Capacity with a pOsitive enviRonmEntal and societAL footprInt: portS in the future era

COREALIS
THE PORT OF THE FUTURE

D.5.4: Livorno LL Scoping Document

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Executive Summary

This document includes the final version of *Livorno* LL chosen scenarios and documents the technical specifications for innovations to be implemented in Livorno (*RTPORT*, *PoFSG* and *PORTMOD*).

The document consists of several chapters that cover all the technical aspects relevant to the implementation of innovations. In particular, in *Chapter #2* we start by presenting the output of the *D1.3 - Ports needs and Requirements*, listing all the user requirements defined for the Livorno Living Lab scenarios.

Subsequently, in *Chapter #3*, the individual scenarios are described with more details, in particular the scenario concerning the management of general cargo (*RTPORT*). A detailed description of the various phases of the scenario is presented. For each scenario the relative KPIs are also mentioned.

Chapter #4 is primarily focused on extracting system requirements from the user requirements listed in *Chapter #2*. A first list of system requirements, which must be respected for a correct implementation of the scenarios, is presented.

Chapter # 5 focuses instead on the description of the individual *COREALIS* innovations, taking into consideration the flow of data with a reference to aspects such as: necessary software and hardware, interaction with existing systems, type of data, etc.

In *Chapter #6* reference is made to the data required within the implementation of the *RTPORT, PORTMOD* and *PoFSG* modules, with particular attention to both the type of data and safety aspects.

The description of both the physical infrastructure and the process of integration with existing systems is entrusted to *Chapter #7*. This chapter proposes a detailed description of the individual components that will be used during the implementation of the scenario. Particular attention is also paid to integration with digital port platforms such as *OneM2M Standard Platform* and the *Port Community System* (*MonI.C.A*).

Finally, in the *Chapter #8* the conclusions are presented.