

## PRESS DOSSIER



Cooperative Mobility Systems and  
Services for Energy Efficiency

[\*ALL GRAPHICS AND LOGOS ARE AVAILABLE ON REQUEST; PLEASE CONTACT [Julie Castermans](#)]

### ABOUT THE ECoMOVE PROJECT

***eCoMove aims to achieve cleaner and more energy-efficient mobility of goods and people through cooperative green ITS***

#### INTEGRATED GREEN-MOBILITY ICT SOLUTIONS

The eCoMove vision is to achieve minimum fuel consumption by reducing the current main causes of energy waste in road transport can be avoided, i.e.:

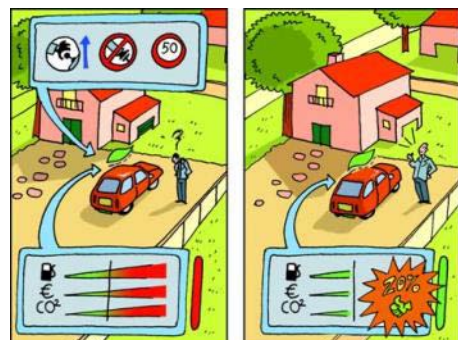
- uninformed trip planning & route choice
- inefficient driving performance
- non-adaptive traffic control



eCoMove intends to bring major improvements to road transport energy consumption by making use of the next-generation car-to-X or so-called “cooperative” communication technology. In such scenarios, “connected” vehicles exchange near-instant information with the road infrastructure about their destination, fuel consumption and surrounding traffic conditions. This data fed into prediction models allows to compute routing and eco-driving advice or traffic balancing strategies that will improve traffic flow, save fuel and cut down CO<sub>2</sub> emissions.

On top of this underlying technology, eCoMove has developed services designed to help private and professional drivers, freight forwarders and road operators to save fuel, avoid unnecessary distances driven and manage traffic more efficiently to approach the theoretical least possible energy use; for example:

- *ecoSmartDriving* “virtual coach” provides on-trip dynamic green driving and routing guidance as well as tips to set vehicle functions (e.g. electrical auxiliaries, tire pressure) in order to minimise fuel use, but also ecoPostTrip personalised



recommendations for eco-driving optimisation based on the driving record;

- *ecoTour Planning* for logistics companies to define eco-efficient delivery tours taking into account drivers' eco-performance, vehicle payload and road infrastructure status;
- *Truck-specific ecoNavigation* calculating the most fuel efficient route based on truck-specific attributes and traffic situation information;
- *ecoAdaptive Balancing & Control* strategies for energy-optimised traffic lights phasing at intersections (green waves);



When combined, these mainly independent but interacting applications can potentially save up to 20% fuel savings and CO<sub>2</sub> emissions.

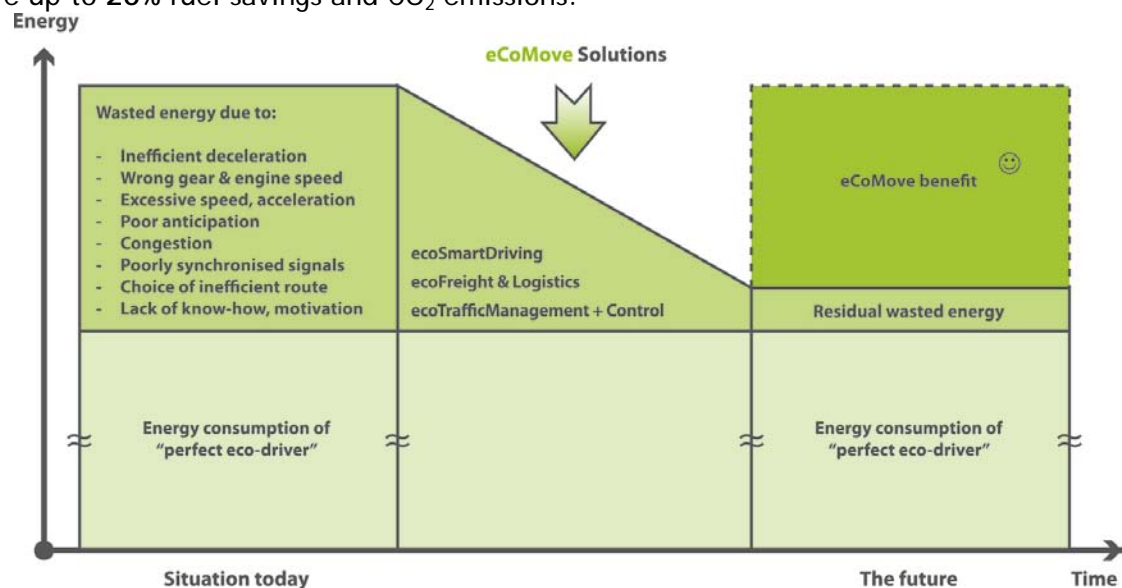


Fig 1: The eCoMove vision is that of the "perfect eco-driver" travelling through the "perfectly eco-managed" road network.

Finally, the project has studied user acceptance of such solutions, their potential impact on driver behaviour, mobility, traffic efficiency and environmental issues, and the barriers and requirements for their implementation.

#### ENSURING DATA PRIVACY AND SECURITY

As a general principle throughout the project, only the minimum data is collected and communicated, which is necessary to enable the application. Moreover the eCoMove data collected from individual vehicles are anonymised, so that no individual personal data are communicated. Where detailed driver behaviour data needs to be stored and analysed on board the vehicle, they will not be linked to that driver's personal data.

Issues of data privacy and data security have been analysed during the requirements definition and validation phases. In addition, a methodology for ensuring personal data

security and privacy protection is embedded in the high-level architecture and data management processes.

## STAKEHOLDERS

The eCoMove project brings together a multi-disciplinary team to develop the necessary new tools to support energy-efficient driving based on cooperative traffic control and infrastructure.

**Coordinator:** ERTICO - ITS Europe

**Consortium:** Association des Sociétés Françaises d'Autoroutes, AVL LIST GmbH, BMW Forschung und Technik GmbH, Robert Bosch GmbH, CGI Nederland B.V., Continental Automotive GmbH, Centro Ricerche FIAT S.C.p.A., Fundación para la Promoción de la Innovación, Investigación y Desarrollo Tecnológico en la Industria de Automoción de Galicia, DAF Trucks N.V., Deutsches Zentrum Für Luft und Raumfahrt EV, Ford Forschungszentrum Aachen GmbH, GoGreen Trafik & Miljö, Gemeente Helmond, HERE, Rheinisch Westfälische Technische Hochschule Aachen, Magneti Marelli S.p.A., MAT. TRAFFIC, NEC Europe Ltd, Imtech Traffic & Infra, PTV Planung Transport Verkehr AG, Q-Free ASA, Fundació Privada RACC, Fundación Tecnalia Research & Innovation, Technolution B.V., Telecom Italia S.p.A., TNO, TomTom B.V., Technische Universität München, Vialis B.V., Volvo Technology AB

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## ABOUT ITS - INTELLIGENT TRANSPORT SYSTEMS AND SERVICES

ITS - Intelligent Transport Systems and Services - is the integration of information and communications technology with transport infrastructure, vehicles and users. By sharing vital information, ITS allows people to get more from transport networks, in greater safety and with less impact on the environment.

ITS can:

- detect hazards on the road ahead and inform drivers of them even before they are visible
- keep vehicles at a safe distance from one another

- allow vehicles to communicate directly with the infrastructure around them and with one another - enabling drivers to make better decisions about their route and respond to warnings of congestion and accidents
- keep drivers informed of the local speed limit
- monitor drivers for signs of fatigue and inform them when it's time to take a break
- give public transport users real time service information as well as smart and seamless ticketing solutions
- integrate public transport into traffic management systems, giving priority to buses and trams
- enable freight operators and customs authorities to share information about consignments and keep track of their position and status, as well as providing information on the most efficient, economical and secure routes for freight
- improve the efficiency of passenger and goods transport and ease congestion on the network - with obvious benefits for the environment
- provide reliable real-time travel and traffic information, anywhere, anytime!