



Transport sector moves to improve energy efficiency



The transport sector is highly energy-intensive, and improving efficiency is key to meeting ambitious emissions reduction targets. The REDU-CE-D project team are developing an environmental management system customised to the challenges facing different transport modes, as **Hrvoje Spremić** explains.

The European Union's energy efficiency directive sets out ambitious targets for reducing consumption, part of the wider goal of limiting carbon dioxide (CO₂) emissions and shifting towards a more sustainable energy model. The transport sector has a major role to play in this respect, yet the directive does not set out specific measures on how energy efficiency targets should be reached by different modes, an issue central to the EU-backed REDU-CE-D project. "We are looking to develop and implement an Environmental Management System (EMS) for different transport modes. This will transpose the requirements set out in the energy efficiency directive into different transport sectors," outlines Hrvoje Spremić, Assistant General Manager at Dubrovnik Airport Ltd in Croatia, lead partner in the project. The project consortium brings together partners from five countries in Central Europe, including transport organisations from four different sectors; air, train, urban public transport and water. "The project consortium includes Ruđer Bošković Airport (Dubrovnik) and Budapest Ferenc Liszt International Airport (airports), Adriafer s.r.l and Ecco-rail GMBH (rail), Municipality of Krakow (Krakow transport authority) and BKK Centre for Budapest Transport (urban public), Freeport of Budapest Logistic and Port of Ploče Authority (water)" says Spremić.

Environmental Management System

There are also two technical and research partners within the project (University of Maribor and Romagna Tech), responsible for research and development, with the wider aim of implementing effective, reliable EMS packages to help transport companies and organisations reduce their energy consumption. The main priority in the project's first workpackage was to assess the current approach of each partner to energy efficiency and the environmental practices they have already implemented, with reference to industry best practice. "We looked at the standards regarding environmental management in each partner's area," outlines Spremić. This provides a solid basis for the project team to then produce a trans-national assessment report, identifying the areas that can be improved by each partner. "We have developed a strategy to guide the implementation of environmental management systems in different transport sectors and institutions," continues Spremić. "The strategy includes general guidance, which is applicable to all the transport modes and more specific guidance for each transport mode, with different KPIs applicable to the different modes."

These key performance indicators (KPIs) will be defined in a second workpackage, alongside defining planning and operational tools that each of the partners will follow.

This is all part of the overall EMS package that each partner will implement within their own specific environment, together with tools that enable them to track and monitor progress with respect to different KPIs; these may cover not only energy efficiency, but also certain environmental parameters. "Some partners may decide to implement tools to monitor air and water quality for example," explains Spremić. In the specific case of Dubrovnik Airport, Spremić says the plan is to closely monitor resource use, part of efforts to improve energy efficiency. "We will monitor and optimise energy consumption, CO₂ emissions, noise levels and water use. We expect that the KPIs defined will cover energy consumption per passenger, building energy efficiency CO₂ emission per passenger, noise pollution or number of noise complaints," he outlines. "Other transport modes may also choose some different measurement KPIs more specific to their environment. Currently we are in a phase of the project where KPI's are defined on each transport mode level"

An EMS package will be implemented at four pilot sites from organisations in the project, one in each mode of transport, with the support of another partner from the same sector. For example, Dubrovnik Airport will implement the EMS package in their own environment with the help of Budapest

Airport, who will monitor the results. "We plan to develop and test a customised EMS package that can be easily implemented across different transport modes," explains Spremić. This could then act as a kind of template or how-to guide for other organisations seeking to reduce energy consumption, says Spremić. "We hope that we will be able to provide clear technical guidance and know-how to other institutions and partners on how to implement an EMS in their organisations. We hope that we will be able to develop guidelines which will be adopted and used by other institutions in future," he continues. "The main objective in the project is to establish procedures, methods and tools to monitor energy and environmental efficiency, and in future to reduce consumption and greenhouse gas emissions."

"We are looking to **develop** and **implement** an **Environmental Management System** for different transport modes. This will transpose the requirements set out in the **energy efficiency directive** into **different transport sectors** in several countries in Central Europe."

Training and dissemination

A third workpackage in the project will contribute to this wider goal by establishing training and dissemination activities, encouraging other transport organisations and companies to consider how they can reduce energy consumption and optimise their environmental management process. The first step will be to establish a trans-national advisory forum, which will then test and evaluate the implementation of EMS in the four different transport modes. "This forum will be comprised of experts and stakeholders," says Spremić. A training programme on EMS will also be established

for project partners, as well as local, regional and national stakeholders, highlighting the practical measures that can be taken to reduce overall energy consumption. "We will promote the EMS package, and look to show how it can be implemented and used in different environments," continues Spremić.

The current priority however is more to lay the foundations of the EMS, with work in the preparation phase of the project mainly centered on conducting assessments and background work. With the project into the second year of its three-year funding term, the teams are now developing operational documents which will guide partners in the implementation of EMS. "We have now finalised the preparation phase, and are starting with the implementation phase and structuring pilot actions. We have developed

EMS guidelines for each specific transport mode as well as a toolkit, which contains both general and mode-specific parts," outlines Spremić. This work is very much in line with the goals of the European Union's Green Deal, which imposes new energy requirements on ports and airports. With the transport sector still highly energy-intensive, improving efficiency is key to meeting ambitious emissions reduction targets, underlining the wider importance of the project's work. "We aim to help our partners with their energy planning, and to identify the areas they should prioritise for future investment in order to reduce their CO₂ emissions," says Spremić.

REDU-CE-D

Customized Environmental Management System (EMS) to increase energy efficiency and reduce energy consumption of different transport modes in Central Europe

Project Objectives

Transport in Poland, Slovenia, Croatia and Czech Republic has doubled their mobility energy consumption in the last decades and their transport GHG emissions are above EU average. Through project REDU-CE-D, partners will transpose Energy Efficiency Directive (EED) requirements to increase energy efficiency of different modes of transport (air, waterway, urban and rail) by developing unique Environmental Management System (EMS) and joint strategy. Stakeholders and key experts will be engaged in testing and training activities for EMS customized package as well as in dissemination activities for policy makers.

Project Funding

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Project Partners

• Dubrovnik Airport Ltd (Lead partner) • Budapest Airport • Municipality of Krakow (Krakow Transport Authority) • BKK Centre for Budapest Transport • University of Maribor • Adriafer s.r.l • Ecco – rail Gmbh • Freeport of Budapest Logistics Ltd • Port of Ploče Authority • Romagna Tech

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