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.T3.1 – Pilot Action for last mile connectivity of multimodal nodes: Feasibility Study for a new rail terminal
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

In 2027 there will be the Brenner Basis Tunnel (BBT) opening, a new infrastructure to reduce a part of inefficiencies affecting the Brenner axis. Despite the 2027 deadline is now approaching, there still remain consistent constraints along the Verona-Brenner route, thus limiting the overall capacity to only 120 trains per day. Given these circumstances, Consorzio ZAI reached an agreement with RFI to implement new projects with the purpose of strengthening the node of Verona, so as to satisfy the traffic forecast.
Within this framework, a core investment concerns the implementation of a 4th railway module which - combined with an organizational model capable to increase its efficiency – will improve the current railway terminal in Verona. More specifically, the new infrastructure will be capable of managing trains up to 750m (instead of 600m) and weighting up to 2,000 tons (rather than 1,400 tons), according to EU standards laid out in the recent Directives, which require trains to be longer and more loaded. More of the freight village potentialities will thus be unleashed, resulting in an estimated growth of 50 per cent. Moreover, the new railway module will facilitate and support the intermodal transport along the Brenner route, which will in turn result in lower carbon emissions – thus reducing the carriage of goods' environmental impacts – and diminish the road congestion.

More concretely, the project implementation will require 3 different sub-activities.
1. The first one concerns the modernization of the RRT marshalling yard, which will also be connected to three directions (North, to the Brenner, South to the rest of Italy, East to Eastern destination and the Med and BAC Corridors) and, via one shunting, to Western destinations. This sub-activity is necessary to receive and work longer trains in Verona Quadrante Europa terminals, as the current maximum length of the tracks in the marshalling yard is 600m. The planned intervention consists of the extension of the 6 tracks up to 1,000m long, in order to recover trains 750m long or even longer in case of future module expansion.
2. The second sub-activity relates to the actual construction of the 4th module, and include the following steps:

- physical construction of 5 new railway tracks, each 750 meters long;
- deployment of additional activities for the smooth operation of the 4th module, such as the concept, layout and implementation of cranes, internal road accessibility and storage areas;
- implementation of a traffic operation technology;
- implementation of an ICT and security systems technology.

3. The third sub-activity deals with complementary road infrastructure, which are fundamental for the flow of traffic in the freight village area. The plan will improve the efficiency of the access to the Quadrante Europa from the motorway network and from the ring roads, which will thus avoid the current traffic jams on the ring road network (especially at peak times), and which can also serve as an alternative route in case of road blocks on the southern side of the city.

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

The actions described in the documents will have an impact on the surrounding NUTS regions. The actions of this document will have a direct impact on the ITH North-East region, AT3 West Austria and DE2 Bavaria. The impact will certainly reach other surrounding NUTS regions - especially those along the Scandinavian-Mediterranean corridor - which will positively be affected by the project, such as AT1 East Austria, AT2 South Austria, DEG Thüringen and hopefully even northern areas, although it is not possible to identify them at the moment.

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 construction of the 4th module will significantly increase the overall terminal capacity, given the implementation of 5 new railway tracks, each 750 meters long. More concretely, longer tracks will permit the direct handling of any train without having to split it in two or more sections. It follows a reduction in time (and consequent cost savings) for each train management, allowing more trains to be daily loaded and unloaded. Simply put, the present implementation will increase the infrastructural efficiency, thus resulting in a greater terminal capacity. The construction of a 4th railway module north of the freight village area will consent a northern access to the terminal, while maintaining the southern exit, thus permitting a one-way direction within the infrastructure. Moreover, besides the one-way internal roads, the double lanes will be maintained in order to avoid internal congestions and facilitate the viability of heavy vehicles. As a result, both the internal and external bottlenecks will be reduced to the minimum, with the overall viability ultimately benefitting from the project's implementation. The new module will be equipped with a number of technological advancements. The main benefits offered by these new machineries include: a considerable capacity strength, as they can lift even the heaviest loads; a greater mobility, when compared with other cranes; a significant versatility, since they have adjustable heights, spans or treads. The modal shift of goods from the road to rail and the support of the combined/multimodal transport as a whole will definitely reduce much of the harmful impacts on the environment deriving from the transport of goods, in reason of railway transport being by far one of the most ecological mean of transportation. In addition, the railway system reduces to the minimum costs deriving from potential incidents, acoustic pollution and traffic congestions.

With regards to the leverage of funds, it should be noted here that following the present feasibility study of a new railway terminal, the Verona freight village has been involved in Veneto Intermodal project, funded by CEF programme (2018). The lead partner of this project is Consorzio ZAI (the infrastructure manager of the Verona freight village), with the other partners being RFI (the Italian railway infrastructure manager), the North Adriatic Sea Port Authority (ports of Venice and Chioggia) and the Veneto region. The feasibility study will thus be a guideline for the upcoming physical works, necessary for the realization of the new infrastructure. The overall financing of action 3 of Veneto Intermodal (preliminary and final design of a new railway module) amounts to 1.100.000€ (400.000€ for Consorzio ZAI and 700.000€ for RFI).

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

Three main aspects of sustainability shall be considered when planning the project: institutional, financial and political.

As regards the institutional sustainability, it shall be noted that the present pilot falls within wider national plans, which aim at adjusting domestic standards with recognized EU targets. In the present case, the project makes explicit reference to recent EU Directives which require to shift as much goods as possible from road to rail, and consequently to operate longer and heavier trains. Thus, RFI (the Italian railway infrastructure manager) together with Consorzio ZAI have promoted and supported the construction of a 750 meters long terminal, which would be capable of managing even the longest trains without splitting them, saving time and reducing costs for shunting operations. Within this context, many other hubs all over Europe are adopting similar solutions, aiming to build an efficient and sustainable European Union chain.

Concerning the second point - the financial sustainability aspect - the present pilot will be implemented thanks to the investments of the players involved. In fact, the new railway module will be realized thanks to the financial resources of Consorzio ZAI, the Municipality of Verona and the Italian railway infrastructure manager (RFI). Specifically, Consorzio ZAI will provide the area on which the new terminal will raise, a share of the money necessary for the completion of the works and the long-term experience of its internal engineering office. On the other hand, RFI will give a significant technical contribution, designing internally the entire fourth module and building it in a second phase, in addition to its share of money to cover the budget necessary for the realization of the project. Lastly, the contribution of the municipality of Verona will be mainly focused on the realization of the new roads to connect the upcoming infrastructure to the surrounding Verona bypass and to the Brenner and Serenissima motorways.

Finally, the political sustainability of the project has been guaranteed by the direct involvement of the three shareholders of Consorzio ZAI: the Chamber of Commerce of Verona, the Verona municipality and the Verona province. The three entities have endorsed the project implementation since the very beginning, with the prospect of supporting the Verona freight village as the main railway junction from and to North European destinations. Certainly, this will help to promote further business opportunities in the area, thus contributing to the development of the entire Veneto region.

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

The realization of the feasibility study has been possible thanks to the working group established. The coordinated activity of all players involved in this cooperative entity has made possible the achievement of the foreseen targets. Therefore, the key aspect of the pilot action implementation has been a collaborative approach among the actors, while at the same time keeping in charge - for each task - the subject with the necessary experience to reach the goal. For instance, RFI has carried out the design of the railway part of the project almost entirely internally, but following the specific requirements discussed with the other partners (e.g. length of the railway tracks, number of gantry cranes, precise position of the new terminal gate, etc.). This operative method permits to take full advantage of the most experienced partner, but following a merged approach in the achievement of the targets foreseen.
In the fourth railway module will represent a sort of guideline for the other hubs (ports and freight villages) operating in the Central Europe area. In fact, many other terminals will hopefully follow the example of Verona that, over the years, has become a sort of benchmark in terms of handling performance. At the same time, the cooperation of Zailog with the TalkNET partners has demonstrated that a proactive approach is the winning strategy to plan a considerable infrastructure like the fourth module.

More specifically in terms of mutual learning, the TalkNET partners have discussed the pros and cons of the present pilot, 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). While the critical points mainly concerned the high investment costs and the traffic restrictions during physical works, positive feedbacks have underlined the possibility to handle longer trains and the consequent increase of terminal capacity, on the one hand, while decreasing traffic congestions within the terminal viability and in the surrounding areas, on the other. In addition, the partners have referred to the environmental aspect of the project, as the new infrastructure will directly support the intermodal carriage of goods and will thus contribute to a carbon footprint reduction. Finally, the partners have also pointed out the transnational capitalisation opportunities; a terminal extension might in fact be feasible wherever a physical space is available - in both ports and inland terminals - and would thus ensure compliance with recent EU standards.

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**

As mentioned before, this pilot action is in compliance with the instructions of the European community that are to shift the 30% of freight traffic from road to rail and in turn to reduce the environmental impact. In fact, the realization of this new railway module will mitigate the negative impact of the traffic in an area - the Verona freight village one - often crowded, especially in the rush hours when trucks are waiting their turn out of the terminals. Moreover, there will be a positive impact not only around the Verona node but also along the corridors connecting the freight village to the European transport network, especially on the Brenner axis which the majority of the Verona railway connections are currently being developed on. However, other scopes relates to the deployment of this innovative infrastructure. In fact, there will be the strengthening of the Milan-Venice railway line that will permit to get access to new markets now not yet reached, creating new collaborations with maritime players (ports and shipping operators).

As regards the transferability of the project, it should be noted that a construction of a new module - or alternatively the extension of an operating one - might be replicable in any port and inland terminal where enough space is available to lengthen the tracks, thus adapting the infrastructure to the new EU standards.

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.T1.4.1 Knowledge tool for pilots/action plans in the field of last mile connectivity of nodes/terminals;
- D.T3.1.1 Meetings to involve key players of freight transport;
- D.T3.2.1 Pilot Action for last mile connectivity of multimodal nodes: Feasibility Study for a new rail terminal.

The following images and graphics intent to better understand the proposed measure and the territorial context.

Image 01 - Prevision of traffic increase (trains per year) at the Verona Quadrante Europa freight village. The graphic highlights the two main events which are expected to drive the traffic growth: the opening of the Brenner Basis Tunnel, and the EU target to shift 30% of the goods from road to rail.

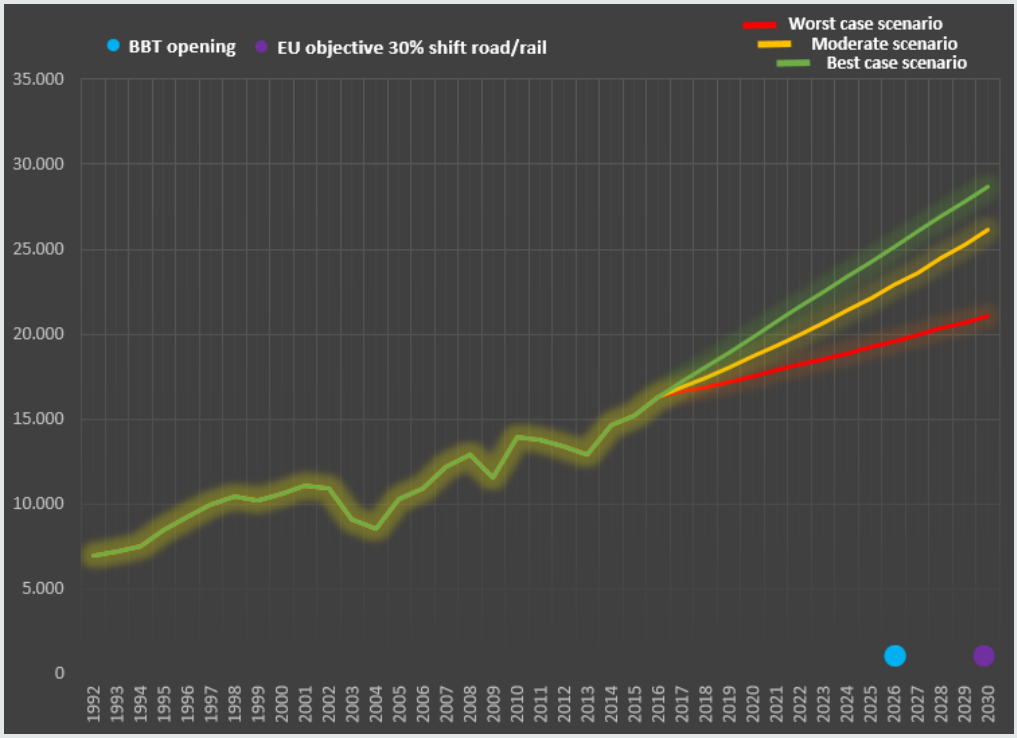

Image 02 - The Scan-Med route. The map outlines the area where most terminals are in the process of expanding to 750 mt, in order to meet future demand of rail traffic flow.

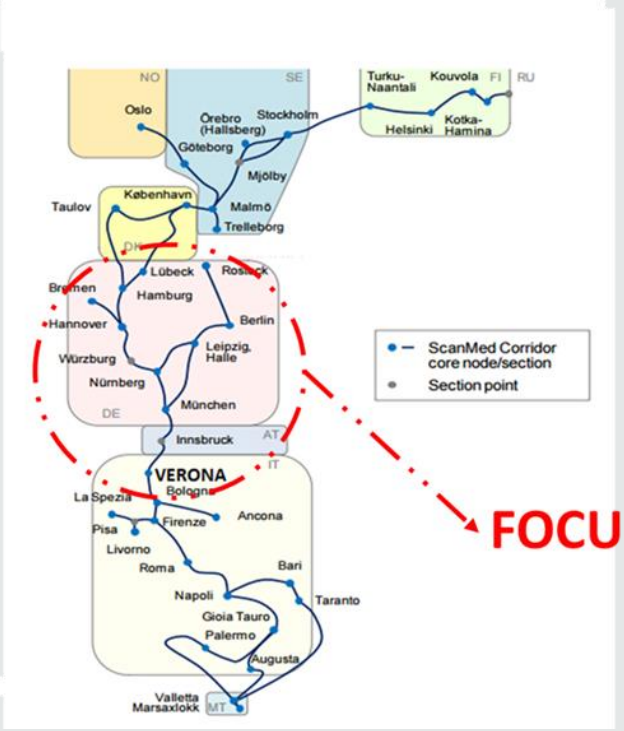

Image 03 - Current Verona freight village map (AS IS).

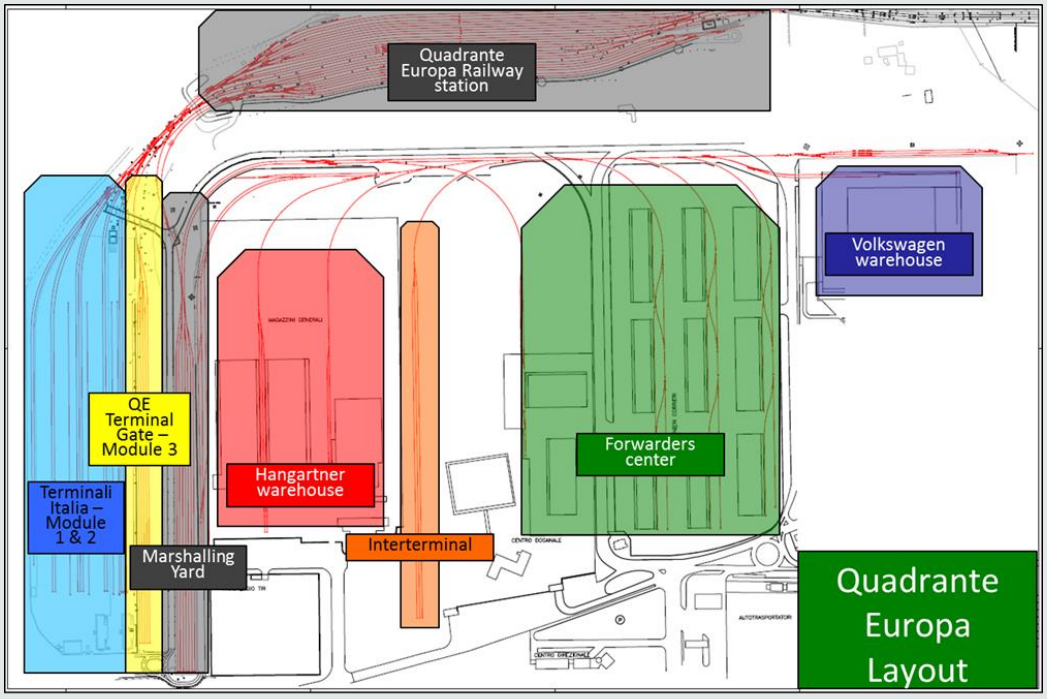

Image 04 - Future extension of the marshalling yard (1.000 mt) and construction of the new 4th module (750 mt) at the Verona Quadrante Europa terminal (TO BE).