

## \*\*\* PART 3 \*\*\*

### HIGH-CAPACITY ROAD TRANSPORT

### FOCUSING INNOVATION ON SMARTER MOBILITY SOLUTIONS FOR SMARTER POLICIES

Efficiency improvement up to 33% by 2030



*The AEROFLEX project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement no 769658*



# Agenda

14:00h **Opening Session:**

- Welcome and rules of the webinar
- ALICE introduction (by Fernando)
- Project overview and highlights (by Ben/Per/Giuseppe)

~14:30h **Session I - Short presentations followed by Q&A and interactive Sessions on the following topics:**

- P&G use case and next steps: Smart Loading Units and Tools into Practice (by Ton/Hilal)
- Modelling of freight 2040: Implications of High-Capacity Transport (by Andreas/Christoph)
- e-Dolly and the next steps (by Julius/Henning)
- Intelligent Access Policies initiative and next steps (by Marta/Elisah)

~15:45h **Session II - Outlook and closure:**

- R&I opportunities beyond AEROFLEX (by Ben)
- Horizon Europe opportunities (by Ben)
- Outlook and closure (by Ben/Fernando)

## Use Slido:

- To make your questions and remarks known
- To collect opinions
- To challenges audience
- To find support for IAP and eDolly
- To join project ideas beyond AEROFLEX



# R&I opportunities beyond AEROFLEX

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- 🌐 R&I opportunities beyond AEROFLEX
- 🌐 Scaling (logistics) projects to further demonstration and implementation new technologies / systems to realize the needed impact and efficiencies (autonomous handling and transportation of freight and cargo)
- 🌐 Link EMS to zero tail pipe vehicles, connections to urban logistics including last mile operations. Potential solution to speed up decarbonization at cost able to bear by the society and contributing to the Green Deal targets (50 - 55% CO2 reduction by 2030).
- 🌐 Project OEM / trailer-manufactures / transshipment / intermodal operators to demonstrate the holistic system

# HORIZON-CL5-2022-D5-01 Clean and competitive solutions for all transport modes Addressed Call Topic

**Modular multi-powertrain zero-emission systems for HDV  
(BEV and FCEV) for efficient and economic operation**  
(Funding Code: HORIZON-CL5-2022-D5-01-08)

*This topic implements the co-programmed European Partnerships on  
'Towards zero emission road transport' (2ZERO)*

# Opportunity for AEROFLEX demonstrators

## Communication:

Automotive Ethernet, new Protocol for Energy/Torque Management; no new connectors

## eTrailer:

Schmitz-Cargobull from EU-Project  
"Transformers"

Option for BEV / FCEV in combination with AEMPT



**eDolly:**  
Hydraulically Steered  
Dolly front axle Axle

**eDolly:**  
Axe: ZF AVE130, 250kW;  
Battery: AKASOL 75kWh

**eTrailer:**  
Drive axle: Bosch 80kW  
Battery:



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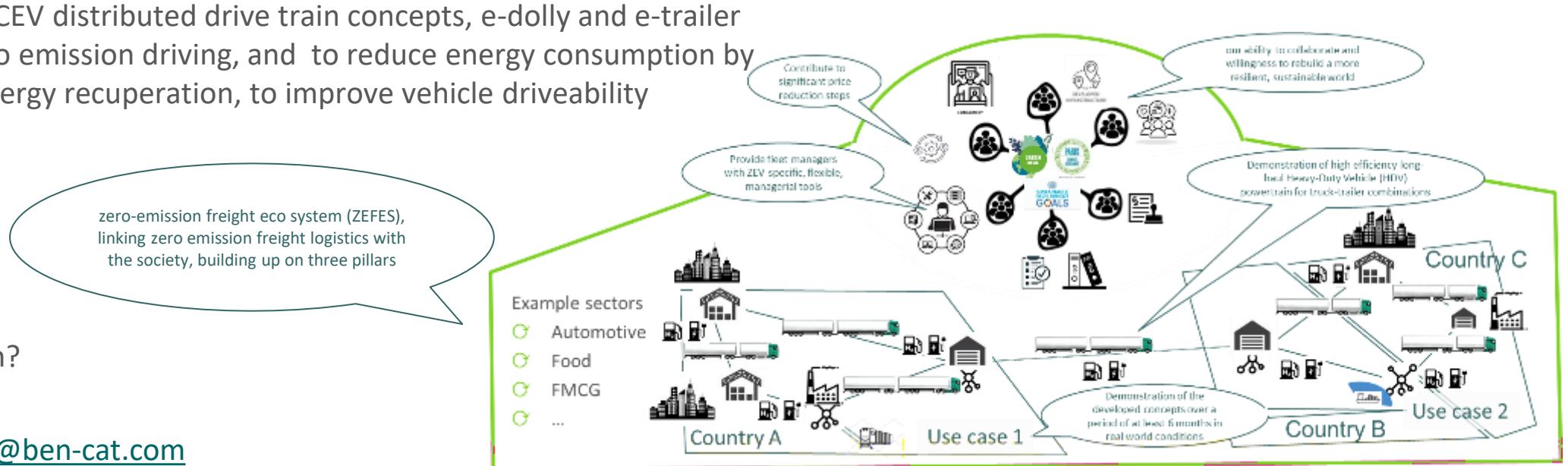
# Modular multi-powertrain zero-emission systems (HORIZON-CL5-2022-D5-01-08)

## Conceptual Ideas

- Include ALICE members to align use cases from a logistic perspective:
  - to better understand needs and requirements
  - to further develop vehicle concepts and charging infrastructure
- Include cross border corridor applications to prove benefits at local, national and EU wide circumstances
- Include BEV/FCEV distributed drive train concepts, e-dolly and e-trailer to achieve zero emission driving, and to reduce energy consumption by maximizing energy recuperation, to improve vehicle driveability

- Interest to join?
- Contact

[benkraaijenhagen@ben-cat.com](mailto:benkraaijenhagen@ben-cat.com)





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# ALICE Hydrogen



alice |  
Alliance for  
Logistics Innovation  
through Collaboration  
in Europe

Hydrogen  
Europe

MoU: supply and demand join forces to boost freight and logistics sector decarbonisation through hydrogen technologies

The ALICE Innovation Platform and Hydrogen Europe are delighted to announce a collaboration in the form of a Memorandum of Understanding.



# Join follow up sessions

- 🌐 We invite you to indicate your interest to join the follow up sessions.
- 🌐 Below you see an overview of the intended follow up sessions.
- 🌐 Please let us know your name and the number of the session of interest

Nr	Topic	Month
1	e-Dolly and the next steps	May 2021
2	Front end design for more survivability in crashes	May 2021*
3	Intelligent Access Policies	May-June 2021
4	P&G use case and next steps (focus on PUZZLE® and CargoCam)	June 2021
5	Modelling of freight 2040	June 2021
6	Cost – Benefit Tool supporting seamless integration of AEROFLEX innovations into fleets	June-July 2021

## 🌐 Contact

[benkraaijenhagen@ben-cat.com](mailto:benkraaijenhagen@ben-cat.com)



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# IPIC 2021 - 8th International Physical Internet Conference

## 14-16 June 2021

### AEROFLEX at IPIC 2021

Option for 2 sessions



**IPIC 2021**

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8TH INTERNATIONAL PHYSICAL INTERNET CONFERENCE  
BOOSTING PHYSICAL INTERNET TO EUROPE

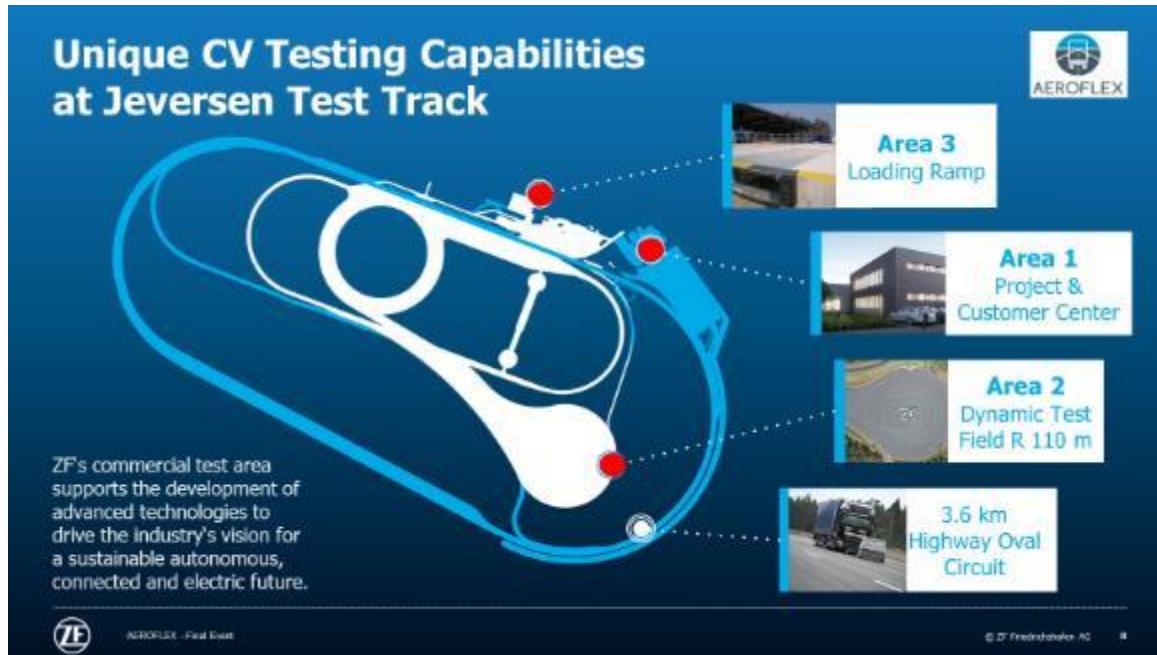
Towards a smart hyperconnected era of efficient and sustainable logistics, supply chains and transportation  
IPIC 2021 - 8th International Physical Internet Conference  
June 14-16, 2021 | Virtual



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# Next steps and outlook

Jeversen, Germany



## Next meetings:

- Follow up sessions May – July 2021
- ALICE IPIC Conference, June 14-16
- SAVE THE DATE**  
**Final event, 28 September 2021**  
**Full day hybrid event and interactive program**  
**Registration open June onwards**
- Keep on looking at our website  
<https://aeroflex-project.eu>



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# Keep healthy



**DAF**  
A PACCAR COMPANY

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**VOLVO**  
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FIAT CHRYSLER AUTOMOBILES



  
**UNIRESEARCH**

**SCHMITZ**  
**CARGOBULL**  
The Trailer Company



**TIRSAN SOLUTIONS**

  
**CREO**  
DYNAMICS

  
**MICHELIN**  
A BETTER WAY FORWARD



  
**CHALMERS**  
UNIVERSITY OF TECHNOLOGY



  
**Fraunhofer**  
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**HAN** UNIVERSITY  
OF APPLIED SCIENCES  
  
School of Engineering  
and Automotive

  
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& **MOBILITY**  
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**UIRR**  
INTERNATIONAL UNION  
FOR ROAD-RAIL  
COMBINED TRANSPORT



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