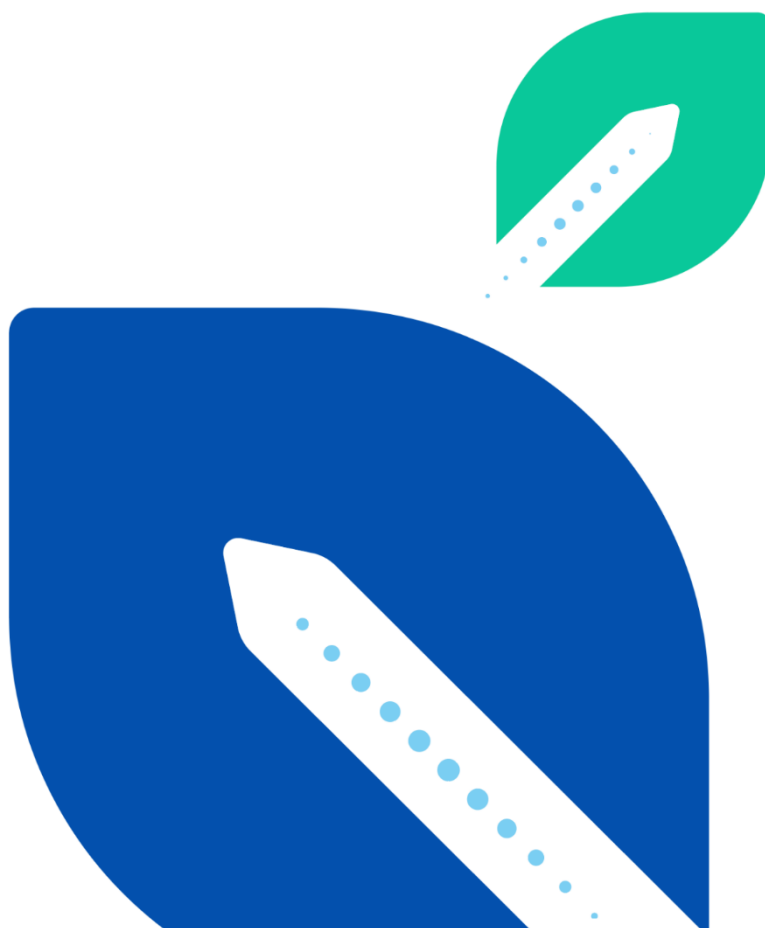




## City-specific narrative scenarios

Valencia



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# City-specific narrative scenarios

## 1.1 Valencia

### 1.1.1 Scenario 1- Valencia Smart City

In Valencia in 2030, sustainable mobility has become a priority for the city. Line 10 of Metrovalencia has been completed, giving residents more public transport options, making public transport one of the preferred modes of transport. The bus fleet of the city has also been expanded with hybrid buses, contributing to the move towards cleaner mobility. This evolution towards sustainable mobility is strengthened by public-private initiatives that promote intermodality between public and private transport modes. This has led to coordinated solutions for personal mobility and urban logistics. The city's public transport operator has also developed a Mobility-as-a-Service app that unifies all of the city's mobility services, with unique fares that make choices more flexible for users. These developments have come despite a decrease in demand from residents, as Valencia's population has decreased. However, this decrease in demand is compensated by a strong demand by tourists, who have made it one of their favourite travel destinations.

The city centre, which is now increasingly pedestrianized, is also characterized by a ban on fossil fuel vehicles. Many families have reduced the number of cars they own, but they have not seen their mobility decrease, as they can now take advantage of Valencia's offer of Mobility-as-a-Service. Shared mobility services are now preferred, so that the streets are lined with shared cars, motorbikes, and scooters. The cars that are still owned are all electric, so charging stations are part of the city's landscape. This electrification is made possible by the optimization of the existing electrical grid, but also by the installation of solar panels all around the city, that contribute to the production of clean energy. However, various neighbourhood associations do not approve of the urban developments for the further pedestrianisation of the city centre, due to a lack of transparency in the public procurement processes.

Valencia residents have now also increasingly adopted biking as a mode of transport, since the city has developed a vast network of bicycle lanes, and since secure bike parking facilities have been built all around the city. This mode of transport is now also extremely popular among tourists. The significantly improved air quality further encourages the use of bicycles around the city, as it makes the activity extremely pleasant. In addition to biking, popular alternatives are the e-scooters, which are extensively used all around the city. To accommodate these new modes of transport, Valencia has developed dedicated bike and micromobility lanes.

All around the city, passers-by can also observe the strong development in city logistics: consolidation centres and smart lockers can be found all over, for easy parcel retrieval, and home deliveries are only carried out with clean vehicles. It is therefore not uncommon to see bicycle deliveries and electric delivery vans in the streets of Valencia, mostly operated by gig economy workers. To accommodate this increase in freight travel, the city has started to implement restrictions on delivery during peak hours, in order to more equally distribute

deliveries during the day. In addition, the evolution of tracking technologies for shipment have greatly contributed to the strong development of e-commerce.

Valencians now also enjoy higher flexibility when it comes to teleworking, as it has become an integral part of the city’s work culture. This reduces commuting and reduces pressure on inner-city traffic.



Figure 1 Valencia scenario 1: Valencia Smart City

### 1.1.2 Scenario 2- Riding through the recession

In Valencia, in 2030, the public transport network has now reached all parts of the city, and line 10 of Metrovalencia is completed. The city has also added a significant number of buses to its fleet, which are hybrid, increasing the network’s capacity to transport users. The network also favours intermodality, as metro stops have incorporated bicycle parking facilities, making it easy for commuters to leave their bike and jump on the subway. Getting to these bicycle parking facilities has also never been easier, as the city has developed a huge bike lane network, encouraging the use of active modes among travellers. These developments have managed to make public transport the most favoured alternative to private cars in Valencia. The level of service offered to users of public transport has also increased dramatically thanks to new technologies being applied on the entire network. Real-time data is available in all vehicles and at all stops, and users can easily use smart payments inside vehicles to pay for their fare. However, despite the political push in favour of

sustainable mobility, the air in the city remains rather polluted, which, coupled with extreme weather events that happen all year round, can dissuade some from using bicycles. In addition, e-commerce also lags behind on sustainable development, contributing to the air pollution around the city. Online shopping has not completely taken off yet in the city, leaving the sector with no strong incentives to move towards new, less polluting, and more efficient models for deliveries. This is partially due to the economic recession that has hit the city, making consumers think twice before buying any goods. The city, however, is trying to implement inner-city micro-consolidation centres in order to counter the unsustainability of freight.

Valencia's public transport company has made progress in unifying the city's public transport offer under a single app with single rates, making it even easier to opt out of using a private car. However, the digitalization rate of the city is rather slow, and the app does not integrate private mobility solutions, or real-time data on private mobility solutions. This means that users must have different apps for the various mobility options, reducing the flexibility that the system offers. Counterintuitively, this lack of flexibility is made even worse by the increasing number of private operators that offer mobility solutions, as it makes it difficult for residents to know which solution to choose. These alternative shared mobility solutions are extremely popular and can be seen all over the city. They have been developed as a reaction to the strong influx in tourists that the city has seen, making it possible for tourists to have access to sustainable mobility packages when they visit.

Few personal vehicles are now seen on the streets, and they only have limited space available to them on Valencia's streets, as areas of the city have been increasingly pedestrianized and dedicated to bikes. In 2030 citizens have moved away from the idea of car ownership. From the small amount of vehicles that can still be seen, almost all are electric, as the city strongly encourages this type of vehicles through tax breaks.

The city's decrease in traffic is further fuelled by the involvement of employers and the Transport to Work Plans that have been developed. These plans promote a shift towards sustainable mobility, and actions such as the 'Smart Day' are now widely adopted around the city. 'Smart Day' allows employees to telework at least once a week, due to which emissions have been significantly decreased around the city. Employers now also encourage their employees to use public transport to commute, increasing the demand for it, further reducing emissions and noise pollution.

In 2030, Valencians are increasingly aware of their environment, and they are furthermore increasingly aware of their own potential and their involvement in helping shape public policies for sustainable development, as the city council has made it a priority to render their policies transparent. They rely heavily on citizen participation and have constructed an open data portal to give all citizens access to data sources. This makes the implemented policy measures widely accepted by citizens.



Figure 2 Valencia scenario 2: Riding through the recession

### 1.1.3 Scenario 3- COVID-19: The aftermath

Valencia in 2030 is a city transformed by COVID-19. There are fewer people on the streets, both residents and tourists, as a consequence of the pandemic that started in 2020. Teleworking has become the norm for all employees, drastically reducing mobility for commuting, reducing the number of vehicles in the city. The only exception are national tourists, who now enjoy discovering the various Spanish cities. These tourists take the time to visit the city centre but also tend to go farther out, decongesting the centre and distributing tourism more evenly in the region.

Public transport has had to be adapted to incorporate safety measures and social distancing, and as a result, many users opt for personal mobility vehicles as a result. Line 10 of Metrovalencia has been completed, rendering public transport increasingly attractive for commuters. Users can now easily combine it with the use e-scooters, e-bikers, or carsharing services, optimizing their routes through Valencia's Mobility-as-a-Service platform as they go. This is further induced by successful public-private partnerships in terms of mobility, meaning that Valencia's MaaS app includes both types of solution in a single interface, giving users maximum flexibility. Real-time data is extremely accurate and available throughout the entire public transport network, and is also easily visualized on the app.

As e-commerce has strongly developed as a result of COVID-19, prices when buying goods online are now significantly lower. For this reason, the entirety of the urban logistics network has had to be optimized, and last-mile vehicles are now the most common sight all over Valencia. E-lockers have been placed all over the city to offer consumers easy access to their parcels, which has helped reduce emissions, as distributors now have to make fewer stops and are guaranteed to be able to deliver a package at the first try. Most vehicles for delivery, in addition, are now electric, further helping reduce emissions and limiting noise pollution.

The only personal vehicles that can be seen on the streets are electric, as the city has implemented policies discouraging the ownership of internal combustion vehicles. As the city experiences an economic crisis, these incentives have significantly reduced the cost of ownership for electric cars, making them the number one type of vehicle sold. However, as electric vehicles are now cheapest on the market, this has not discouraged Valencians from car ownership, only limitedly reducing the total number of vehicles on the streets. This economic recession has also fuelled the shift towards the use of biking in Valencia, and the city has used the income from taxes on non-electric vehicles to fund the development of an expansive network of dedicated bicycle lanes. In order to comply with social distancing, growing pedestrianized areas have also been organised all around the city.

In 2030, Valencians are increasingly aware of their environment, especially due to a rise in extreme weather events that they have seen over the last years. They are furthermore increasingly aware of their own potential and their involvement in helping shape public policies for sustainable development, as the city council has made it a priority to render their policies transparent. They rely heavily on citizen participation and have constructed an open data portal to give all citizens access to data sources.



Figure 3 Valencia scenario 3: COVID-19- The aftermath