OUTPUT FACT SHEET

Pilot actions (including investment, if applicable)

Version 2

Project index number and acronym	CE1044 TalkNET
Lead partner	North Adriatic Sea Port Authority
Output number and title	O.T3.6 – Pilot Action for the activation/optimisation of multimodal services: new services port gateway/freight village
Investment number and title (if applicable)	
Responsible partner (PP name and number)	Zailog scarl
Project website	https://www.interreg-central.eu/Content.Node/TalkNET.html
Delivery date	

Summary description of the pilot action (including investment, if applicable) explaining its experimental nature and demonstration character

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 of 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.
However, this project will unfortunately not be implemented within the end of TalkNET; in fact, a number of market conditions prevent to operate this shuttle train profitably. In fact, the feasibility analysis has highlighted a significant difference in cost between the rail service and the road option. Having considered all factors contributing to the train total cost (railway traction, train path, handling operations, etc.), the cost for a single loading unit amounts to 309€, compared to the 145€ of the road alternative. It is therefore evident that the shuttle service is not financially competitive to the road counterpart.

NUTS region(s) concerned by the pilot action (relevant NUTS level)

The actions described in the documents will have a direct impact on the ITH North-East region, as well as on the surrounding NUTS regions. In particular, this document will likely have an impact on the ITC North-West area, as a consequence of the reduction of traffic along the A4 motorway.

Investment costs (EUR), if applicable

Expected impact and benefits of the pilot action for the concerned territory and target groups and leverage of additional funds (if applicable)

The implementation of the present project is in essence an attempt to promote a multimodal transport between two hubs (Verona and Venice); such approach will comport consistent benefits to the present circumstances and is expected to eventually overcome the issues affecting the Verona node.

The reduction of traffic along the A4 motorway is one of the key purposes of the rail shuttle. A considerable share of heavy vehicles travelling along the "Serenissima" motorway connects the port of Fusina to the Verona freight village. Therefore, a shift from road to rail 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.

A major strength of the project concerns the environmental sustainability of the shuttle service at hand. In fact, the environmental benefits of rail carriage – as well as the multimodal one – when compared to the sole road transport are well-known. According to a specific analysis about impact of the different transport modalities, 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 C02; the same goes for nitrogen oxide (NOx) 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.

Lastly, a rail connection with the Fusina terminal is certainly strategic for the future expansion of the Verona freight village. In fact, the port is located at the top of the Adriatic Sea and at the intersection of two main European transport networks, the Mediterranean and the Baltic-Adriatic corridors; thus, given this key position, the port of Venice has the potential to act as the European gateway for trade to and from the Middle East and central Asia. Not surprisingly then, recent data confirm the crucial role the port in Venice plays in the shipping business; in 2018, 26,495,278 tons of goods were moved through the port, thus registering a significant increase of 5.4 per cent when compared to the previous year. Therefore, the rail shuttle service has the potential to expand both Verona and Venice freight traffics thanks to this close collaboration, creating at the same time a "clean" transport chain with a reduced use of road transport.

Sustainability of the pilot action results and transferability to other territories and stakeholders.

As regards the sustainability, the project has been supported on different levels. For instance, the pilot is certainly part of an EU ambition to create longer European multimodal chain, shifting as much goods as possible from road to rail transport, with all the benefits entailed. Therefore, the main bodies operating in the European area are promoting and fostering such a type of transport, so directly pushing our shuttle service from the institutional point of view.

Besides this general institutional support, the initiative has also been promoted on a more political level. The municipalities of Verona and Venice, together with the Veneto region, have endorsed the implementation of such a railway connection, as the main benefit will consist of a significant reduction of traffic congestions along the A4 motorway, which connects the two cities and represents the main transport infrastructure of the region. Moreover, as the A4 traverses North Italy from west to east, an improvement in traffic conditions will benefit the overall logistics flow in the most productive regions of the country.

However, significant issues arise when it comes to financial sustainability. In fact, the present pilot could only be implemented if the investments of the players involved will be supported by public funding. Currently, there are few resources to make the pilot economically sustainable. All the players involved are willing to reduce to the minimum their profit but the final price of the shuttle service for the customers is too high compared to the same service on road. This issue is caused by the customers' perception of the service because is not seen as a short stretch of a long multimodal chain. In fact, the basic idea is to insert this shuttle train in a longer route in order to mitigate the higher costs and timings of the service compared to the road transport. However, this idea has not been accepted by the final users, so it is essential to activate some national or regional financial helps. Therefore, a public incentive is the key to solve this situation. A sort of bonus to finance the railway sector can help to bridge the gap between rail and road transport, creating new productive collaborations. As said before, the reduction of partners profit to the minimum level is insufficient to finance the pilot. Their huge efforts are not enough to compete with the road transport on a short trip like Verona-Venice (about 170 kilometers). Hence, the railway undertakings should receive this "rail-bonus" to compete in the market, providing a more sustainable choice to the forwarders.
The described pilot can be a best practice to follow in all the situations on which it is necessary to create a railway connection between ports and freight villages. The objective is to link the several maritime European routes, crossing Europe by rail and connecting southern to northern ports in a more sustainable way.

Lessons learned and added value of transnational cooperation of the pilot action implementation (including investment, if applicable)

The design of the entire pilot and the creation of a concrete market study was possible thanks to the team constituted among the strategic players operating both in Verona and in Venice terminals. The key element to outline the shuttle service has been a steady exchange of information among the partners of the group, aiming to define all the possible market scenarios. After a detailed analysis of all costs involved in the project and a realistic calculation of timings necessary to run the shuttle train, some surveys have been submitted to the majority of the forwarders and dispatchers to understand if the idea was feasible. Despite the repeated explanation of the shuttle context to the customers (part of a bigger multimodal chain starting from Greek ports and arriving to the Baltic sea, and vice versa), they showed a low interest in the project because is not profitable like a road connection between the two nodes (Verona and Venice) since it is slower (4/5 hours against a couple of hours) and more expensive (a price almost 45% higher). Therefore, the synergy between the operators of the multimodal chain (terminal managers, shunting operators, forwarders, railway undertakings and shipping companies) has permitted to avoid a waste of resource in the implementation of a good project but not currently feasible, saving a lot of time and money. In addition, the comparison with a similar service has identified the missing piece to make it profitable: a public incentive to cover the higher costs that will make it competitive with the road transport in the same short stretch. Unfortunately, the externalities (mainly traffic jams and pollution) caused by the raising number of trucks on the Serenissima motorway are not paid by the users otherwise there would not be necessary to receive a subsidy to cover this higher price.
The shuttle train designed is a great idea to give a concrete answer to the reduced space available in the European ports buffer areas, quickly forwarding the loading units arriving at the port and reducing the internal traffic flow of trucks. Moreover, it permits to activate a long multimodal chain with a decreased use of road transport, creating a sustainable network with a reduced environmental impact. This model can be transferred to all European nodes, but it is essential a new set of rules to give a price to the externalities in order to make attractive the rail transport. The key element in this pilot was the cooperation among the players because they used their specific know-how to evaluate all the problematic aspects and have jointly defined a solution that will help to solve many issues in Central Europe area.

As regards the mutual learning among the partners, pros and cons of the present pilot have been discussed, as well as transnational opportunities of potential deployment of the pilot action during the project Working Groups organized for the assessment of pilots carried out within the project (27-28 May 2020). Positive feedbacks have mainly focused on the decongestion of road traffic and the reduction of motorway traffic jams, which would lead to a decrease of CO2 emissions and a reduction in externalities deriving from noise pollution. The partners have then identified transnational opportunities: the service can in fact be replicated in any port/inland terminal connection - particularly when covering medium/long distances at supranational level - thus offering a sustainable alternative to road transport. However, negative feedbacks were also received, specifically concerning the high cost of running such a railway service, which remains economically unfavourable to the road alternative. Therefore, the service could only be competitive on a long-distance connection, or - alternatively - when public funds are available.

Contribution to/ compliance with:

- **relevant regulatory requirements**
- **sustainable development – environmental effects. In case of risk of negative effects, mitigation measures introduced**
- **horizontal principles such as equal opportunities and non-descrimination**

After the previous description, it is clear that the pilot is in line with the European regulations which aims to reduce the road transport as more as possible in the coming years, fixing the target of 30% of freight traffic shifted from road to rail within 2030. Therefore, the potential deployment of the shuttle train will produce significant benefits for the environment and will increase the overall life quality of citizens. As said before, the truck CO2 emissions are about four times of train ones (451 gram/km instead of 102 gram/km). It means that the annual reduction of traffic estimated (8,424 trucks) will diminish the air pollution on the analyzed motorway stretch (Verona-Venice) of 7,160.4 tons of CO2 per year. This positive aspect and the significant decrease of heavy vehicles on the A4 motorway are important reasons that can push the government or the Veneto region to help the actors involved in the implementation of the project. Moreover, the activation of this service will increase the cooperation between the port of Venice and the node of Verona that is connected to the majority of the destination in Europe. This collaboration will permit to merge dry and maritime traffics, creating a huge multimodal chain connecting two continents and several countries. The actors involved in the pilot are in contacts with the national and regional public bodies, waiting for a positive decision about the activation of an incentive that will allow the activation of this shuttle train and to complete this big sustainable chain.

As concerns the transferability of the project, this results particularly interesting when considering alternative solutions to motorway traffic and congestions, a common issue affecting all main infrastructures of the European regions. More specifically, since the longer the distance the more economically viable the project will be, this could ideally be applied to connect ports on coastal Europe to terminals in inland European regions.

References to relevant deliverables (e.g. pilot action report, studies), investment factsheet and web-links
If applicable, additional documentation, pictures or images to be provided as annex

The deliverables used to produce the action plans are:
- D.T1.4.3 Knowledge tool for pilots/action plans in the field of existing/new multimodal service activation;
- D.T3.1.1 Meetings to involve key players of freight transport;
- D.T3.2.6 Pilot Action for the activation/optimisation of multimodal services: new services port gateway/freight village.