

ACTIVITY 3.2 Pilot actions implementation

PILOT ACTION FINAL REPORT

Draft Version
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1. BACKGROUND

Introduction

Technical Work Package 3 includes pilot actions and trainings for cooperation in multimodal transport chains and business activation. Within this WP, activity 3.2 involves the implementation of the pilot actions.

Each partner shall carry out its pilot (as it is specified in the application form) and prepare its pilot report. In all cases other partners are involved, too (assessment, capitalization etc).

Purpose of this document

In order to have a same quality level of pilot report, PP8 Freeport of Budapest as WP leader provides a series of reporting templates, including:

- the pilot action inception report,
- the pilot action mid-term report,
- and the pilot action final report.

This document - the template of the pilot action final report - is the third and last element of this series. The aim of this document is to provide methodological support to be used to summarise the implementation of each pilot action.

Which project partners are involved?

Each project partner who has a pilot is involved. The following table summarises the pilot actions and the responsible PPs.

Topic	Pilot action - Deliverable	Partner responsible
Last mile connections of multimodal nodes	D 3.2.1. PA for last mile connectivity of multimodal nodes: Feasibility Study for a new rail terminal	PP4 - ZAILOG
Multimodal terminals efficiency and optimisation	D 3.2.2. PA for multimodal nodes/terminals efficiency and optimization: innovative control shunting system	LP - NASPA

Topic	Pilot action - Deliverable	Partner responsible
Multimodal terminals efficiency and optimisation	D 3.2.3. PA for multimodal nodes/terminals efficiency and optimization: ICT/ITS tools for rail traffic	LP - NASPA
Multimodal terminals efficiency and optimisation	D 3.2.4. PA for multimodal nodes/terminals efficiency and optimization: ICT/ITS tools for rail traffic	PP6 - Port of Rijeka
Multimodal terminals efficiency and optimisation	D 3.2.5. PA for multimodal nodes/terminals efficiency and optimization: new WMS (warehouse management system) model	PP16 - CODOGNOTTO POLAND
Assessment of market opportunities to reinforce or activate new multimodal services	D 3.2.6. PA for activation/optimization of multimodal services: new services port gateway/freight village	PP4 - ZAILOG AND LP - NASPA
Assessment of market opportunities to reinforce or activate new multimodal services	D 3.2.7. PA for activation/optimization of multimodal services: modal shift from road to rail	PP16 - CODOGNOTTO POLAND AND LP - NASPA
Alternative fuels deployment	D 3.2.8. PA for ECO-innovations on alternative fuels deployment: development of new e-mobility	PP8 - FREEPORT OF BUDAPEST (WITH PP9 - PUBLIC PORTS JSC INVOLVEMENT)
Alternative fuels deployment	D 3.2.9. PA for ECO-innovations on LNG deployment as alternative fuels: logistic model for LNG	PP16- CODOGNOTTO POLAND
Energy efficiency solutions	D 3.2.10.	PP5 - LUKA KOPER

Topic	Pilot action - Deliverable	Partner responsible
	PA for ECO-innovations on energy efficiency deployment: test of energy efficiency in cargo handling	
Energy efficiency solutions	D 3.2.11. PA for ECO-innovations on energy efficiency deployment: tests on transport operations	PP14- LOKOMOTION (assessment by PP7 - RCH)
Trainings	D 3.2.12. Testing of training pathways for energy efficiency deployment in the rail sector - RCH (report is not needed)	PP7 - RAIL CARGO HUNGARY
Trainings	D 3.2.13. Testing of training pathways for energy efficiency deployment in the rail sector - Lokomotion (report is not needed)	PP14- LOKOMOTION

Why do you have to do it?

The main important findings of the pilot actions are recorded and organized in specific documents in order to support the transferability process. It means that we have to prepare a summary assessment report of all pilot actions - which is the responsibility of WP responsible partner (Freeport of Budapest - PP8). The summary report will be based on the inputs you provide in your inception, mid-term and final reports about your pilot actions. Inputs from you are provided for the final report in the format specified by this document.

2. PILOT ACTION IMPLEMENTATION

PROJECT PARTNER	PP4 - Zailog scarl
PILOT PROJECT NAME:	TalkNET Thematic work package 3 - Pilot Action for the activation/optimisation of multimodal services: new services port gateway/freight village
PILOT PROJECT ID:	O.T3.6

3. DESCRIPTION OF THE PILOT ACTION

NEEDS AND CHALLENGES ADDRESSED BY THE PILOT ACTION (max. 2000 characters)

The present project originated as a response to a variety of circumstances; while some specifically relate to the Verona freight village and the Fusina terminal in Venice, others regard the network system or ultimately concern the community as a whole. Thus, different factors have contributed to the planning of the multimodal connection at hand.

More in detail, this was meant to overcome the following needs:

a) Reduce traffic along the Verona - Venice route

The A4 motorway ("Serenissima") plays a strategic logistics role, being part of the Mediterranean corridor stretching from the Iberian Peninsula to the Balkan region (the Mediterranean Ten-T); it also crosses the Scan-Med corridor which, passing through Verona, connects the Northern countries to Southern Europe. For these very reasons, it is by far the most congested Italian motorway, with a major share of traffic deriving from trucking transport. As regards the A4 framework, a significant share of heavy vehicles traffic certainly develops along the Verona – Venice route. This is partly due to the amount of goods that arrives into the Venice Port and has later to be redirected towards Northern destinations. Therefore, it is essential to reduce this amount of road traffic with the aim of a significant trucks decrease on this motorway stretch.

b) Limit the ecological impacts of trucking industry

Having outlined the consistent volume of goods being carried by road between Verona and Venice, a variety of environmental considerations have to be made. In fact, trucking poses serious threats to the environment from two major quantifiable sources, namely air pollution and noise. For instance, while only accounting for 2% of the vehicles on the road in the EU, they are responsible for 22% of road transport CO2 emissions. More concretely, the data shows an average of 451 gram/km of CO2 emissions and 5.65 gram/km of NOx, which provide a clear idea of the amount of environmental consequences arising from the trucking industry. Besides greenhouse emissions, trucks are also a considerable source of noise and, as other externalities, noises result in costs. These costs include damage to health, fall in property value and expenses for preventive measures so it must be dramatically reduced.

c) Expand the rail system towards shipping routes

There is the intent to take more advantage of shipping routes currently connecting a variety of destinations to Italian ports; in Verona freight village case, the strategic ones would surely be the port of Venice, Ravenna and La Spezia. This is mainly due to their convenient locations and the amount of goods being traded. It is evident that a rail connection with the mentioned ports will foster and certainly increase the amount of goods being ultimately channeled towards the terminal in Verona; there, goods can then be redirected along the Mediterranean (west-east) or the Scan-Med (north-south) corridors.

BEST PRACTICES AND ACTION PLANS SUPPORTING THE PILOT ACTION (max. 2000 characters)

In short, the present project foresees the realization of a rail shuttle train connecting the freight village of Verona and the port of Venice.

The connection was originally foreseen (during the implementation of the action plan) as a part of a wider service provided by the Italian Customs Agency, the so-called “fast corridor”. This allows to immediately move goods from a port to another terminal, without going through customs procedures, which are known to be time (and space) consuming. Instead, loading units are attached a signaling device on, leave the port and proceed on a pre-determined path. In so doing, it is possible to decrease traffic congestions within ports, and carry out all customs inspections in larger warehouses or terminals, thus avoiding queues and delays.

In this concern, the objective was to promote the Verona freight village as an ideal terminal where to conduct customs procedures in, and thus fostering the implementation of a new rail connection between the Italian ports (in particular, port of Venice) and our terminal.

However, the long bureaucratic procedures necessary to implement such a service in collaboration with the Customs Agency have made it impracticable to proceed further. Instead, it has been tried to attract and involve in the project regional investments and funds, referring to what has already been achieved in the Emilia-Romagna region. The decision to change our strategy has been done at the beginning of the pilot action when we tried to physically activate the shuttle service.

More specifically, the reference is the rail connection between the port of Ravenna and Parma, which has realized a door-to-door intermodal service, with the containers being unloaded from the ships in Ravenna, loaded on the dedicated rail shuttle and delivered up to the Barilla plant in Pedrigrano (Parma). In so doing, the number of trucks daily operating to carry the grain between the two hubs has been drastically reduced, with the rail shuttle also being used to transport a major part of the final products outside of the plant.

Certainly, the implementation of the abovementioned project was financially supported and facilitated by regional investments and funds. In fact, in the past decade the Emilia-Romagna region has provided different subsidies for logistics and railway companies, with the ultimate goal of developing railway traffics along existing and additional connections, thus promoting multimodal transport and reducing carriage of goods by road.

Given the positive results achieved in the Emilia-Romagna region, the objective is to obtain similar investments in the Veneto region as well, in order to implement the project at hand; nonetheless, multimodal transport funds are currently being debated, and are thus yet to be granted.

PURPOSE OF THE PILOT ACTION (max. 1000 characters)

The present Pilot was originally conceived for the implementation of a railway shuttle connecting the Verona freight village to the Fusina terminal in Venice. It should be outlined that the rail service was not designed as an “end to itself”. On the contrary, by combining the shipping routes from the port of Venice with the railway relations from Verona, the shuttle service would be ultimately connected with a variety of ports and inland terminals, starting from North European countries and reaching Mediterranean destinations. Within this framework, the activation of the present shuttle service along the Verona - Venice stretch has become highly relevant since, as of today, the carriage of goods between the two hubs is mainly operated by road. Thus, the shuttle was meant to help shifting the traffic from road to rail transport, with all the benefits entailed. In essence, the operation of the shuttle service was aimed at implementing a wider multimodal route, combining rail transport with maritime routes. It would be one of the first services activated in a such short stretch so it can be a new solution to propose in the market to face the issues related to the road transport (mainly related to traffic jams and pollution).

CONTENT AND OUTPUT OF THE PILOT ACTION - DESCRIPTION OF THE DELIVERABLE (max. 15000 characters)

The final document resulting after the implementation of this pilot action is a market study despite it was foreseen a physical activation of an innovative railway shuttle service. As said before, the service had to be activated between Verona freight village and Venice port authority, as an alternative transport modality that forwarders can choose in order to avoid congestions on the A4 Serenissima motorway. Unfortunately, the market conditions prevented the completion of the last steps that were the commercialization and the physical implementation of the service. However, it is important to describe the main features of the service with the aim to provide a complete overview of its potential. The rail shuttle must be 600 meters long, so as to transport as much goods as possible in a single trip. Despite the recent EU Directives requiring trains to be even longer, and despite the upcoming construction of a new module 750 meters long in Verona, such a length (600 meters) is optimal as it guarantees that both hubs will be able to easily handle the train without delays during shunting procedures. Secondly, the train will consist in 16 T-3000 pocket wagons, which in turn will be carrying 2 trailers each. It follows that each shuttle will have an overall capacity of 32 trailers. In order to be cost-effective, the project must provide at least 3 round-trip connections per week, to be hopefully increased in the future to 5 weekly relations, so as to unleash the complete potential of the service. Also, it has been estimated that the train must be no less than 85/90 per cent full to be economically advantageous; thus, it is necessary to ensure a full cargo for at least 29 out of 32 trailers.

Therefore, a shift from road to rail transport will comport a significant reduction in traffic congestions; assuming a minimum train filling rate of 85%, it has been estimated that there will be a decrease of 8,424 trucks per year covering the distance between the two hubs. According a deep analysis carried out thanks to the joint work of the pilot actors, while trucks were reported to produce 451 gram/km of CO₂ emissions on a given parameter, on equal terms trains were only emitting 102 gram/km of CO₂; the same goes for nitrogen oxide (NO_x) pollution, emitted by heavy vehicles at a rate of 5.65 gram/km, compared to the 1.01 gram/km produced by trains. More specifically, on the present route (Venice – Verona) a truck produces on average 0.85 tons of CO₂ (source: EcoTransit); thus, considering the annual reduction in traffic estimated above (8,424 trucks), the decrease of environmental pollution will amount to 7,160.4 tons of CO₂ per year. As previously said, currently are not foreseen investments since the pilot is not economically sustainable. However, if the Veneto region or the Italian government will make a positive judgement about the rail subsidy, the project will start. Therefore, all the actors involve will reduce their profit to finance the shuttle train and the remaining part of the service (now uncovered) will be financed through this public incentive.

WERE THERE ANY DEVIATIONS IN TERMS OF THE CONTENT OR PURPOSE OR ANY PART OF THE PILOT ACTION - IF YES, PLEASE DESCRIBE THE REASONS (max. 2000 characters)

According to the Application Form planning, this pilot action had to create a new shuttle train service between Verona freight village and Venice port authority (to be more precise, Fusina terminal). Unfortunately, the market conditions stopped the physical implementation of the project and it was produced only a market study (and not a service activation, as foreseen in the AF). The main reasons are the wrong perception of the shuttle potential (and its huge operative context) by the market and the high costs for running the service. The first issue has been triggered by the habits of operators. They usually prefer to receive the goods as soon as possible without considering the problematic aspects generating using the road transport. Then, the significant difference between road and rail service in a short route like Verona-Venice is caused by the lack of payment for the pollution produced. In fact, externalities are hidden costs that nobody pays despite they are damaging the environment and the overall community health. A greener approach by all the freight carriage players and by the public authorities can help to foster the use of more sustainable transport modalities, creating an overall decrease of the carbon footprint.

4. STAKEHOLDER'S INVOLVEMENT

HOW THE STAKEHOLDERS WERE INVOLVED (max 2000 characters)

All the operators involved in the elaboration of the pilot action (terminal managers, shunting operators, forwarders, railway undertakings and shipping companies) have been contacted through a direct involvement. The idea of this service was born by the insight of an important shipping player operating in Fusina terminal that wanted to exploit the potential of its huge amount of maritime traffic to generate a unique multimodal chain able to connect two continents. Therefore, it used its wide contacts list to invite the pilot partners to a roundtable. After a long discussion, there was the common interest of all the participants, so the market and technical analysis started. Further invitations to the discussions carried out have been submitted directly by the pilot partners to their

business contacts. The final result was the production of a detailed market study for a railway shuttle service that can be quickly activated once a public rail incentive will be approved.

5. TRANSFERABILITY OF PILOT ACTION RESULTS

TRANSFERABILITY OF THE PILOT ACTION RESULTS (max. 2000 characters)

A railway shuttle service like the one designed in this pilot action is an extremely useful solution to generate an added value for the entire transport system. In fact, it is able to carry a significant number of loading units (trailers, swap bodies or containers) with a low level of emissions and reducing the number of heavy vehicles travelling on the road. The potential benefits of such service are clear (mainly the decrease of pollution and of traffic jams) but are not enough to persuade the freight operators in the full adoption of this sustainable transport modality. The reasons are the higher costs to operate the service and the longer timings that are not accepted in a competitive system like the logistics one. Just in time and costs reduction are the pillars of the nowadays freight market, even more focused on the faster and cheap movement of goods. Therefore, it is not easy to convince the logistics players to use the multimodal transport in their daily operations. However, the will of the European Community to push sustainable transport modalities could be crucial. The national governments of European community members can draft dedicated rules to promote the multimodal transport of goods. These regulations can involve specific subsidies to push the companies in the adoption of a green approach, fostering the creation of new collaborations for the activation of similar services to the one described in this pilot action. If there will be the creation of more railway connections (even for short routes), it is possible to limit the road freight transport to the last mile connections, to reach the companies close to the terminal area. In this way, there will be an improvement of truckers work conditions since they can go home every night instead of sleep in their vehicles along the motorways, in addition to the benefits (reduction of pollution and traffic jams) described previously.