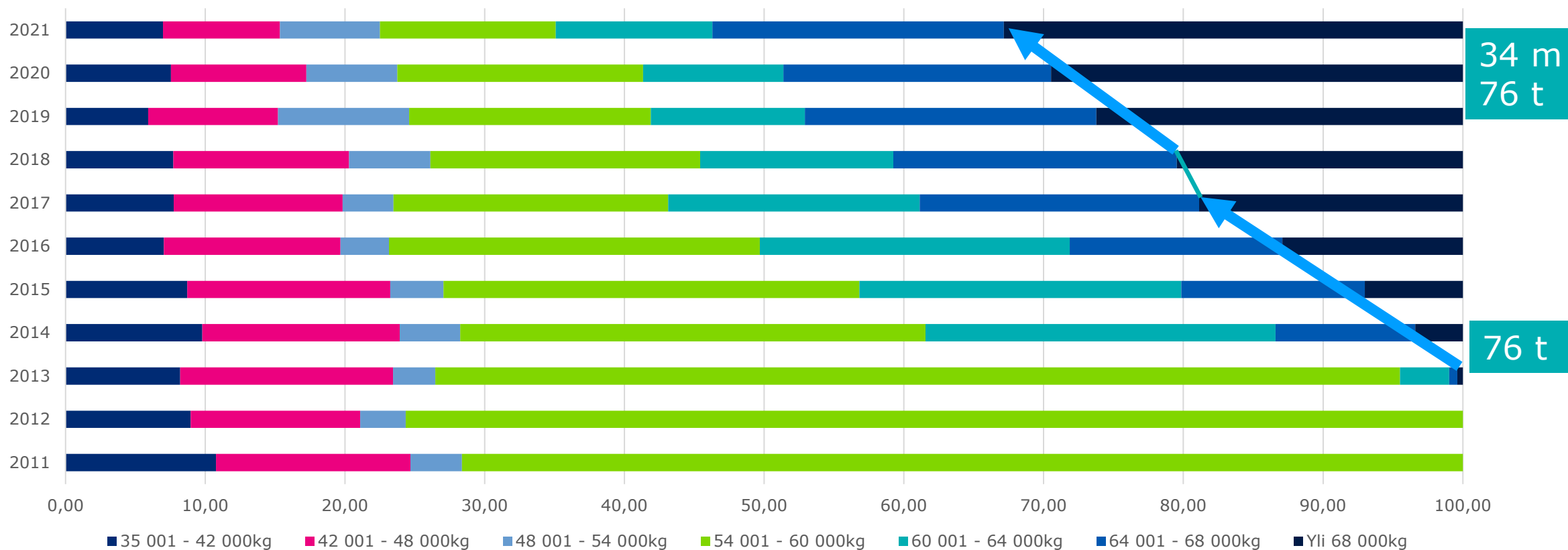
Best stability, fuel economy and payload



Transport sector has adopted 76 t and 34,5 m fast

Finnish high diesel price and labor cost are probably the biggest motivation for heavier and longer trucks

Domestic traffic share in weight categories

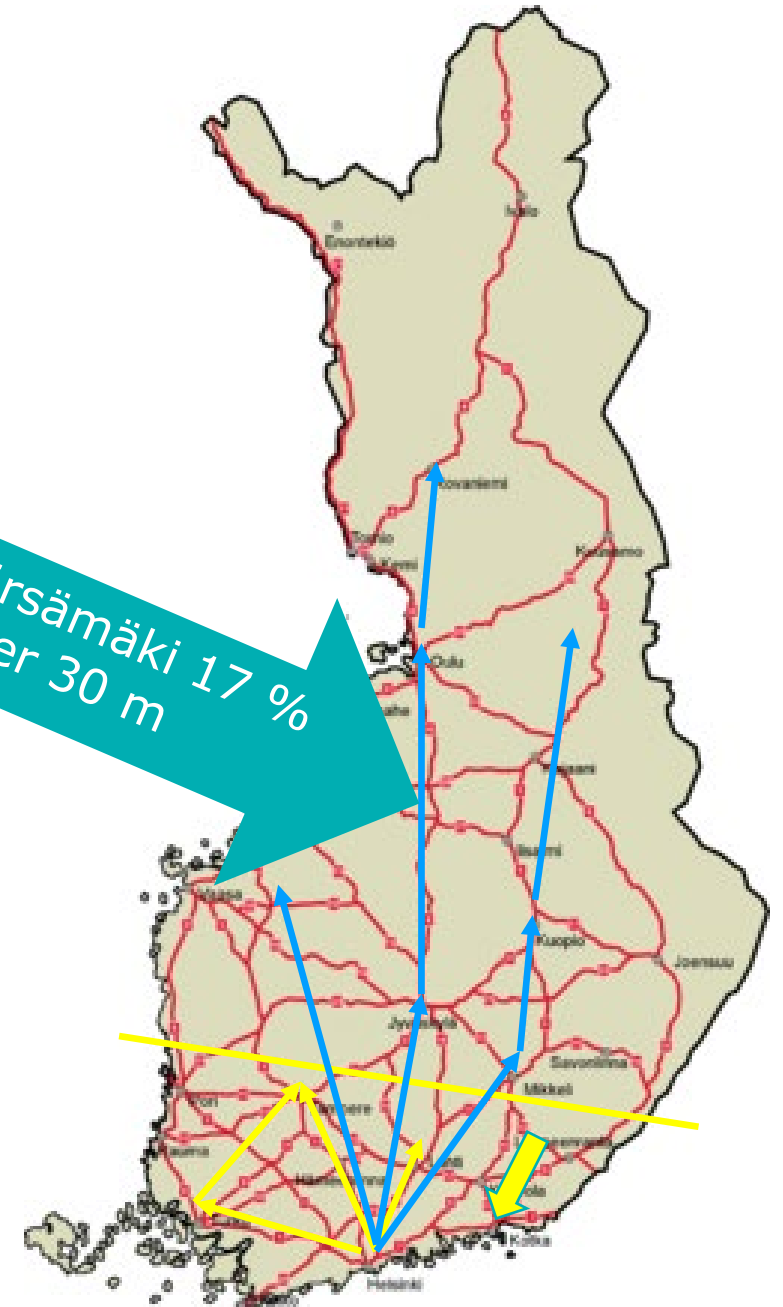


EMS2 is specially important for sparsely populated east and north Finland

- ▶ 50 automated measuring points at main roads
- ▶ Accurate truck traffic data every day
- ▶ EMS2 trucks are popular on domestic long haulage

2021	16,5 m	22 m	25,25 m	28 m	Over 30m
South	42,9 %	19,5 %	28,0 %	5,8 %	3,9 %
Other	25,5 %	22,6 %	37,0 %	7,7 %	7,2 %

Vt 4 Kärämäki 17 %
over 30 m



EMS and EMS2 trucks have huge impact to truck traffic and emissions

- ▶ This calculation combines traffic volumes and the differences between weight classes
- ▶ Traffic volume would be 67 % higher with 16,5 m 40 t trucks
 - ▶ 778 750 000 km is lot of truck traffic
 - ▶ It would need 10 000 drivers
- ▶ Emissions would be over 20 % higher with out EMS and EMS2 trucks
 - ▶ Benefit from EMS2 is bigger with light goods

2021 traffic volumes

Mass	Traffic volume milj km	Savings milj km	CO2 %
35 001 - 42 000kg	81		
42 001 - 48 000kg	97	19,4	-10
48 001 - 54 000kg	83	20,75	-12
54 001 - 60 000kg	146	73	-15
60 001 - 64 000kg	130	91	-17
64 001 - 68 000kg	242	193,6	-20
Yli 68 000kg	381	381	-25
yht	1160	778,75	-17,9

Over 25,25m combinations in fatal accidents

- ▶ The road accident investigation teams investigate all fatal road accidents in Finland. In addition, the teams investigate some other accidents on a project basis.
- ▶ In 2019-2021, 6 heavy vehicle combinations longer than 25,25 m were involved in fatal accidents.
 - ▶ 2 suicides by colliding an oncoming truck-trailer-combination with a passenger car
 - ▶ 2 other head-on accidents, in which a passenger car drove at high overspeed
 - ▶ 2 accidents in which a passenger car collided with the rear of a combination driving in the same direction. Both cars drove at high overspeed.
- ▶ The length of the vehicle combination did not affect the occurrence or consequences of these accidents

Unloading to hardware store
165 km north from arctic circle

**Thank you for
your interest**

My contact
information

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Picture 16.1.2023 15:17