SMART MANAGEMENT OF ACCESS, SECURITY AND MOBILITY FOR THE PORT OF VALENCIA'S ZAL

About the challenger – VPI Logística

Valencia Plataforma Intermodal y Logística, s.a. s.m.e. m.p., **VPI Logística**, is a company belonging to the Port Authority of Valencia group, **APV,** responsible for the development, marketing and management of the **Logistics Activities Zone of the Port of Valencia (ZAL)**, one of the infrastructures that strengthen the competitiveness and sustainability of the port-logistics ecosystem.

This role is in line with Valenciaport's strategy to consolidate logistics areas linked to maritime and rail traffic, in order to improve the competitiveness of the hinterland, reduce emissions and promote intermodality in freight traffic associated with port activity.

Description of the challenge

The Port of Valencia's ZAL faces the challenge of becoming a smart logistics environment, where access management, security and mobility are integrated in an efficient, automated and sustainable manner.

In this context, it is a priority to design an access, security and mobility management system that not only meets current operational needs but is also capable of anticipating future developments. This allows for the implementation of a highly controlled and advanced model, capable of automating processes, improving traceability and optimising operations without compromising traffic flow

Unlike other logistics environments, the ZAL has specific characteristics: a fully enclosed site with controlled access, featuring urban-style roads and the coexistence of multiple operators. This context requires balancing access control and security with the need to ensure the smooth flow of vehicles and people, avoiding operational friction.

Furthermore, the future connection to the Fuente de San Luis rail logistics facility, managed by ADIF, introduces a new vector for incoming and outgoing flows, which requires designing, from the outset, a model capable of managing multiple access points in a coordinated and efficient manner.

The challenge lies in designing a comprehensive, intelligent and sustainable model that enables the coordination of access to the site, ensures security and optimises internal mobility.

This model must integrate traditional solutions — such as on-site surveillance, video surveillance and access control systems — with advanced technologies that facilitate automation, real-time monitoring and data analytics for decision-making.

All of this must be developed in compliance with current regulations, particularly regarding data protection (GDPR and LOPDGDD), incorporating 'privacy by design' principles and ensuring data processing is minimised.

The system must be agile, user-friendly, scalable and capable of integrating with existing services, contributing to the ZAL's evolution towards a digitalised and efficient environment.

We are seeking solutions that add value in one or more of the following areas:

1. Smart access and advanced security, compatible with the urban nature of the ZAL's roads and with data protection regulations.

2. Smart management of heavy traffic, with the aim of improving the flow of access and the efficiency of logistics flows.

3. Digital tools for the comprehensive management of the ZAL (*smart logistics park*).

4. Environmental sustainability and operational efficiency.

This challenge represents an opportunity to define, from the outset, the management model for one of the main logistics hubs of the Port of Valencia.

Expected results

We expect a comprehensive and actionable proposal that describes:

· Firstly, a **functional architecture** of the system that describes its components, information flows and necessary integrations. This architecture must incorporate a cybersecurity approach and a preliminary legal framework that addresses the legal basis for data processing, the roles of the stakeholders involved, and the criteria for data minimisation and retention.

· Secondly, a **limited pilot proposal** that allows the solution to be validated in a real-world environment, such as an access point or a critical area. This pilot must define its scope, necessary resources, planning and cost estimate, as well as key performance indicators (KPIs) related to improving access flow, reducing waiting times, minimising manual intervention, privacy-compliant traceability, and the system's integration capacity and scalability.

· Finally, consideration will be given to the **presentation or the possibility of subsequently implementing a prototype or demonstrator** that allows the

solution's operation to be visualised, whether through an interface, an access management workflow, or a basic monitoring and alert system.

Overall, **we are seeking proposals that combine innovation and real-world applicability, with particular emphasis on operational simplicity, efficiency and the ability to adapt to a complex and evolving logistics environment. The ultimate aim is to move towards a smart management model that positions the Port of Valencia's ZAL as a benchmark in advanced, digital and sustainable logistics.**