

The European project “AWARD” to autonomize heavy-vehicles for logistics operations launched remotely

21 January 2020 - The 29-partner strong consortium that makes up the “All Weather Autonomous Real logistics operations and Demonstrations” (AWARD) project came together online this week to kick-start the project.

The project received a funding grant of nearly €20 million by the European Commission under the programme **Horizon 2020** to develop and demonstrate **driverless heavy-duty vehicles** in harsh weather conditions for **real-logistics operations**. It includes 10 works packages and covers a range of applications. After an overview by **coordinator EasyMile**, each work package leader presented their plan and mapped out next steps in the virtual meet-up.

Connected and automated driving systems for commercial vehicles have a great potential. They can improve **safety and efficiency of freight transport** (emissions/freight ratio, fuel consumption, road occupancy, vehicle utilization, capacity of transport network both in confined areas and in mixed traffic (hub-to-hub) and make logistics operations more competitive. Significant progress has been made in the field of **autonomous truck driving** with numerous prototypes. However, there is still a gap to fill in order to ensure the uptake of this breakthrough technology and the future advent of an overall **autonomous logistic chain**. The current inabilities **autonomous heavy-duty vehicles** to work with the right safety and functional level for **24/7 availability** (e.g. **harsh weather conditions**) hinder their deployment, along with the lack of a harmonized **regulatory framework**.

Against this background, AWARD will develop and enable a **safe autonomous transportation system** in a wide range of **real-life use cases** in a variety of different scenarios. This encompasses the development of **autonomous driving system (ADS)** capable of handling adverse environmental conditions such as heavy rain, snowfall, fog. The ADS solution will be based on multiple sensor modalities to address **24/7 availability**. The ADS will then be integrated into multiple vehicle types used in low-speed areas.

Finally, these vehicles will be deployed, integrated and operated in a variety of real-life use cases to validate their value in the application and identify any limitations: forklift (un)loading in warehouses and industrial plants, hub-to-hub shuttle service on open road, automated baggage dispatching in airports, container transfer operations and vessel loading in ports.

Logistics operations will be optimized thanks to a **new fleet management system** that will act as a control tower, gathering all information from subsystems (vehicles, road sensors, etc.) to coordinate the operations and protect vulnerable road users. This work should then enable commercial exploitation of the technology and **policy recommendations** for certifications processes.

The members, from **12 different countries**, will work together for the next three years. They are leading companies and innovative, growing ones recognized for their real-world applications and expertise, as well as research organisations. This maturity and mix paves the way for the replicability and sustainability of project results. They include:

Heavy-duty vehicle manufacturers

- KAMAG, Worldwide leader for Swap body trucks
- Kion, Worldwide Material handling vehicles provider



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- Terberg, manufacturer of special vehicles and worldwide leader of yard and terminal trucks for ports, industry, and distribution centers
- TLD Group, worldwide leader for airport ground support equipment and Smart Airport Systems (SAS)

Automated driving technology suppliers

- Continental, one of the biggest automotive suppliers and expert on automated driving technologies
- ADASKY, the leading developer and manufacturer of advanced high-resolution, thermal perception systems
- Navtech Radar, world-leading manufacturer of High-Definition-Imaging Radar Solutions
- Foresight, world expert in multispectral automotive vision systems and sensor fusion

Fleet supervision and teleoperation

- Applied Autonomy, leading provider of Smart Fleet Management systems for connected autonomous vehicles
- Otopia, delivering safe teleoperation

Research organizations

- CEREMA, expert in characterizing weather-related parameters in fog and rain
- Linz Center of Mechatronics
- AIT - Austrian Institute of Technology
- VTT, validation of automated driving functions and sensors in arctic conditions
- University of Applied Sciences Upper Austria - Department of Logistics

Companies involved in demonstrations of Autonomous Road Transport (ART) Autonomous Transport Systems

- DFDS
- Rotax (factory)
- Avinor (airport)
- DB Schenker

Consulting companies

- ENIDE, delivering digital solutions for sustainable mobility and logistics
- Testregion and Proving Ground: DigiTrans
- Certification and regulatory bodies: CERTX, FRACS-STACS
- National and international organizations with close links to the automotive and logistics industries: CARA European cluster for mobility solutions and Business Upper Austria, Automobil Cluster ÖO

Certification and regulatory bodies:

- CertX: Accredited functional safety and cyber security certification body for safe and secure automated and autonomous systems worldwide.
- FRAC-STACS

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Membership Organization

- ITS Norway
- IRU Projects works closely with IRU, the world transport organisation, by upholding the interests of commercial road freight and passenger transport operators

You can follow AWARD on [Linkedin](#) and [Twitter](#) to keep updated with its next developments.

Boiler plate: here you can describe your organization and the activities developed in the project (no more than 5-6 sentences)



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Project Factsheet

Duration:	1 January 2021 - 31 December 2023
Total cost:	€ 26 398 799,01
EC contribution:	€ 19 892 905,63
Coordinator:	EASYMILE
Partners:	CONTINENTAL TEVES AG & CO. OHG, KAMAG TRANSPORTTECHNIK GMBH & CO.KG, TERBERG BENSCHOP BV, SMART AIRPORT SYSTEMS, DEMATIC, DFDS AS, CENTRE D ETUDES ET D EXPERTISE SUR LES RISQUES L ENVIRONNEMENT LA MOBILITE ET L AMENAGEMENT, TEKNOLOGIAN TUTKIMUSKESKUS VTT OY, AIT AUSTRIAN INSTITUTE OF TECHNOLOGY GMBH, APPLIED AUTONOMY AS, DIGITRANS GMBH, ENIDE SOLUTIONS .S.L, IRU PROJECTS ASBL, ASSOCIATION CARA, NAVTECH RADAR LIMITED, BUSINESS UPPER AUSTRIA - OO WIRTSCHAFTSAGENTUR GMBH, ITS NORGE-NORSK FORENING FOR MULTIMODALE INTELLIGENTE TRANSPORT SYSTEMER OG TJENESTER - ITS NORWAY, LINZ CENTER OF MECHATRONICS GMBH, FH OO FORSCHUNGS & ENTWICKLUNGS GMBH, AVINOR AS, ADASKY LTD, FORESIGHT AUTOMOTIVE LTD, BRP-ROTAX GMBH & CO KG, CERTX AG, OTTOPIA TECHNOLOGIES LTD, AUSTRIATECH - GESELLSCHAFT DES BUNDES FUR TECHNOLOGIEPOLITISCHE MASSNAHMEN GMBH, SCHENKER & CO AG, FRANCE AVIATION CIVILE SERVICES.

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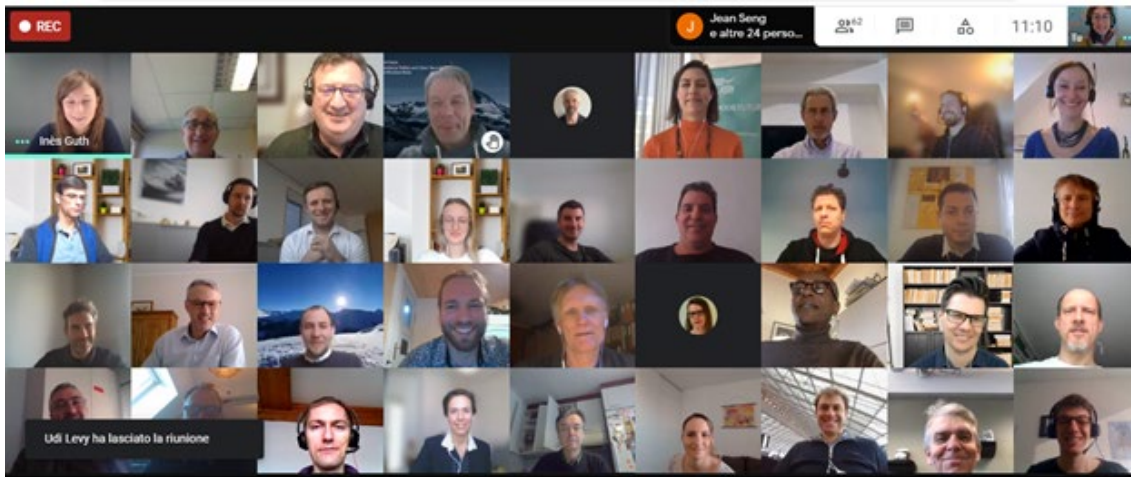
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AWARD online Kick-off meeting, 19/01/2021.



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