DigLogs

WP2 Pilot implementation

Progress Report #1

5.1.2. WMS 4.0

Responsible partner: PP2 - Elevante s.r.l Involved partners: n/a			
Version	**Status**	**Date**	**Author**
0.1	Draft	12.04.2021	Elevante s.r.l
1.0	Accepted	16.4.2021.	Actual IT, WP5 leader
Notes:			

Table of Contents

1 Reporting period

Reporting period	01.03.2021 - 09.04.2021
Date of the report	12.04.2021

2 Pilot action progress status

2.1 Pilot implementation schedule

The creation of a **pilot project work plan (D5.1.1 PWP)** is a result of studies, analysis and planning of envisaged tasks and activities. D5.1.1 PWP, which should be read in conjunction with this report, already defined the tasks to be carried out to implement the WMS 4.0 Pilot Action.

For ease of reference, WMS 4.0 − to be implemented in the form of a DSS (web application) connected with the WMS operating at the Gorizia inland terminal − aims to solve the transport challenges affecting the very last mile of the multimodal transport chain; therefore, it specifically aims to demonstrate how, multimodal transport arrangements − about scheduled shipments − among a heterogeneous set of logistics operators including carriers, logistic providers, transport operators and authorities can be thoroughly and conveniently optimised by exchanging real-time information concerning planned delivery schedules. A novel aspect of the envisaged DSS is the ability to provide an interface between MTO, terminal operator and truck drivers to best plan, schedule and coordinate the execution of last mile transport operations in order to ultimately realise an intermodal terminal appointment system.

WMS 4.0 Pilot Action was thoroughly described in the above-mentioned document with regard to its overarching aims, objectives and the specific technical activities to be performed, including design/integration of systems as well as development of tools, web application and associated testing.

Moreover, the project management methodology, its risk management, the scheduling of activities as well as an accurate specification of functional and technical requirements were

defined within the reporting period. Whilst the **technical-functional specifications** were included in a purposely drafted document (to which the reader should refer to), WMS 4.0 requires a technology-based solution for a wide data collection management system whose primary functions include:

- Data Accessibility
- Entity Profile Administration
- User Accounts Management
- Data Integrity
- WMS 4.0 Administration Panel
- DSS (Decision Support System)
- System Security
- Links to related systems/external compliance database
- Entities and related data

Below the timeline of the action is illustrated, with indication of the milestones achieved within the current reporting period, in accordance with the scheduling.

		Year and month							
Action id	**Activity title**	2021							
		3	4	5	6	7	8	9	10
1	Creation of the pilot work plan draft								
2	Creation of the pilot work plan	**M1**							
3	Creation of the technical-functional specification draft								
4	Creation of the technical-functional specification	**M2**							
5	Completed procurement documentation and award								
6	Development of preliminary functionalities (e.g., TAS) and system integration								
7	Development of DSS								
8	Fully integrated DSS testing						M3		
9	Full system deployment in production								M4

M1= Completed Project Work Plan
M2= Completed Technical-functional specification

2.2 Progress status

A relevant tool of WMS 4.0 that will be implemented in the Pilot Action is a DSS, implemented in the form of an open-source platform, providing optimised transport arrangements for last mile transport segments by making use of specific algorithms and coordinated data from multiple stakeholders. One of the main objectives of the DSS is to implement a Truck Appointment System (TAS), which will enable a communication exchange between the inland terminal and truck operators, and to support the terminal manager in the optimum scheduling of operations.

WMS 4.0 will optimize the bilateral communication channel between MTO's, Inland Terminal and transportation vehicles. Therefore, the solution preferred for the pilot will be the development of a Web Application that is going to be used by carriers, MTO, dry ports and public authorities in the Programme area, which will perform an innovative service: an IT system delivering data and information enabling the realisation of intermodal appointments in the transport nodes.

As outlined earlier, these solutions have been translated into technical specifications; for this purpose, there is a concise and exhaustive list of the activities performed during the reporting period:

a) Identified the 'to-be-used' technologies and their principal roles throughout the project
b) Defined the primary and secondary entities that will be involved throughout the project
c) Conception of a logical database system design, that will be the core system of DSS
d) Listed and details the primary functions of WMS 4.0
e) Identified the TAS module functions
f) Performed UI design, specifically focusing on the visual design of interactive elements of the web application

2.3 Milestones and actions

Milestone / action	Responsible partner / external resource	Deadline, as defined in PWP	Predicted or achieved completion date	Estimated completion %	Progress status
Completed project work plan draft (action #1)	PP2	8th March 2021		100 %	Fully completed
Creation of the pilot work plan (action #2 leading to M1)	PP2	19th March 2021	End of March 2021	100 %	Fully completed
Creation of the technical-functional specification draft (action #3)	PP2	31st March 2021		100 %	Fully completed
Creation of the technical-functional specification (action #4 leading to M2)	PP2	31st March 2021	End of March 2021	100 %	Fully completed
Completed procurement documentation and award (action #5)	PP2	End of April	End of April as predicted completion date	40 %	Ongoing

3 Risks

The implementation of the workplan did not generate any risk and all foreseen activities could be executed with no delays or need for mitigating actions.

4 Next steps

Next steps regard:

a) the finalisation of the completed procurement documentation and award of the piloting activities to the external supplier identified;

b) the development of the WMS 4.0 functionalities as defined in functional requirements document.

Although technical requirements were already identified, the scope and technicalities of the primary functions of WMS 4.0 might be subject to very minor changes following the award of the pilot implementation activities to the external supplier in order to best reach the goals set in the functional specification document by adopting a collaborative and agile working method.