D.4.2.6 Connection of local database with CIMIS in Port of Split
**Document Control Sheet**

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<thead>
<tr>
<th>Project number:</th>
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<tr>
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<td>CHARGE</td>
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<td>Project Title</td>
<td>Capitalization and Harmonization of the Adriatic Region Gate of Europe</td>
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<td>Start of the project</td>
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**Related activity:**
D 4.2 – Updating of existing port community systems for the efficiency of the logistic chain

**Deliverable name:**
D 4.2.6 Connection of local database with CIMIS in Port of Split – “Upgrading and connecting the F4B (Framework for Business) database with CIMIS (Croatian Integrated Maritime Information System) in the port of Split”

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Rathmann d.o.o. / Split Port Authority

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Introduction

This document is based on a Contract between Port Authority of Split (PAS) and Rathmann d.o.o.. According to the contract terms, Rathmann d.o.o. agreed to upgrade and connect the F4B (Framework for Business) database with CIMIS (Croatian Integrated Maritime Information System) for the purpose of project “CHARGE - Capitalization and Harmonization of the Adriatic Region Gate of Europe”, in the framework of Italy - Croatia 2014 - 2020 Programme - Priority Axis 4 “Maritime Transport” – Specific Objective 4.1 “Improve the quality, safety and environmental sustainability of marine and coastal transport services and nodes by promoting multimodality in the Programme area”, coordinated by RAM – Logistics, Infrastructures, Transports S.p.A. The project CHARGE (Capitalization and Harmonization of the Adriatic Region Gate of Europe) capitalizes the collected results of IPA CBC Programme 2007 - 2013 CARICA project and other projects like ADRIATICMOS, INTERMODADRIA and EASYCONNECTING from IPA and ADB Multiplatform from South-East Europe having the objective the development of freight transports in the Adriatic area and connectivity to the other EU member states. Project CHARGE fosters the connectivity between the Adriatic regions and improves decision-making process coordination at CB level in maritime transport for joint strategies implementation and infrastructural investments, with specific attention to Adriatic Motorways of the Sea improvement between Italy and Croatia. CHARGE aims to upgrade intermodal services on existing maritime links between the two shores of the Adriatic Sea to improve traffic flows efficiency and environmental sustainability and resolve critical bottlenecks. The common approach should lead to the enhancement of Adriatic freight transport, taking into consideration the lessons learned within the 2007 - 2013 CARICA project.

This document relates to Work Package (WP) 4 – Enhancing freight traffic flows and connections between the Adriatic ports, of the project CHARGE, Activity 4.2. Upgrading of existing port D.4.2.6 Connection of local database with CIMIS in Port of Split
community systems for the efficiency of the logistic chain, and covers the second part of the deliverable D.4.2.6. of the project CHARGE “Connection of local database with CIMIS in Port of Split” implemented by the Split Port Authority.

The main objective of the WP4 is to foster traffic flows and the connectivity between the Adriatic ports involved in CHARGE and to contribute to the competitiveness of territories served by the existing maritime links while simultaneously increasing the perceived value of shared intermodal solutions, while activity 4.2. is aimed at increasing the efficiency of ferry flows between involved ports by promoting adoption of standardized information and processes along the Italian and Croatian logistic chain. CHARGE project activity 4.2.6. “Connection of local database with CIMIS in Port of Split” includes the following segments:

1. Analysis of needed processes and data with the aim of connecting the Port Operating Information system with CIMIS (Croatian Integrated Maritime Information System) in the port of Split”.

2. Upgrading and connecting the F4B (Framework for Business) database with CIMIS (Croatian Integrated Maritime Information System) in the port of Split.

1. **Pilot development**

Within the CHARGE project (Interreg Cross Border Cooperation Program Italy - Croatia 2014-2020) Split Port Authority is conducting a pilot activity of connecting the port operating information system Framework for Business –F4B with the Croatian Integrated Maritime Information System- CIMIS  in the port of Split. Split Port Authority has a Port Management Information System - Business Information System for Management -Framework for Business – F4B, which monitors and records all vessel movements in the port area of the port of Split. Acceptance of vessels is a process involving several entities, operators of different activities and
functions, and the process holder is the Port Authority. The process involves: timely evidence and
documentation of all inputs related to the reception of vessels at the port, in accordance with legal,
regulatory and organizational requirements; coordination of all entities involved in the process selected
through the flow of information and documents; realization of outputs (statistical data and invoicing);
document management and strategic management.

For the purpose of obtaining as accurate as possible operational and statistical data, and
ultimately the harmonization of the systems, there is an increasing necessity for gathering data
from the state-operated information system CIMIS (Croatian Integrated Maritime Information
System) directly in the port operating information system – F4B.

For this reason, Split Port Authority started this project activity – “Connection of local database
with CIMIS in Port of Split”, which includes the following segments:

1. Analysis of needed processes and data with the aim of connecting the Port Operating
Information system with CIMIS (Croatian Integrated Maritime Information System) in
the port of Split”.

2. Upgrading and connecting the F4B (Framework for Business) database with CIMIS
(Croatian Integrated Maritime Information System) in the port of Split.

On the basis of the above-mentioned, the tender documentation was drafted and the public
procedure for the selection of the external providers was carried out first for Analysis of needed
processes and data with the aim of connecting the Port Operating Information system with CIMIS
(Croatian Integrated Maritime Information System) in the port of Split” and then on the basis of
the Analysis for “Upgrading and connecting the F4B (Framework for Business) database with
CIMIS (Croatian Integrated Maritime Information System) in the port of Split.”
Upgrading and connecting the F4B (Framework for Business) database with CIMIS (Croatian Integrated Maritime Information System) in the port of Split

On the basis of the results of the above-mentioned Analysis, it was necessary to create the interface and modules that will enable upgrading and connecting the F4B (Framework for Business) database with CIMIS (Croatian Integrated Maritime Information System) in the port of Split.

The detailed design is made which will enable Port Authority to materialize all the advantages of synchronization. It was done in such a way that it doesn’t burden the current infrastructure, but enables the staff to dedicate more time to control and management.

Considering the volume of business and the current standard business procedures, it was necessary to carefully implement the new system to avoid damaging the port’s current operational performance by introducing new processes and obligations.

Areas of application of data from the state database

Gathering data from the state-operated information system CIMIS directly in the port operating information system - F4B, and synchronizing and harmonizing both systems would enable Port Authority to alleviate some of the current problems, introduce order in the system and remove unnecessary documentation.

The following areas of applications are especially useful for the port:

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- Passengers and vehicles (local ferry traffic, catamaran traffic, excursion boats, cruisers (under the flag of the Republic of Croatia), international ferry traffic, cruise Ships
- Cargo traffic - according to different criteria (basins, shoreline users, types of cargo, grouping, cargo catalogue, etc.)
- Port operational
- Environment Safety and Protection

**Technology**

- Data communication in the form of a web service (the content of the data encrypted with an asymmetric key algorithm)

**Connecting the two systems (criteria)**

- Unique definition of ship movement in CIMIS and F4BPort system
- Types of movement
- Vessel identification
- Time
- Port identification

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The rules of linking two systems –

central interface

- refreshed autonomously and deliver information about traffic from both systems
- adapted to responsible management of the port
Changes in business procedures and further automatization of basic business

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2. Result

- Synchronization of visit data between CIMIS and F4B is possible through a web application that offers several options.

- The application has a simple interface and supports modern web browsers.
• Visit search in CIMIS:
  - Tabular presentation of visits
  - Search by date and type of visits (announcement, arrival, departure)
  - Selecting the desired number of results
  - Ability to view XML results

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• Ability to view individual visits:
  
  o Visit details

  o Technical details of the ship

  o Information on passengers, cargo and waste

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• The connectivity interface allows the user to select the appropriate visit in F4B to match the visit in CIMIS

• If an identical visit is found, the application automatically offers to select it

• If neither visit matches, it is possible to transfer CIMIS’s visit to F4B as a new one

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• The application will automatically fill in the fields

• User manually completes data in fields required in F4B for which CIMIS has no corresponding values

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• The application offers the ability to update IMO and NIB (National Identification Number) data in F4B

• This information is used when linking visits, so it is necessary to update it

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3. Conclusion

The result of the pilot consists of the improved business model and the improvements in terms of synchronization with Croatian Integrated Maritime Information System – CIMIS that are related to:

- gaining insight into reliable documents without the use of paper
- introducing order in the system and removing unnecessary documentation
- easier collection of relevant data for statistical purposes
- increasing the productivity of the port and speeding up the process of tracking vessels
- Increasing the throughput of the port

This represents a significant step forward in the present paper-dominated business environment. The fact that various data will be used throughout the system and that it will be documented and ready for further use represents a great benefit for the port.

In addition, it provides to the partnership added value and knowledge in the specific field of data sharing on maritime level and port purposes.

It is a new system to share maritime data among all port users that brings innovation to the project and that can easily be replicated using more standardized information from the ports, making certain services more accessible for goods handling and traffic flows.