i2d-MSW – intelligence to Drive | Move-Save-Win

Transparency, Responsible consumption, Behaviour changes and Reducing inequalities

Coordinator ***Scientific*** ***Business***

CONSORTIUM

Main partner: UVolution Green Lda (Portugal)

Austria: Beia GmbH

Canada: NSCC Nova Scotia Community College Applied Research

Hungary: Seacon Europe

Portugal: University of Minho, SPI Sociedade Portuguesa Inovação, Instituto Superior Técnico

Turkey: PEAKUP Technology

UK: Electronic Media Services Ltd., Brunel University London, Swansea University

SUSTAINABILITY OF ROAD TRANSPORT AND URBAN MOBILITY

The UN's SDG 11 reads "Make cities and human settlements inclusive, safe, resilient and sustainable". This deals with the **Sustainability** of **Road Transport** and Urban Mobility. **Facts:**

- Over 120 years, the car industry created and fed a socioeconomic culture around the car that pushes you to buy one and use it individually
- 90 million new cars are being produced per year, of which 50 million go to urban areas, condemning measures to minimise congestion
- *Road transport sector has continuously increased total GHG emissions over the last 30 years*
- *Last decade, the EU and USA could not decrease road deaths/year. Serious injuries highly increased*
- *In 2016, EU28 Road Transport **External Costs** reached €820 billion (6,6% of its GDP; € 3,150/vehicle/year), largely (60%) paid by society, not just users*
- *These costs arise from **Accidents**, **Congestion**, and **Environment** which are interconnected and must be seen in an integrated way*
- *As the EU falls short of achieving all road goals, the invoice is ever-growing*

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CENTRAL OBJECTIVE

The **Central objective of the project** is ***to reduce Road Mobility External***, and **Internal Costs**, such as €7,400/year/*car* and €11,100/year/*van* for fuel, insurance, accidents, maintenance, and taxes.

SOLUTION

we address **Cultural Changes** in Road Mobility. To achieve this, we can rely on Violeta Bulc's quote: "*...implement the 'polluter/user pays' principle... define right incentives/charges models to promote a level-playing field among transport modes"*, supported by **reliability technologies, 5G-V2X** and **Edge computing**.

PROJECT APPROACH: Climate and digital transformation require a cultural shift.

Taking into account the EU guidance: "the real costs of road transport helped to define appropriate incentive (or pricing) models" and the new EU CO2 regulations Nos. 392 and 631 (2021.03.04) and its amendment (2021.07.14), we propose the following:

1) Accurately, fraud-proofly calculate the savings/surplus of external costs of road transport and translate them into incentive-based public policies. This will allow society to achieve savings of more than 30%.

2) Create a public database with real fuel/energy consumption and emissions data (passenger cars and vans since 2002).

We intend to test our solution under real-world conditions, within the framework of a Proof-of-Concept involving 1000 vehicles, for up to 10 months on an international level, and to support it with data collection and data analysis.

INTERNATIONAL COOPERATION

Working with partners from different countries allows for the sharing of expertise, resources and data across borders, ensuring a more comprehensive understanding of sustainable mobility and safer transport.

EXPECTED INTERNATIONAL RESULTS

The multidisciplinary consortium of 11 organisations from 6 countries, through the implementation of the i2D-MSW project, aims to make a strong contribution to reducing the impact of road transport at EU level, in terms of the relevant external costs as follows, taking into account the three interrelated causes: accidents, congestion, environment.

- *Behavioural and cultural changes to be achieved by introducing appropriate incentives and pricing models to promote a level playing field between transport modes*
- *Technology-based solutions to road accidents and congestion, namely C-2X standards, EDGE computing and IMU (Inertial Measurement Unit) analysis*
- *Ways to inform and raise awareness from the driver to the individual citizen*
- *Exploring and using Big Data storage environment, statistical tools and AI+ML*

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