



**AJUNTAMENT
DE VALÈNCIA**

Missions
València 2030

LAS NAVES



Early Demand Map València 2030

Sustainable València – Sustainable Mobility



Early Demand Map València 2030 – Sustainable València – Sustainable Mobility



Presentation of the Sustainable València Look- Sustainable mobility

The Sustainable Look is complemented by the vision of a city that, in its desire to generate more accessible and inclusive, breathable and sustainable, intelligent and dynamic urban environments, has managed **to decarbonise urban and metropolitan mobility and improve air quality** through different measures aimed at the very fabric of the city and its infrastructures, promoting **and optimising the use of public transport and active mobility**.

In this sense, it is concluded that València 2030 will be the city that has managed **to promote the digital and sustainable transformation of the public transport sector** as a real alternative to the use of private vehicles. Likewise, this desired sustainable mobility model will be committed **to promoting active mobility**, developing new alternatives and mobility models for this purpose.

From another perspective, and as a measure that advances in the decarbonisation of mobility by improving its efficiency, it is necessary to highlight **the role that digitalisation** will play in this sustainable mobility model that València 2030 is committed to, incorporating the benefits and opportunities of new technologies for the optimisation of this global mobility model.

Last mile mobility, mobility flows of tourists and electric mobility will be other challenges that València 2030 will have to respond to in order to shape a mobility model that will become a key agent in the city's climate neutrality.

The challenges and unmet public needs presented below must be read, interpreted and understood in conjunction with those of the Sustainable València Look - from the perspective of climate change described above.





Challenges sheet

Below is the set of Challenges sheet that have been identified for the configuration of the Early Demand Map associated with the Sustainable València Look – Sustainable Mobility.



1

Multimodality



Justification of the need/challenge

The generation of more accessible and inclusive, breathable and sustainable, intelligent and dynamic urban environments requires the implementation of measures that focus on sustainable, safe and connected mobility in urban and metropolitan environments, thus pursuing the promotion of the decarbonisation of urban mobility and the improvement of air quality.

In this sense, intermodality, understood as the combined use of different means of public transport and in which users are placed at the centre of all action, stands as an optimal solution to facilitate urban mobility and between urban and peri-urban environments, thereby reducing traffic congestion and the emission of greenhouse gases derived from such congestion.

Currently, metropolitan mobility in València is significantly conditioned by the use of private vehicles, and it is therefore necessary to advance in new mobility solutions that, based on this concept of multimodality, will reduce this phenomenon. Moreover, the Mediterranean climate, together with the city's flat terrain, is a very favourable factor for promoting multimodality through transport modes such as cycling and other modes of active mobility.

Global challenge associated

Promote a sustainable, efficient and safe mobility model

Strategic line

Sustainable, inclusive and efficient urban and metropolitan mobility

Field of Missions

Reduction of CO2 emissions

Priority

LOW MEDIUM HIGH

Deadline

SHORT MEDIUM LONG

Expected impact

Local Government [5 green squares]

Business fabric [3 green squares, 2 grey squares]

Citizenship [5 green squares]

Unmet public needs

Creation of new spaces and stations that promote intermodality

Improvement of connections between peripheral areas with nodes/centers generating large flows (city center, work centers, etc.)

Creating new cycling connections with metropolitan areas that foster a healthy lifestyle

Introduction of tools and technologies for the integration of payment and information systems between the different mobility modalities

Development of Park&Ride solutions as modal exchangers

Development of new solutions based on intelligent parking systems (unassisted parking, real-time information, etc.)



Connectivity



Parking



2

Optimisation of the public transport network



Justification of the need/challenge

The **transformation of urban and metropolitan public transport** is directly linked to the objectives of reducing emissions and air quality, as collective transport, in addition to active mobility modes, **are the most sustainable mobility alternatives for city journeys.**

The city of València **covers 98% of the municipal population with a public transport stop less than 300 metres away.** This figure makes it **the fourth provincial capital with the best public transport coverage.** This, in addition to highlighting the city's commitment to sustainability, is a perfect **opportunity and breeding ground for improving and optimising** its use, thus improving the service and satisfaction of both residents and tourists.

To this end, it is necessary to continue **promoting the digital and sustainable transformation of the public transport sector** as a real alternative to the use of private vehicles, as well as encouraging active mobility. Thus, this challenge aims to achieve advances in aspects such as **autonomous vehicles**, the development of **digital management and information tools linked to the public transport network** or the **intelligent management of lanes for its use**, among others.

Global challenge associated

Promote a sustainable, efficient and safe mobility model

Strategic line

Sustainable, inclusive and efficient urban and metropolitan mobility

Field of Missions

Reduction of CO2 emissions

Priority

LOW MEDIUM **HIGH**

Deadline

SHORT **MEDIUM** LONG

Expected impact

Local Government

Business fabric

Citizenship

Unmet public needs



Public transport management

Introduction of tools and technologies for the **optimization of the operation of the public transport network** and for the development of new information systems in real time

Introduction of tools and technologies to advance the **intelligent management of public transport lanes, promoting prioritization systems**



Public transport after COVID-19

Adaptation of public transport to the after COVID-19 stage in terms of cleanliness, safety, etc.



New transport solutions

Development of **new solutions based on fleets of autonomous vehicles**



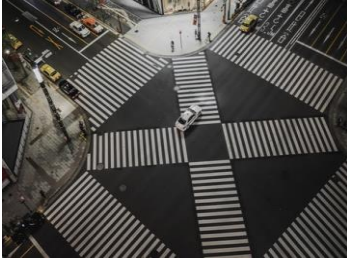
Connectivity

Increase in public transport services that bring metropolitan areas that generate large flows



3

Promoting safe and autonomous mobility



Justification of the need/challenge

Safe mobility is that which guarantees the interactions generated between traffic, transport and the movement of people in public space, **preventing mortality due to road accidents**; through the promotion of city management models, under a **focus on protecting the vulnerable and integrating healthy lifestyles**. In this sense, safety must be understood not only as a right, but also as a great challenge with an integrated vision that not only encompasses the physical concept.

In addition to **road mobility**, which is the mode of transport with the **highest accident rate**, with more than 100,000 accidents per year in Spain, it is necessary to address **other modes of safety derived from healthy mobility and micro-mobility** from an inclusive and health perspective. And, all of this, subject to **ensuring the safety of people with reduced mobility in particular**.

This is a challenge in which València has already taken the first steps, for example, thanks to the fact **that 12 out of 100 traffic lights in the city emit acoustic warnings** for the use of visually impaired people. However, there is still a long way to go, as evidenced by its position as **the 9th provincial capital with the highest level of bicycle accidents**.

Global challenge associated

Fomentar un modelo de movilidad sostenible, eficiente y seguro

Strategic line

Sustainable, inclusive and efficient urban and metropolitan mobility

Field of Missions

Reduction of inequalities

Priority

LOW MEDIUM **HIGH**

Deadline

SHORT MEDIUM LONG

Expected impact

Local Government

Business fabric

Citizenship

Unmet public needs

Cycling and scooter safety

Improvement of **bike lanes** with the use of **new materials** such as damping kerbs, improved lighting, etc.

Development of **mandatory registration solutions and monitoring of electric skates** for real-time control of speed and respect of areas of use

Pedestrian Safety

Development of solutions based on **artificial vision for public transport** for pedestrian detection

Introduction of **tools, technologies and solutions for automatic speed reduction** (pavement changes, lighting, etc.)

Analysis of black spots and **technologies for speed reduction** that do not cause vehicle failures

Safety of people with reduced mobility

Massive deployment of **BT-powered systems** to expand safe travel areas for **people with mobility difficulties**

Inclusion of **innovative safety solutions** in streets with urban furniture, awnings, etc. or change of plot that makes it difficult **for people with reduced vision to move safely**



4

Decarbonisation of mobility



Justification of the need/challenge

The continuous growth of the transport sector over the last few years and its foreseeable increase make decarbonisation a challenge. In particular, road transport is responsible for 70% of CO2 emissions. And this leads, along with other factors, to 6,800 premature deaths in Spain being attributable to NO2 and 23,000 premature deaths to PM2.5 particles, according to the latest annual European air quality report based on 2018 data.

Global challenge associated

Promote a sustainable, efficient and safe mobility model

Priority

LOW MEDIUM HIGH

Deadline

SHORT MEDIUM LONG

Expected impact

Local Government

Business fabric

Citizenship

For its part, and in accordance with the National Air Pollution Control Programme PNCCA2, the main driving force behind modal shift is the generalisation from 2023 in all cities with more than 50,000 inhabitants of the delimitation of central areas with limited access to the most emitting and polluting vehicles and the definition of Low Emission Zones.

València, within the framework of the Covenant of Mayors, has already made progress in this decarbonisation of mobility, although there is still, once again, a long way to go, as shown by the fact that only 1% of the city's car fleet in 2018 was classified as ECO, although, on the contrary, it already has one electric charging point for every 9 electric vehicles according to municipal estimates.

Strategic line

Sustainable, inclusive and efficient urban and metropolitan mobility

Field of Missions

Reduction of CO2 emissions

Unmet public needs

Creation of citizen communities of electric and shared vehicles

Decarbonization of the private vehicle fleet

Development of energy-sharing systems among users of electric vehicles. Recharging some vehicles with others at the parking point.

Development of solutions based on the recharging of electric vehicles through public lighting

Decarbonisation of the public transport fleet

Use of maritime and river transport systems with zero emissions, making use of hydrogen-based systems

Emissions 0 - electrification of the fleet and new fleet of hydrogen vehicles

Decarbonisation of logistics

Development of new solutions for the renewal of parcel and freight transport fleets (UAVs, electric vehicles, etc.)

Low emission zones

Development of innovative solutions for the implementation of Low Emission Zones (access control systems, communications systems, sensoric and monitoring of environmental indicators, control and sanction systems, real-time information systems, etc.)



5 Optimising the distribution of goods in urban areas



Priority

LOW **MEDIUM** HIGH

Deadline

SHORT **MEDIUM** LONG

Expected impact

Local Government

Business fabric

Citizenship

Justification of the need/challenge

The boom in e-commerce has been continuous in recent years. In 2019, there was already a 20% growth, while in 2020 this growth has risen to 30% in the period of the COVID-19 pandemic. These figures show that consumers have adopted **new consumer habits**, many of which are directly benefiting from the advantages of digital tools. This phenomenon is therefore leading to a **necessary adaptation of the logistics sector** which, in urban environments, is facing major challenges in order **to minimise its impact** (in terms of the environment, mobility, etc.).

Additionally, **the change in the mobility paradigm** is also bringing about a **revolution in logistics and the movement of goods**, in which factors such as immobility are bringing with them new challenges.

Urban logistics has a very **relevant impact on the city of València**, being **the third largest market in logistics stock at a national level** and with growth rates that double the figures of years not as far back as 2016. Therefore, this challenge aims **to increase the efficiency and sustainability of urban logistics systems**, so that the mobility of people coexists perfectly with the mobility of goods.

Global challenge associated

Promote a sustainable, efficient and safe mobility model

Strategic line

Sustainable, inclusive and efficient urban and metropolitan mobility

Field of Missions

Reduction of CO2 emissions

Unmet public needs



- Development of innovative solutions based on **urban consolidation centers of goods as microplatforms of logistics distribution**
- Development of **new management models of the DUM based on the promotion of horizontal collaboration** between logistics operators
- Advancement in **new autonomous and intelligent logistics solutions**
- Development of **new shared logistics solutions between delivery companies**
- Introduction of **tools and technologies for the improvement of collection systems** and services in work centers and communication nodes - pickboxes



6

Progress on a smart mobility management model



Justification of the need/challenge

Digital tools are key to **optimising the transport offer and traffic management**, making rush hour more flexible, etc. Moreover, in Spain, mobility is an area of competence in which three administrations converge: local, regional and national, so **the digitisation of data** from the different administrations is a sine qua non condition for facilitating data sharing between different administrations.

Global challenge associated

Promote a sustainable, efficient and safe mobility model

Priority

LOW **MEDIUM** HIGH

Deadline

SHORT MEDIUM LONG

Expected impact

Local Government

Business fabric

Citizenship

This concept of intelligent mobility management is associated with the commitment to the development of a **connected traffic management model** that contributes to a smarter, **more sustainable and safer management infrastructure, which is capable of autonomously improving road environments** (without human intervention) and **increasing the safety of citizens**. Likewise, this intelligent traffic management also impacts other aspects such as **intelligent parking systems, digital speed reduction solutions or public and soft transport prioritisation systems**. All of this, taking advantage of the **opportunities of technologies such as IoT and Big Data**.

Strategic line

Sustainable, inclusive and efficient urban and metropolitan mobility

Field of Missions

Reduction of CO2 emissions + Full digitalization

Unmet public needs



Intelligent traffic and mobility management

Implementation of **intelligent systems (machine learning) of traffic control** in real time - Intelligence in predictive models of mobility in the face of changes and adjustments

Development of new solutions for the **prioritization of public and soft mobility systems**

Creation of advanced Citizenship behavior **analysis solutions to anticipate your needs** in relation to your mobility flows



User-oriented digital solutions

Development of innovative travel **planning tools and improvement of transport information**

Development of innovative tools to improve **ticketing and payment procedures in urban transport**

Introduction of tools and technologies applied to facilitate **access to transport for people with reduced mobility or any special need**



7

Mobility as a service



Priority

LOW **MEDIUM** HIGH

Deadline

SHORT MEDIUM LONG

Expected impact

Local Government

Business fabric

Citizenship

Justification of the need/challenge

The way we move around is changing. Citizens, increasingly aware of the impact of transport on climate change and advocating a less restrictive vision of the private sphere, are looking for **new forms of mobility based on the sharing of goods, as well as micro-mobility**.

Shared mobility solutions, in their various forms, are a highly recommendable mechanism for **reducing energy consumption, negative externalities** (pollution, noise, greenhouse gas emissions, etc.) and **congestion in urban and metropolitan environments**, insofar as they contribute to reducing the number of vehicles in cities. They also **favour intermodality** by enabling new mobility patterns that provide a solution to the journey as a whole. Moreover, the use of **zero and low-emission vehicles in carsharing services** makes this solution more sustainable and allows its use in low-emission areas, high pollution scenarios, etc.

It is therefore necessary to **encourage the use of collective transport and shared mobility** by providing users with complete mobility solutions that facilitate their journeys from origin to destination, simplifying the choice of mode of transport, integrating payment, etc.

Global challenge associated

Promote a sustainable, efficient and safe mobility model

Strategic line

Sustainable, inclusive and efficient urban and metropolitan mobility

Field of Missions

Reduction of CO2 emissions

Unmet public needs



Shared mobility

Development of **new intelligent mobility service systems** based on shared electric vehicles (management apps, internal self-cleaning systems, on-board management systems, etc).

Creation of **bonus programs for shared transportation** to workplaces, universities, hospitals, etc.

Promotion of **car-sharing models for urban journeys**



Urban air mobility

Development of the **drone industry** for use in **urban environments**



8

Management of the mobility of visitor flows to the city – tourism mobility



Priority

LOW **MEDIUM** HIGH

Deadline

SHORT **MEDIUM** LONG

Expected impact

Local Government

Business fabric

Citizenship

Justification of the need/challenge

The cruise sector has a very significant economic impact on the city of València. According to a study carried out by the Polytechnic University of València and directed by the Valenciaport Foundation, **this activity generates an impact of around 56 million euros**, derived from an average expenditure of 146.5 euros for each cruise passenger who disembarks in the port of València. Of this impact, some 25 million euros are directly linked to cruise activity and the remaining 31 million euros to other Valencian economic sectors, such as commerce and transport, which benefit from the **arrival of more than 400,000 cruise passengers per year** in the years before COVID-19.

According to the figures provided by Valenciaport, of the 435,616 cruise passengers who arrived in the port in 2019, 366,484, that is, **84% were cruise passengers in transit, i.e. they made stopovers** in the city which, according to the aforementioned study by the UPV and the Valenciaport Foundation itself, amounted to **4.1 hours for cruise passengers with a contracted excursion and 4.7 hours for those who disembark without a guided tour**. In short, we are facing a phenomenon characterised by **the possible simultaneous, sometimes unexpected and massive arrival of tourists** (11,000 on five cruise ships in November 2019) **which have a very significant impact on the daily functioning of the city**.

Global challenge associated

Promote a sustainable, efficient and safe mobility model + encourage innovative and sustainable local economic development and boost entrepreneurship

Strategic line

Sustainable, inclusive and efficient urban and metropolitan mobility

Field of Missions

Full digitalization

Unmet public needs



Tourism mobility management

Introduction of **predictive tools and technologies capable of anticipating and preparing for the massive arrival of tourists to the city**

Introduction of tools and technologies to **optimize mobility systems aimed at tourists, providing them with pre-designed itineraries that minimize their impact on the mobility of residents**