

# TEMPLATE

Output factsheet: Tools

Version 1

Project index number and acronym	CE1044 TalkNET
Lead partner	North Adriatic Sea Port Authority
Output number and title	O.T2.2.1 - KNOWLEDGE TOOL IN THE FIELD OF ENERGY EFFICIENCY IN NODES/TERMINALS
Responsible partner (PP name and number)	PP15 CODOGNOTTO POLAND
Project website	<a href="https://www.interreg-central.eu/Content.Node/TalkNET.html">https://www.interreg-central.eu/Content.Node/TalkNET.html</a>
Delivery date	AUGUST 2019

### Summary description of the key features of the tool (developed and/or implemented)

This project output is one of five knowledge tools that have been developed in order to make available a review of best practices and relevant knowledge in the two macro fields of action of the project, that is to say Multimodality and Eco-innovation. The fifth knowledge tool output is focused on the sub-topic of energy efficiency solutions, that includes both the significant experiences of the project partners and those gathered outside the partnership from other actors and operators.

The selection of the best practices has been strictly influenced by the needs of partners' stakeholders that have been detected from the project activities and the various contacts that the partners had cooperating with them.

A review of the current/up-to-date knowledge in field of energy efficiency will be available as benchmark to support the preparation of the project action plans that in turn will support investment plans in the project territories in order to improve energy efficiency solutions and the related project pilot actions.

In particular the following best practices are presented:

**1. ECO-solutions deployment in the Ports of Amsterdam**

For many years the Port of Amsterdam committed itself to ensure energy efficiency by innovating its overall maritime and inland operation procedures, this including the efforts made in investing in energy optimization and testing new opportunities in energy generation and storage.

**2. ECO-solutions deployment in the Port of Antwerp**

The port of Antwerp houses Europe's largest integrated fuel and chemicals cluster. This is associated with high energy intensity and emissions of greenhouse gases. Despite this characteristics, the port community is considered worldwide as one of the most advanced in energy efficiency and has taken successfully energy optimization related measures in past years while investing in renewable energy.

**3. Innovative technology for gantry cranes energy savings - Hupac, Busto Arsizio (Italy)**

Thanks to the gateway service implemented in 1993, Hupac is one of the few players in the market able to reduce the useless gantry cranes lifts, preventing the congestion of the buffer areas. Verona built a new terminal (called Compact Terminal) in 2010 to reach the same results of Hupac. Compact Terminal uses the half of surface of the oldest terminal in Verona but has the same performance because are reduced the gantry crane movements. In addition, its cranes are able to save the 25% of energy compared to the obsolete ones operating in the area.

**4. Eco-driving practice - Deutsche Bahn**

As an overview of the international practice the eco-driving activity of Deutsche Bahn was examined. DB is the largest energy consumer of Germany and very interested in energy saving. In 2002, a comprehensive energy efficiency management program was launched. During the program, all engine drivers (about 14,000 people) were trained in theoretical and practical training, all 3500 locomotive units were equipped with an energy consumption meter, established a database for the documentation of the energy consumption of locomotives, and trained 300 team leaders for data processing.

**5. LEADER process for eco-driving - DB Cargo Germany**

DB Cargo drivers in Germany are pioneering a new real time system aimed at making journeys as energy-saving as possible. The company is the first in Europe to utilize the Locomotive Engineer Assist Display and Event Recorder (LEADER) system, which has been designed to help deliver a sustainable transport system.

**6. Cranable mobile platform - Intermodal Terminal Dudelange, Luxembourg**

A significant modal shift from road to rail of the cargo transported in non-cranable semitrailers using an innovative cranable mobile platform. After the successful market introduction, it is expected that the users and the transshipment volume of non-cranable semitrailers using the new mobile platform will gradually grow over the coming years.

**7. Time-multiplex control unit system for (older) locomotives (TMC/ZMS) - BR 139 - Lokomotion**

Lokomotion and RTC operate a locomotive fleet which consists of several different types. Newer series (BR 185, BR 186, BR 187 BR 193, EU 43) from about year 2000 are largely compatible with each other, that is, several locomotives can be controlled by a locomotive driver from a driver cab.

As there are older locomotives from the 1950s in the inventory (BR 139), it was natural to establish their compatibility with the rest of the fleet.

### NUTS region(s) where the tool has been developed and/or implemented (relevant NUTS level)

Due to its utilisation, the knowledge tool developed in the field energy efficiency solutions will be applied to all the NUTS covered by the project and adapted to each specific regional context. Accordingly, NUTS II involved are:

- Veneto Region (IT)
- Friuli Venezia Giulia Region (IT)
- Zahodna Slovenija (SI)
- Jadranska Hrvatska (HU)
- Közép-Magyarország (HU)
- Bratislavský kraj (SK)-
- Severozápad (CZ)
- Zachodniopomorskie (PL)
- Oberbayern (DE)
- Łódzkie (PL)

### Expected impact and benefits of the tool for the concerned territories and target groups

This output deals with solutions tested and proposed by TalkNET project partners and other selected from external operators/actors that partners have deemed to be significant for their activities and business in the field of energy efficiency solutions.

Best practices collected in the field of energy efficiency solutions have highlighted different aspects about the approach and interventions in the field of the energy efficiency improvement.

The importance to study, test and put in place valuable actions and solutions to increase the energy efficiency in order to reduce the negative impact of the externalities related to the pollutant emissions increase and the economic costs related to an under-performing energy utilization is growing.

More in detail, as for the deployment of alternative fuels, the re-thinking and the upgrading of the energy management processes for day-to-day operations seems the most effective solution in the short-time, which appears able to produce concrete effects.

### Sustainability of the tool and its transferability to other territories and stakeholders

Sustainability of the this tool is linked to the project action plans and pilot actions improving energy efficiency solutions, as supporting tool for their development. Project results will be included in operative programming plans of project partners, in particular the plans for sustainability and eco-friendly solutions, thus supporting actors operating in the nodes and along the EU Corridors.

This thematic knowledge tool will offer knowledge and best practices review that will be available to support energy efficiency solutions in the central Europe area. Anyway they can be transferred to other territories and stakeholders that dealt with the goal of promoting energy efficiency solutions and the integration among ports/inland terminal and transport operators. In particular, they can be addressed to target groups such as logistics operators, policy makers, enterprises (e.g. in port/rail sector).

### Lessons learned from the development/implementation process of the tool and added value of transnational cooperation

In terms of lessons learned, best practices collected in the field of energy efficiency can be different in relation to the different partners/actors involved. This has shown also the variety of interventions needed to cope with the adoption of energy efficiency measures and the different stakeholders involved.

Anyway, from the process of clusterization of the project stakeholders to the development of common knowledge tools, project partners have further experienced the added value of transnational cooperation, by sharing which best solutions to promote in order to reach the project goal of improving energy efficiency solutions in the central Europe area.

In particular, the identification of specific needs and related feasible best practices (inside/outside Programme Area), for each regional context under review allows to:

- identify needs and critical issues shared together with potential innovative solutions already applied within the partnership or external to it and identified during the monitoring and mapping of best practices;
- verify the adaptability and repeatability of potential solutions previously found to be effective in comparable contexts, or, alternatively, reviewing the aforementioned solutions in light of the previously encountered and resolved criticalities.

Moreover, the development of knowledge tools has allowed to enhance the process of mutual learning.

**References to relevant deliverables and web-links  
If applicable, pictures or images to be provided as annex**

O.T2.2.1 is linked to the following deliverables:

A.T2.2 - Analysis in the nodes' regions

D.T 2.4.2 - Knowledge tool in the field of energy efficiency

D.T 1.4.4 /2.4.4 - Summary report of the inputs collected from the stakeholders

D.T2.5.1 - Methodology for action plans development