

M^{ODI} | A LEAP TOWARDS SAE L4 AUTOMATED DRIVING FEATURES



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MODI

A leap towards SAE L4 automated driving features

01/10/2022



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Modi in a nutshell

Horizon Europe framework

HORIZON.2.5 - Climate, Energy and Mobility

HORIZON.2.5.7 - Clean, Safe and Accessible Transport and Mobility

HORIZON.2.5.8 - Smart Mobility

HORIZON-CL5-2022-D6-01-01 - European demonstrators for integrated shared automated mobility solutions for people and goods (CCAM Partnership)

Project information

MODI: A leap towards SAE L4 automated driving features

Coordinator: ITS Norway

Partners: 34 (27 participants + 2 affiliated entities + 5 associated partners)

Timeline: 1 October 2022 - 31 March 2026

Total cost: € 27,992,880 - **EU contribution:** € 23,030,095

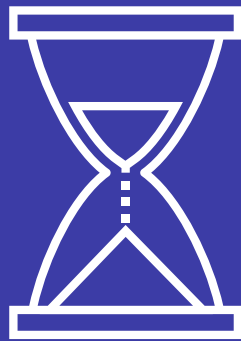
Funding scheme: Innovation Action (IA)



- No net emissions of greenhouse gases by 2050
- Economic growth decoupled from resource use
- No person and no place left behind

- Technology that works for the people
- A fair and competitive digital economy
- An open, democratic and sustainable society

Automated transport is crucial to overcome freight transport challenges



Overview

- **Logistic** corridor from Rotterdam to Oslo
- Identify and largely resolve barriers on this corridor, in **confined areas** and on **public roads**

Leveraging with other projects



The ambition of MODI

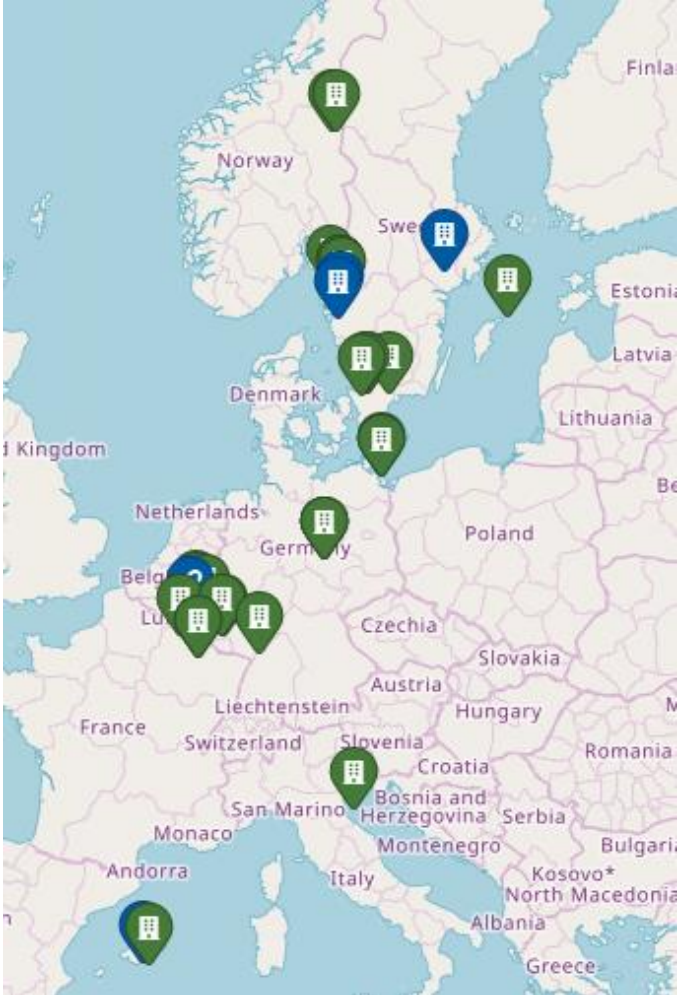
Accelerate the introduction of CCAM solutions to significantly improve logistic chains

- The MODI project aims to **accelerate the adoption of highly automated freight vehicles through demonstrations** and by **overcoming barriers to the rollout of automated transport systems and solutions in logistics**.
- MODI will demonstrate automated heavy-haul vehicles use cases on the **logistics corridor from Rotterdam in the Netherlands to Moss in Norway**, crossing four national borders and demonstrating terminal operations at four different harbours and terminals in route.
- **Automated transport will significantly contribute to improving European transport and logistic chains**. The MODI initiative will contribute to make substantial steps toward identifying and resolving barriers preventing this from coming true.

Consortium

34 organisations from 8 countries: 27 Participants, 2 Affiliated entities and 5 Associated partners

Industry and end users			
Industrial partners 	Industrial clusters & networks 	Terminals 	Public partners
Research and evaluation			
Associated partners			



Objectives

0.1

- **Implement the latest technology and overcome major CCAM deployment barriers for logistics by demonstrating business-oriented and well-integrated CCAM systems for use cases (UCs) along a transport corridor and between hubs.**

0.2

- **Define recommendations for adaptations of supporting infrastructure, vehicle regulations and standards to enable broader deployment of CCAM, speeding up the introduction of CCAM vehicles and recommendations for further (e.g., large scale) piloting.**

0.3

- **Demonstrate business models and partnerships for the application of CCAM vehicles in logistics.**

0.4

- **Perform technical & socio-economic impact assessments and communicate them in the context of the best practices of the MODI L4 CCAM solutions and systems for real-world conditions.**

Use cases

CCAM SOLUTIONS TO IMPROVE LOGISTICS OPERATIONS



PORT OPERATIONS NETHERLANDS

CCAM vehicles in current logistics operations at port site.



MOTORWAY TO HARBOUR GERMANY

CCAM vehicles approaching a confined area at the harbour.



HUB-TO-HUB SWEDEN

Hub-to-hub traffic with CCAM heavy-duty vehicle.



BORDER TO PORT NORWAY

CCAM vehicles from EU border crossing to a port.



MODI CCAM CORRIDOR

MODI CCAM test corridor from Rotterdam to Oslo.

Expected outcome

MODI KEY RESULTS



CCAM vehicles at TRL 7 suitable for L4 demos on public roads & confined areas on the logistic corridor between The Netherlands and Norway.



Interface for efficient coordination of vehicles in public & confined areas, adding more benefits to **CCAM vehicles** use.



Design of Physical and Digital Infrastructure for supporting L4 CCAM vehicles, co-created and verified by relevant stakeholders.



New viable business models and tools creating value along the logistic chain by utilizing CCAM technology and vehicles.



Assessment of environmental, safety, operational, and socio-economic **impacts** to support the recommendation of CCAM deployment in logistics.



Lessons learned and **book of recommendations** on CCAM vehicles, PDI, regulation, harmonization, and standardization to accelerate CCAM adoption in logistics.

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THANK YOU FOR YOUR TIME!



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