

# D.4.2.2 Report on pilot activity

**RAM** S.p.a.  
Logistica · Infrastrutture · Trasporti



## Document Control Sheet

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# 1. INTRODUCTION

The North Adriatic Sea Port Authority has been investing in the recent years in the Intelligent Transport System to increase the nautical accessibility of the port.

For the port of Venice, in fact, one of the main bottlenecks is the low visibility due to weather conditions, that hampers if not prevents the navigation even for few days in a row in case of fog. The delays and route changes cause loss of productivity for the economy. This bottleneck is not bound to infrastructural improvement, but rather to an organizational/management solution.

For this reason, the Port Authority started several projects with the scope of equipping the lagoon with series of sensors and cameras, gathering their information and elaborating them through its Port Community System in order to give real time information to the commercial ships and cruises on the weather condition in the lagoon (wind, temperature, visibility, special notices).

The main scope is to make navigation safer and thus efficient and therefore attract more traffic and business opportunity for the territory.

The fact of increasing commercial traffic will exasperate another problem in the port of Venice that it is caused by the mix of commercial and private/leisure maritime traffic. To maintain a safe navigation implies again delays, loss of efficiency and thus productivity

According to the CHARGE bottlenecks, analysis (Activity 3.2.3) the necessity to continue intervening in the ITS field for the nautical accessibility was highlighted and a possible solution to the problem was selected for the activity 4.2. that is focused on the sea side data exchange and dedicated to every navigation channels in the port area with a maritime accessibility insights and a broader extension of fruition.

The solution identified is a **mobile application** developed and **distributed for free** to be used by any type of person navigating in the lagoon, for commercial or private/leisure purposes.

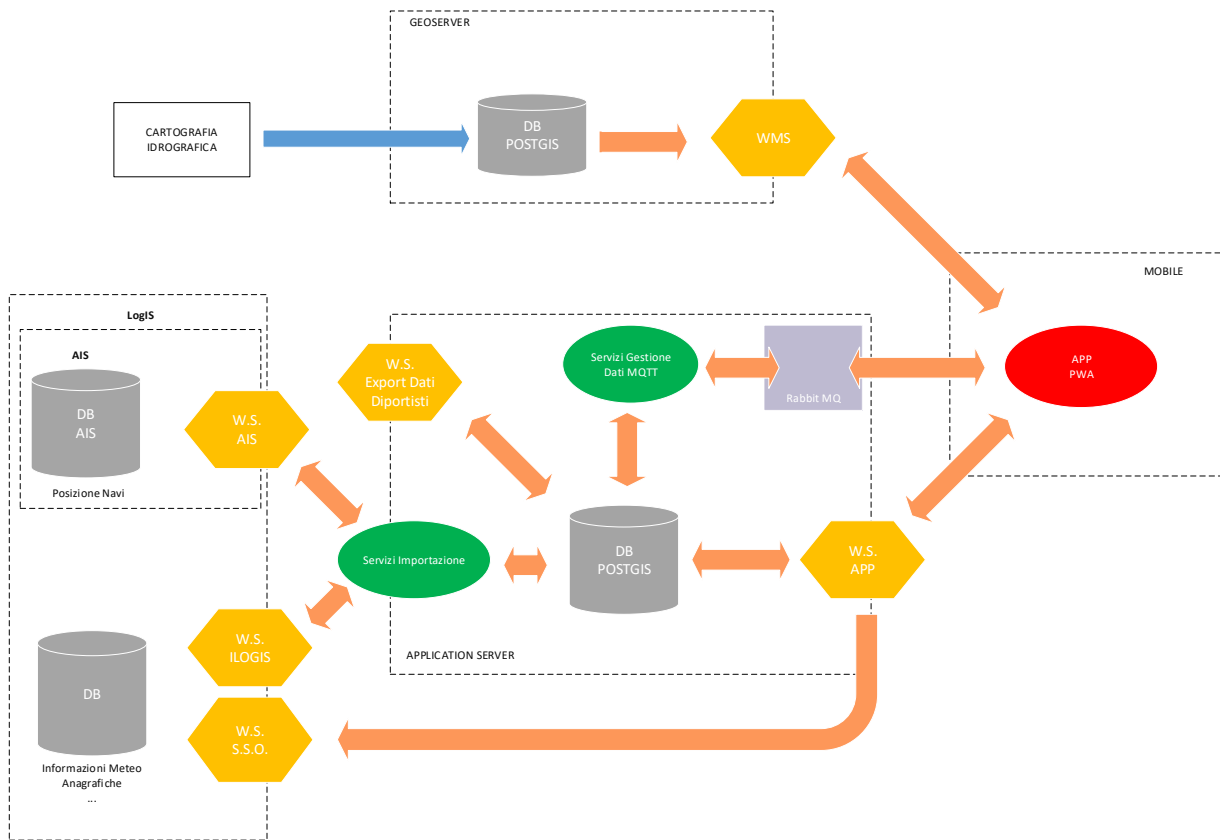
## 2. PILOT DEVELOPMENT

On the basis of the above-mentioned analysis 3.3 the tender documentation was drafted and the public procedure for the selection of the external provider was carried out.

Following the signature of the contract, the following phases for the development of the pilot activity were developed.

### Technical functioning and layout analysis

Consisting in information sharing also to agree on a visual design and user experience.



### App development

Identification of a cross-platform target as the development tool.

### Geo-localization

The user will be geo-localized to provide a real-time experience.

### Data store

The data gathered will be stored only for statistics use and with no reference on remote devices or personal identification info.

### **Scalability**

To consider beforehand the future increase of app sharing and thus consider that the entire infrastructure has to be able to manage a fast escalation of number of users and connections.

### **App functions**

The app land page is the nautical cartography with dynamic reference based on the device position.

It is visualized the instant speed of the device/boat (nodes and km/h). More over the position of other ships and the meteo sensors are visible. By clicking on the ship icon the ship name and type, its destination and other data can be viewed. By clicking on the sensor icon, the user can visualize the weather condition in that point of the lagoon on real time basis.

It is possible to select the position of the user, the current status of the port (open/close) for any of three port in-lets (Chioggia, Malamocco, Lido).


It is also possible to select the page showing in a table the updated weather condition data, tide data (current and forecast) and notice to skippers (in pdf).

### **Data source connection**



The software allows sharing the user's position on the same map with AIS data coming from Coast Guard information system and in future maybe it can be extended to other users such as public transport companies or tour operators.

### **Setting cartography**

The cartography covers the entire Veneto coast with different level of detail obtained by zooming on it.




AUTORITÀ DI SISTEMA PORTUALE  
DEL MARE ADRIATICO SETTENTRIONALE  
PORTI DI VENEZIA E CHIOGGIA



Utente \*

Password \*



MARGHERA

ISOLA NUOVA DELLE TRESSE

TERMINAL FUSINA

1 km  
3000 ft

Leaflet | © OpenStreetMap contributors



### 3. TESTS

The first release of the app was delivered on the end of May 2019, then the test phase started. The app was tested by internal staff for a period of 3 months.

An external campaign of test conducted with the aid of the external supplier was also carried out in order to test and revise the application whenever necessary or appropriate.

### 4. RESULTS

The result of the pilot consists in a “free mobile application” that gives to all port users the possibility to have easy and free access to real time data related to:

- georeferencing
- weather condition
- port accessibility (port entry/exit conditions)
- maritime traffic data (presence of other vessels)
- special notice to navigators

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.

Intervening for better navigability conditions means facilitating the freight and passenger disembarking, improving the road and rail traffics, hence a pilot activity completely in line with a multimodality approach.



## 5. COMMUNICATION & DISSEMINATION

The use of the application will be advertised by means of the Port Authority institutional web site and by communicating it through different channels.

