

Welcome to Aeroflex Webinar

Part 2



Van Eck Trailers B.V. | The Netherlands

108 YEARS
TRAILER MADE

If you have any questions about the presentation please contact us.

With kindest regards,

Van Eck Trailers B.V.

DE: Wenn Sie Fragen zur Präsentation haben, wenden Sie sich bitte an uns.

Mit freundlichen Grüßen,

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Q&A Session

If you haven't already do so

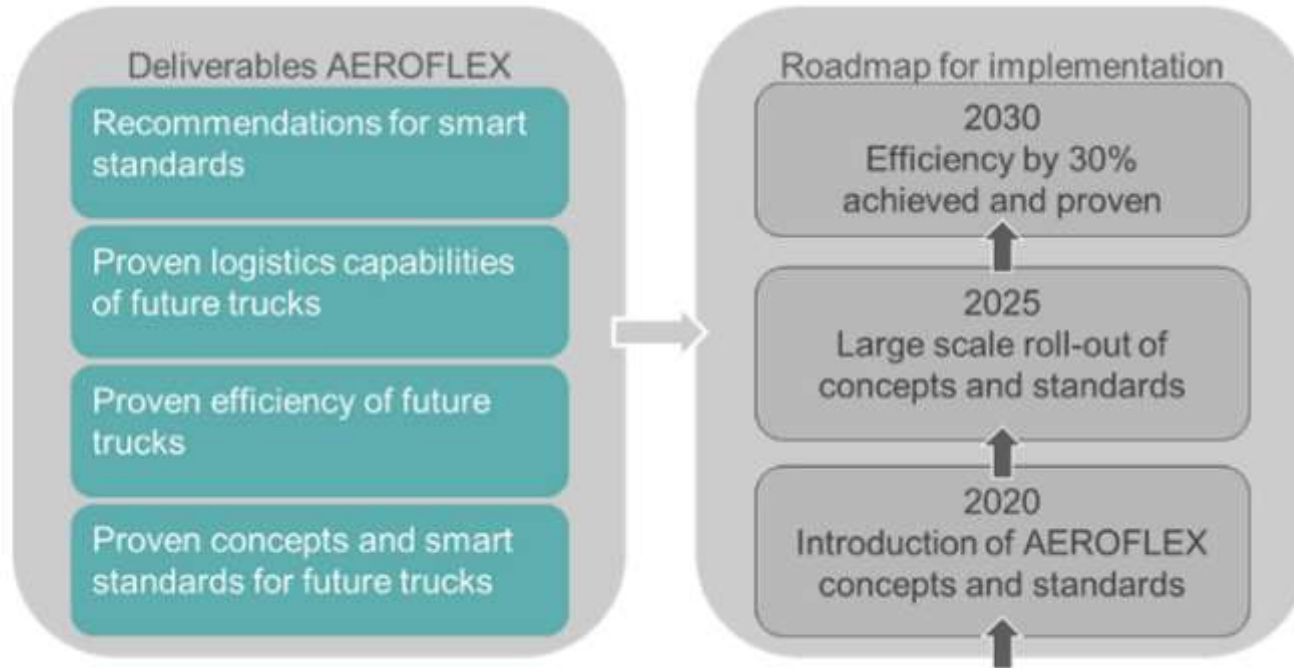
Please use the chat function to write your questions

HIGH CAPACITY ROAD TRANSPORT

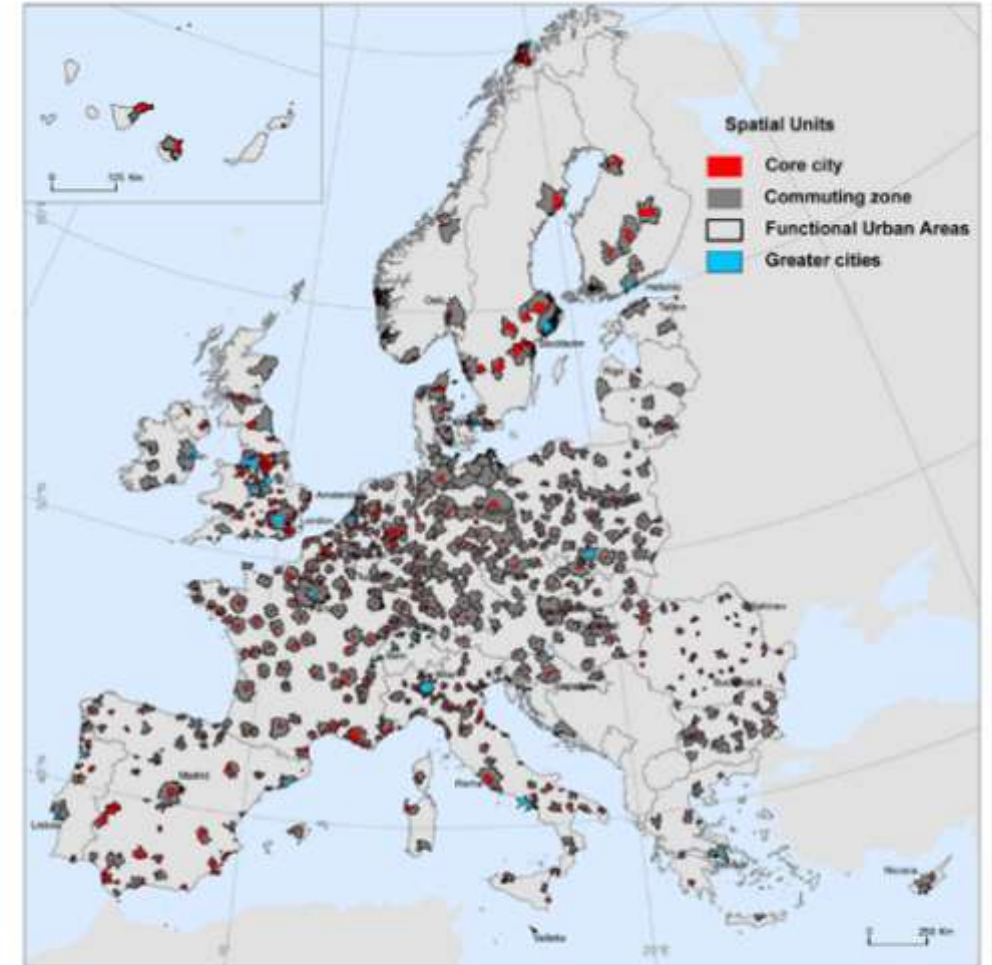
FOCUSING INNOVATION ON
SMARTER MOBILITY SOLUTIONS FOR SMARTER POLICIES
Efficiency Improvement up to 33% by 2030



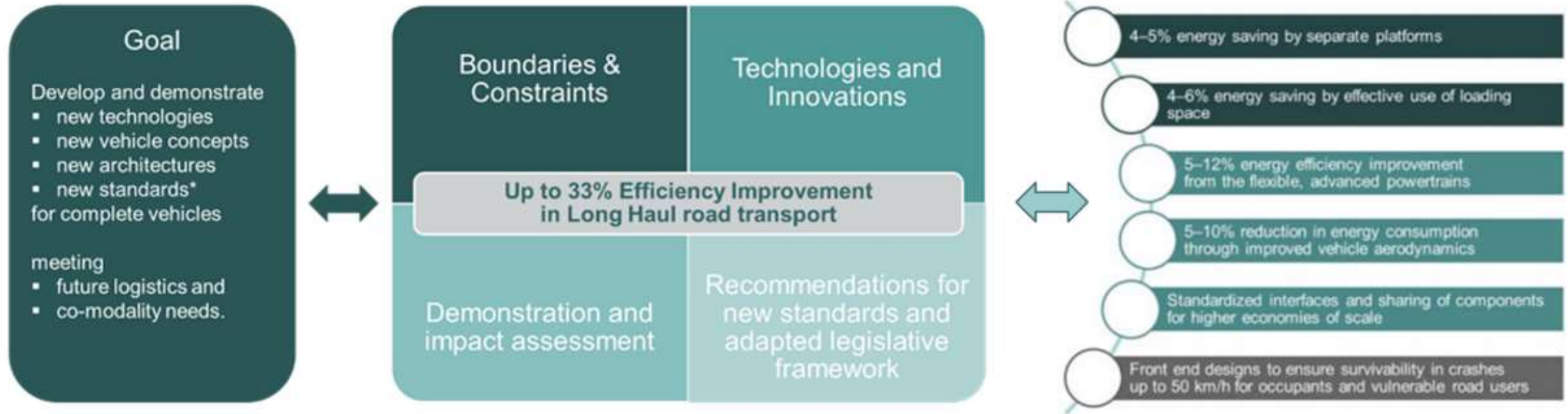
Vision; MEET THE COMING CHALLENGES AND INCREASE EFFICIENCY FOR ROAD FREIGHT TRANSPORT



- 🌐 Contribution in achieving implementation of “The Physical Internet”.*
- 🌐 Optimization of multimodal transport chains by drawing on the advantages of the different modes.



Efficiency improvement up to 33%

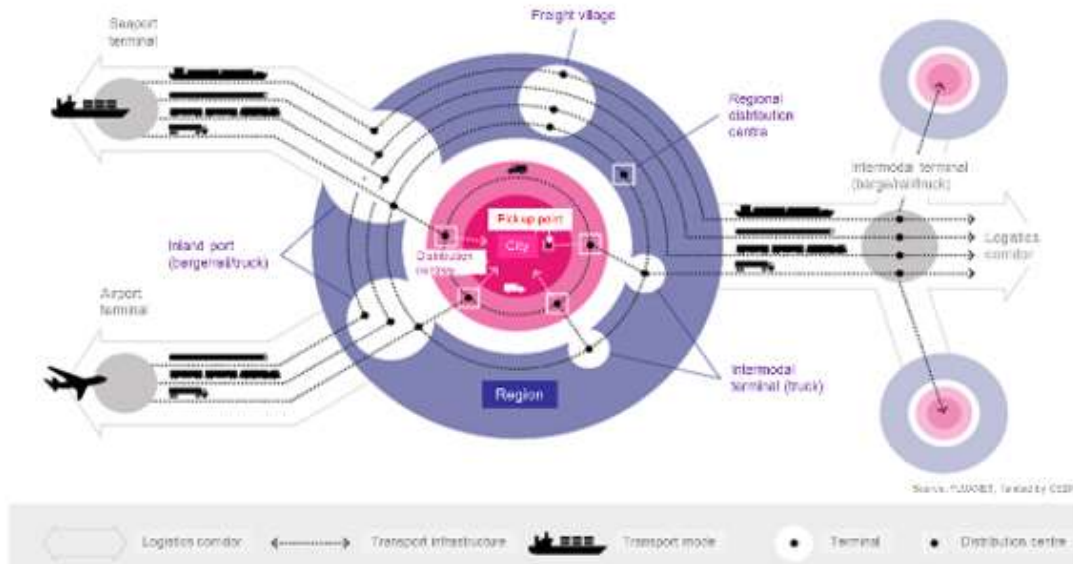


*new standards for hybrid-distributed powertrain, aerodynamic devices for complete vehicle, utilisation of loading units, performance based standards (PBS), access to infrastructure in a multi-mode context

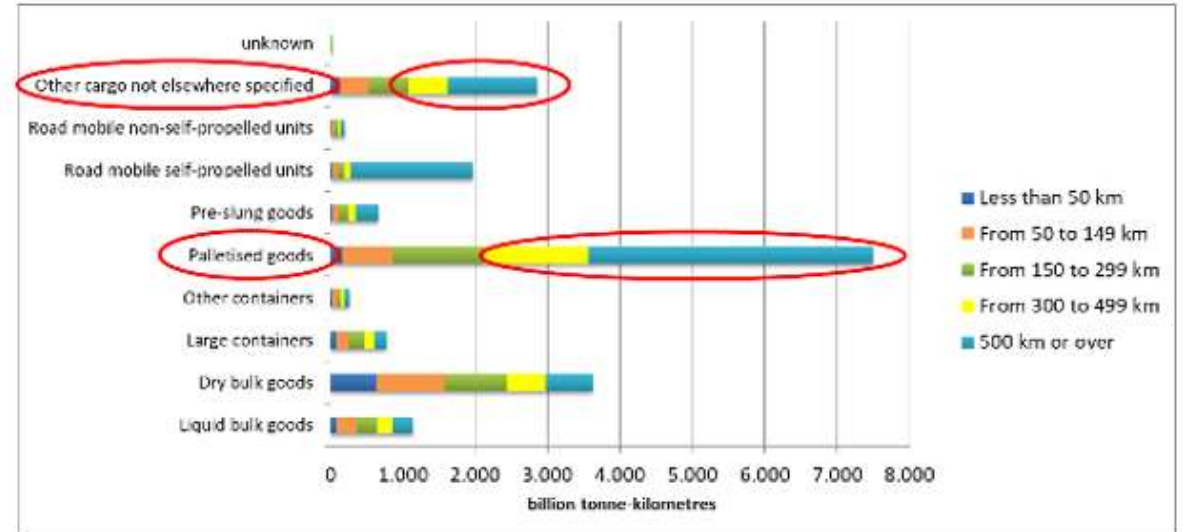
- The optimal matching of novel vehicle concepts and infrastructures require the definition of smart (performance-based) standards for future trucks, load carriers and road infrastructures (Intelligent Access Policies).

HIGH CAPACITY TRANSPORT – focus on the right mode and cargo

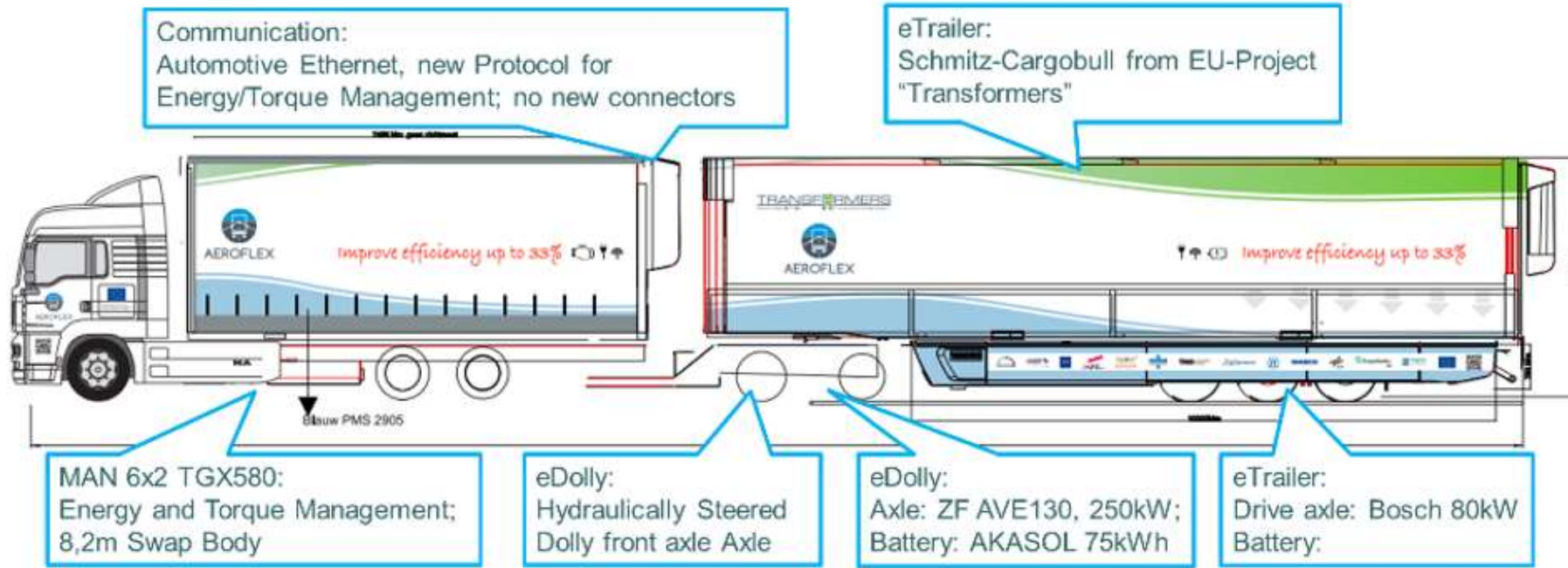
Address logistics concepts for cargo consolidation in logistics hubs and intermodal transport chains



Address most relevant cargo units – palletized and other cargo collis / customized boxes on long distance transports



Hybrid distributed powertrain and e-dolly for autonomous yard operations



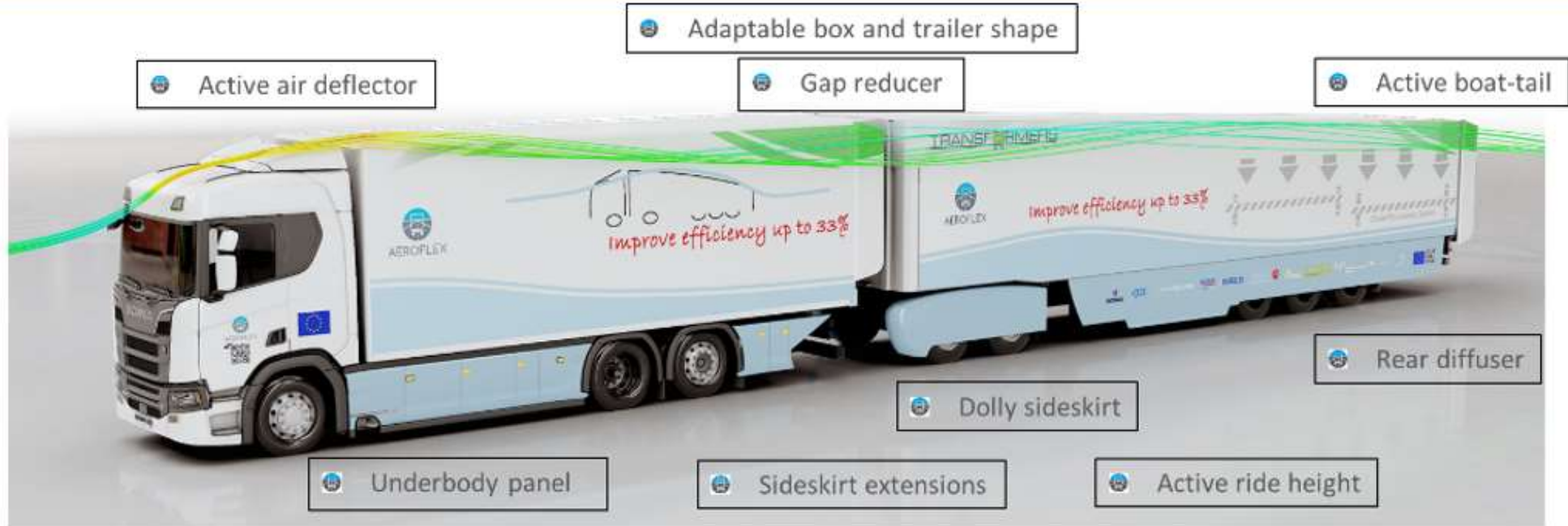
Architecture allows configuration up to 5 units



Hybrid distributed powertrain and e-dolly for autonomous yard operations



Aerodynamic devices for the complete vehicle



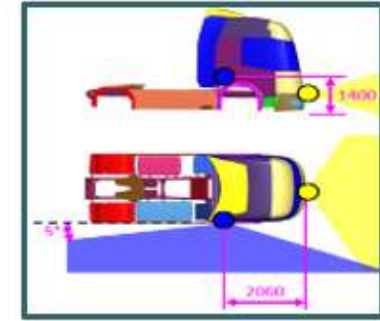
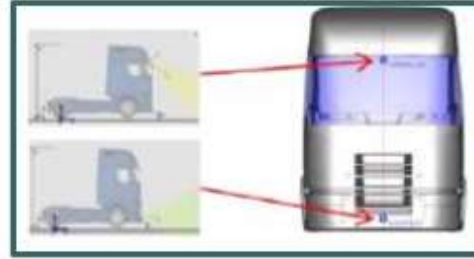
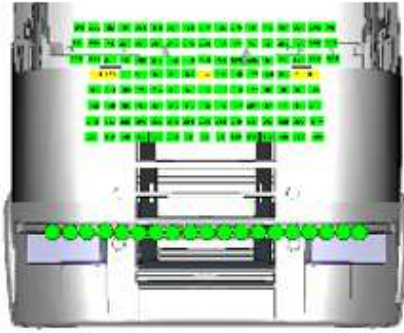
Drag reduction vs reference vehicle



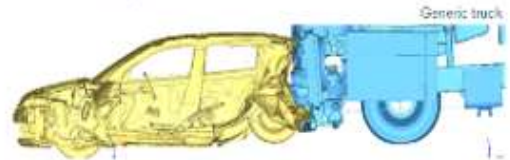
$\Delta C_{dx}A$, realistic	2.09 m ² (42%)	2.36 m ² (40%)
$\Delta C_{dx}A$, maximum	2.38 m ² (48%)	2.62 m ² (44%)



Front end design for improved survivability



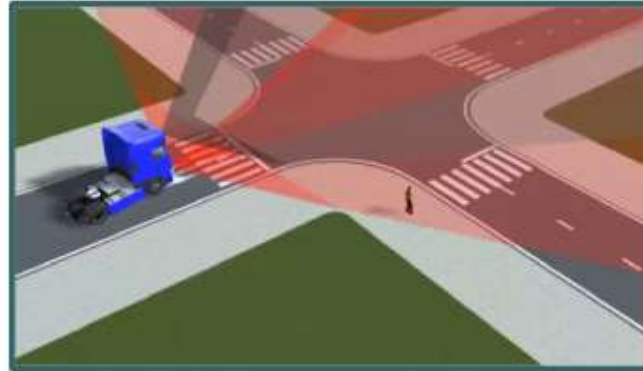
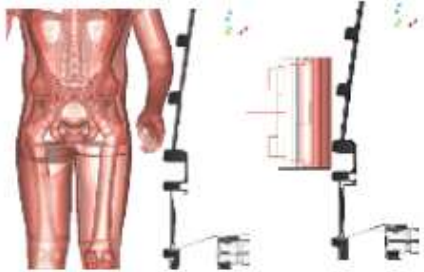
standing car
100% full impacted



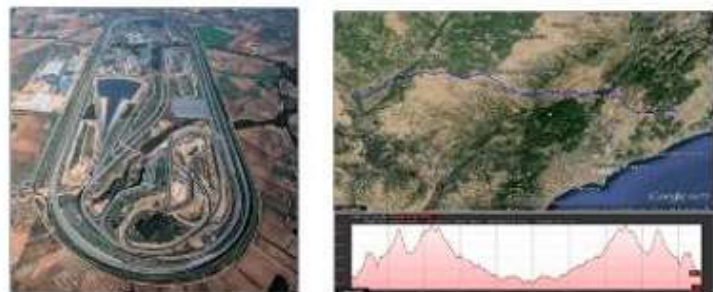
Generic truck



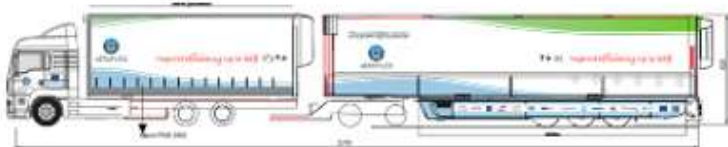
Aeroflex truck



Demonstration, evaluation and impact assessment



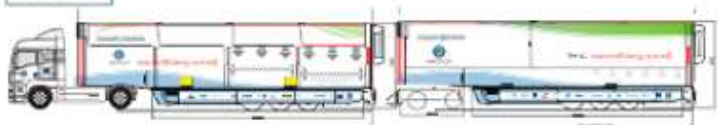
Q4/2020 • Beyond State of the Art:
• MAN 6x2 + e-Dolly + e-Trailer SCB



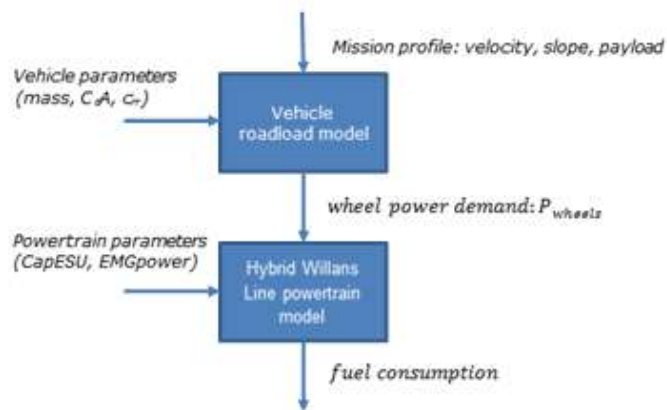
Q4/2020 • Scania 6x2 + Aero-Dolly + Aero-Trailer VET



Q1/2021 • MAN 4x2 + Aero-Trailer VET + e-Trailer SCB

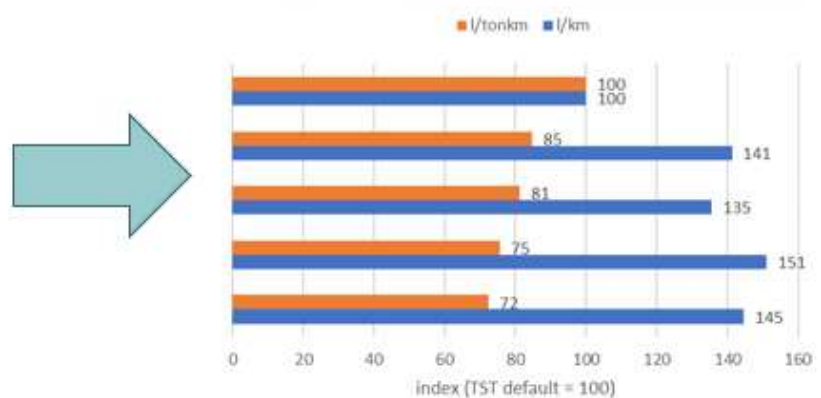


Testing



- 4–5% energy saving by separate platforms
- 4–6% energy saving by effective use of loading space
- 5–12% energy efficiency improvement from the flexible, advanced powertrains
- 5–10% reduction in energy consumption through improved vehicle aerodynamics

Evaluation

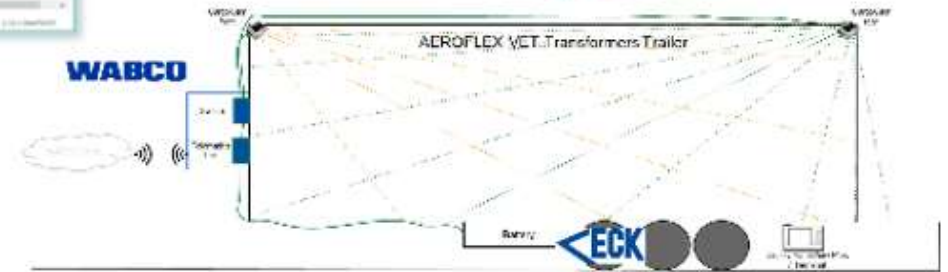
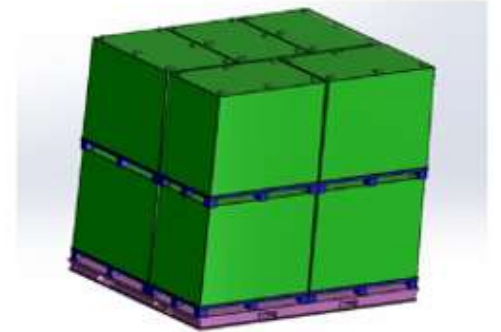
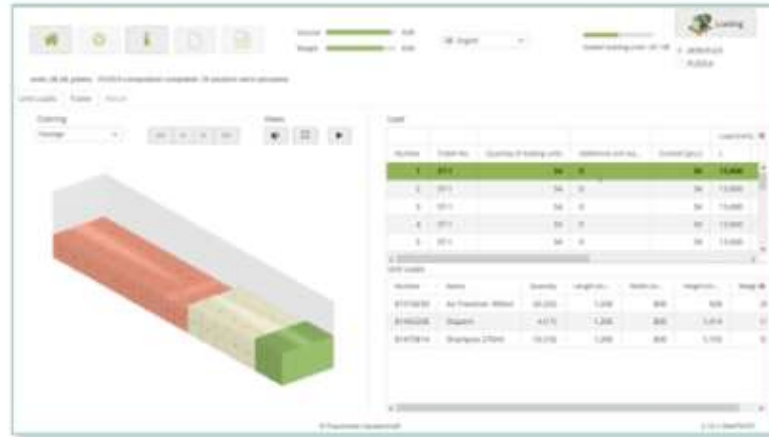


Real world impact assessment

Smart and flexible loading units

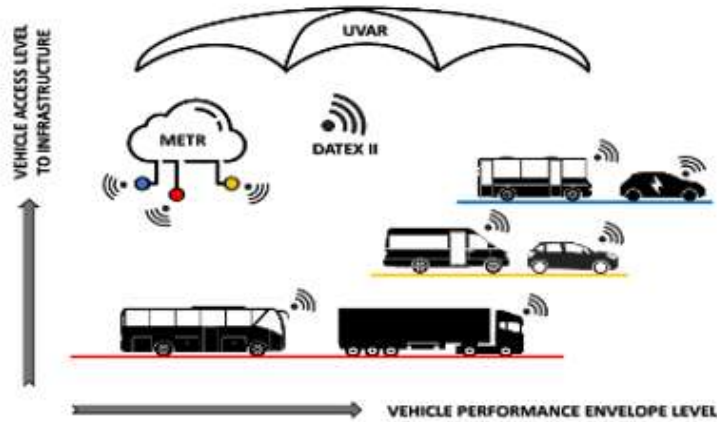
- Three use cases to demonstrate under real-life and conditions
 - Optimization loading of trailers at P&G
 - Trailer to Train by CFL lorry rail Bettembourg - le Boulou
 - EMS2 configuration

- 4-5% energy saving by separate platforms
- 4-6% energy saving by effective use of loading space

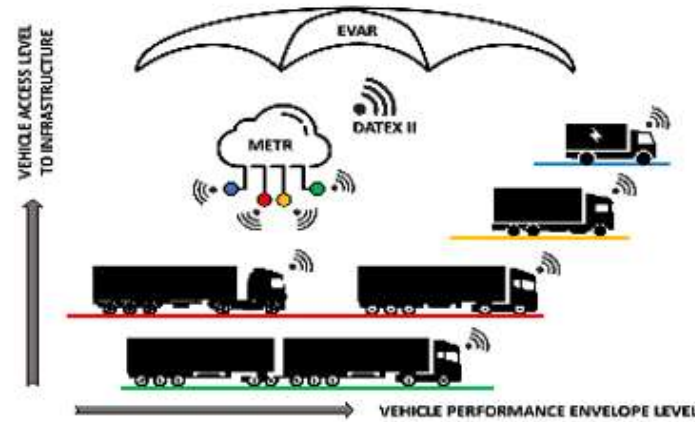


Intelligent Access Policies for Safe and Efficient Use of Infrastructure (example)

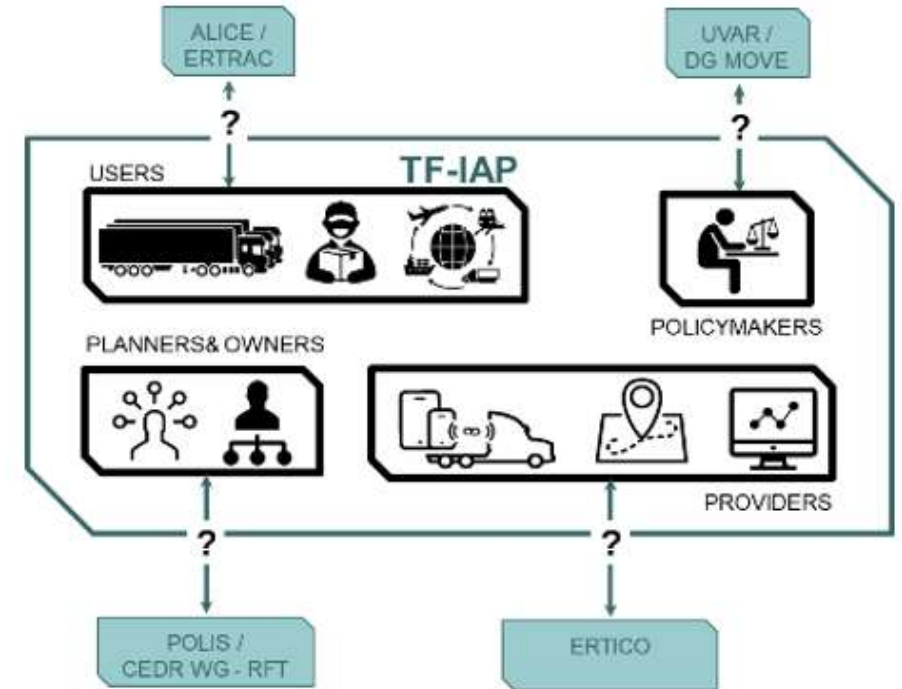
- “Pathway to Intelligent Access Policies through Europe to safeguard freight transport in a healthy, safe and environmentally friendly context”.



- Urban Vehicle Access Regulations (UVAR) & Management for Electronic Traffic Regulations (METR)
e.g. NORDICWAY project, DG MOVE UVAR pilot



- Task force to promote European Vehicle Access Regulations (EVAR) & Management for Electronic Traffic Regulations (METR) for transport of freight in Europe



- The project AEROFLEX has decided to initiate a start of **IAP Task Force**, find budget to continue the activities driving the IAP-agenda beyond AEROFLEX.

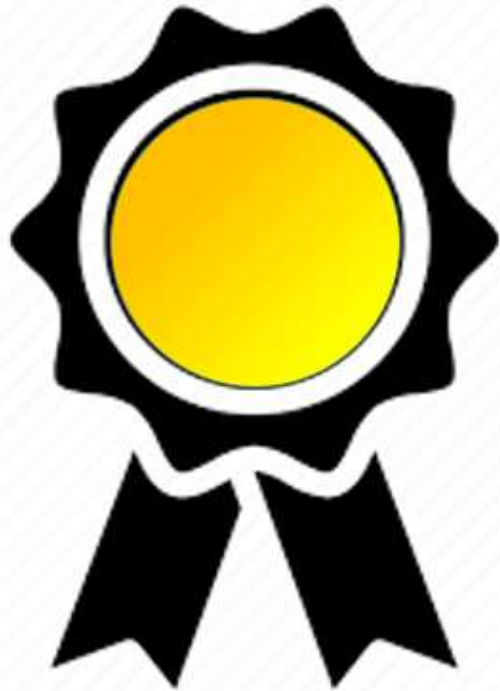
Join our initiative! -> marta.tobar@idiada.com / www.aeroflex-project.eu



Q&A Session

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TRAILER
INNOVATION
CCC 2021

3rd PLACE
CATEGORY
ENVIRONMENT

- Next meetings
 - SB web-meeting – 3-4 November 2020
 - ALICE web-meeting – March 2021
 - Final meeting preliminary 22-24 June 2021
 - Project website: <https://aeroflex-project.eu>
 - Please contact Ms. Marta Tobar Marta.Tobar@idiada.com for participation





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