



# Step by step to Finnish EMS2 rules and 900 million km EMS2 traffic

Otto Lahti, Finnish transport agency Traficom



# Agenda

- 10 Steps to Finnish EMS2 rules
- Current EMS traffic
- Electrifying EMS2 combinations



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# Sweden's trials inspire Finnish transport sector

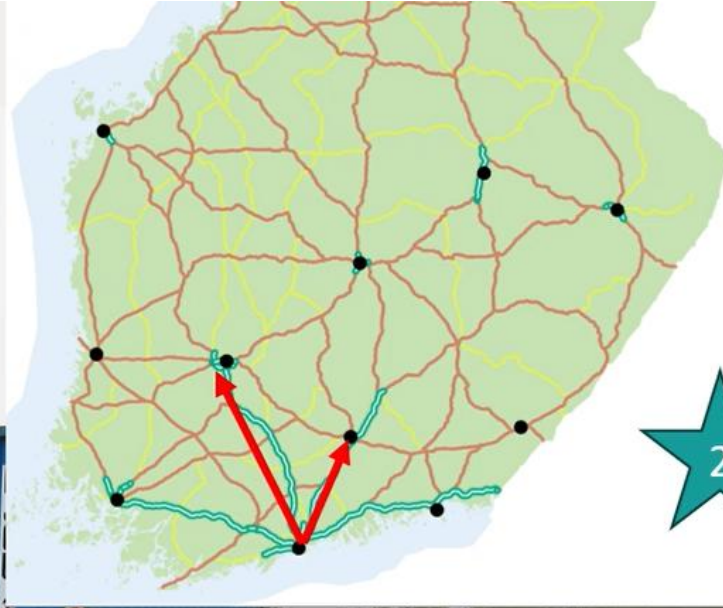


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2010-2011



Light containers  
Helsinki-Tampere  
Helsinki-Lahti



## The first trial in Finland

- In the fall of 2012, the Ministry of Transport published a strategy that mentioned the launch of HCT truck trials.



- The first application 2013 spring
- Traffick started 20.11.2013



- The initial reaction of transport organizations and citizens to the trial was generally negative.



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# Example of an perfect trial

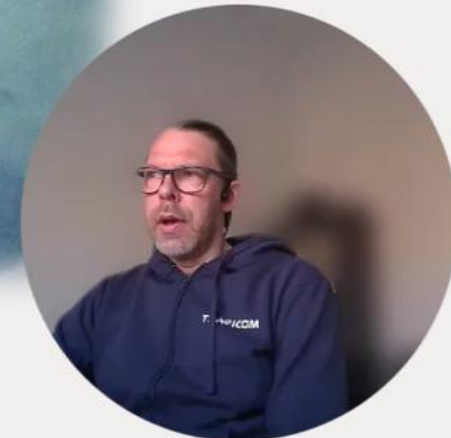
## 3x different trailer sets and routes, 2x different trucks



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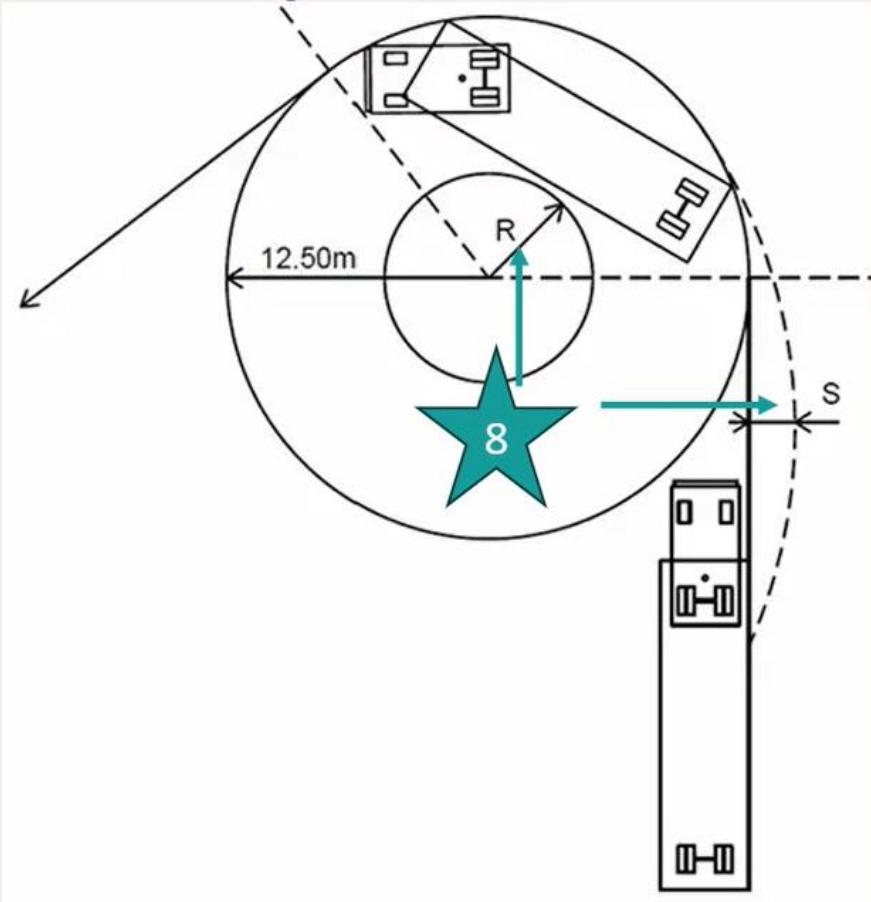


This is not a failure  
In trials you are searching the limits



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Making the final proposal was easy when you could compare different options in theory and in traffic.



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# All new 32 m A-doubles should be as safe as average 25,25 m EMS



- HCT-calculator for stability and turning
- 2015 level safety equipment to all vehicles
- 9% on steering axle and 20% on driving axles + automatic chains in wintertime



Mirror view Cameras to avoid blind spots

- 9% on steering axle and 20% on driving axles + automatic chains in wintertime



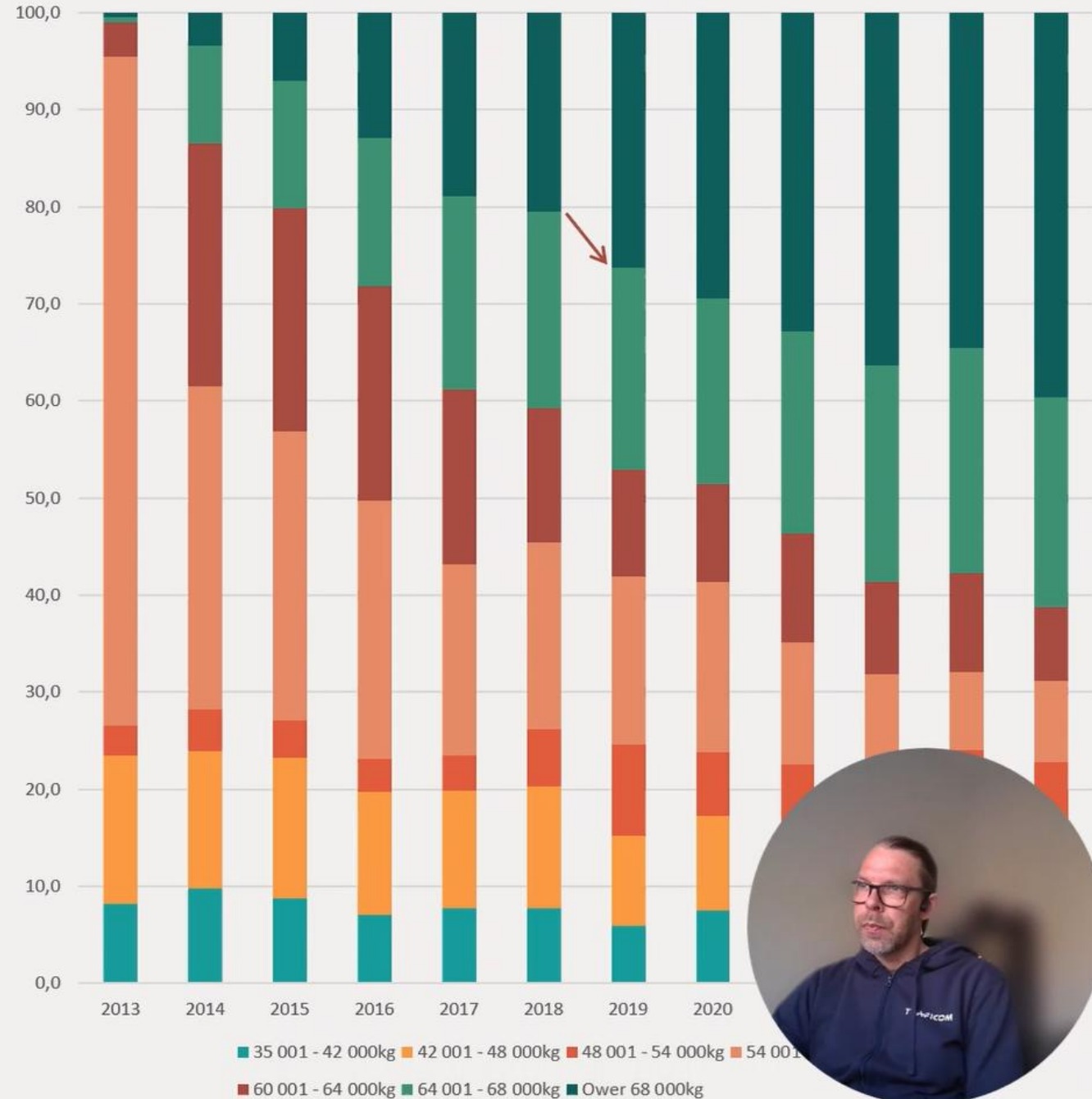
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# Quick change to heavier combinations

- Base level 60 t 25 m
- 76 t since 10/2013
- 34,5 m since 2/2019
- 2024 74/76 combinations
  - 40 % of km
  - 50 % of tkm

Distribution of km performance of heavy combinations



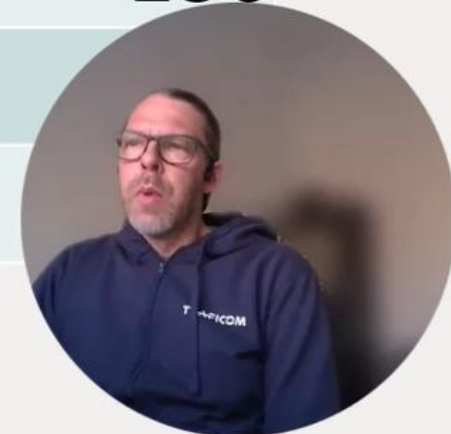
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# EMS2 traffic

Longer than 28 m

- 2019 transport volumes were high and economy was growing -> EMS2 had fast start
- All the time transport sector finds more solutions where they can benefit from EMS2
- EMS2 17,6 % from heavy combination km in 2025
- On weekdays, there are 500-600 EMS2 trucks on the busiest highway north of Helsinki
- The daily record for a single location is 702 EMS2 trucks at 18.12.2025 on the Helsinki ring road

Year	Million km
pilots	16
2019	60
2020	90
2021	112
2022	120
2023	136
2024	
2025	



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# 20%

EU base level  
weight and dimensions  
Vs  
Current Finnish  
weight and dimensions  
in Finnish traffic

Calculated CO<sub>2</sub> reduction at 2021



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# 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	
64 001 - 68 000kg	242	193,0	
Yli 68 000kg	381	3	
yht	1160	778,0	



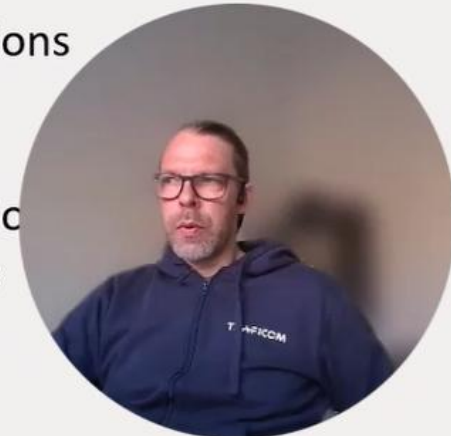
# 25-30%

Expected CO<sub>2</sub> reduction by 2030

EU base level  
weight and dimensions  
Vs  
Current Finnish  
weight and dimensions  
in Finnish traffic



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# The first electric EMS2

- In traffic since 2023/10
- Operates Helsinki – Tampere
- 100 000 km annually
- GCW 68 t





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# eTrailer works as part of the A-double

- 6x2 500 hp tractor + 120 kw eAxle in trailer
- excellent performance and fuel economy
- The first pilot in traffic since 5/2023



Unloading to hardware store  
165 km north from arctic circle



Picture 16.1.2023 15:17

**Thank you for your  
interest**

**My contact information**

Otto.lahti@traficom.fi