

CASE STUDY

MADRID (SP) – SAN DIEGO (USA)

IURC - NA

JUNE 9, 2023

Thematic Network(s): Urban and Regional Renewal

Thematic Cluster(s): Sustainable Mobility and Transport

Cross-cutting challenge(s): Climate Change and Energy Transition

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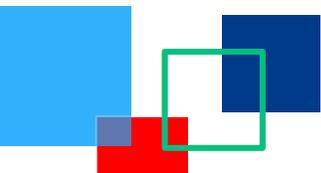
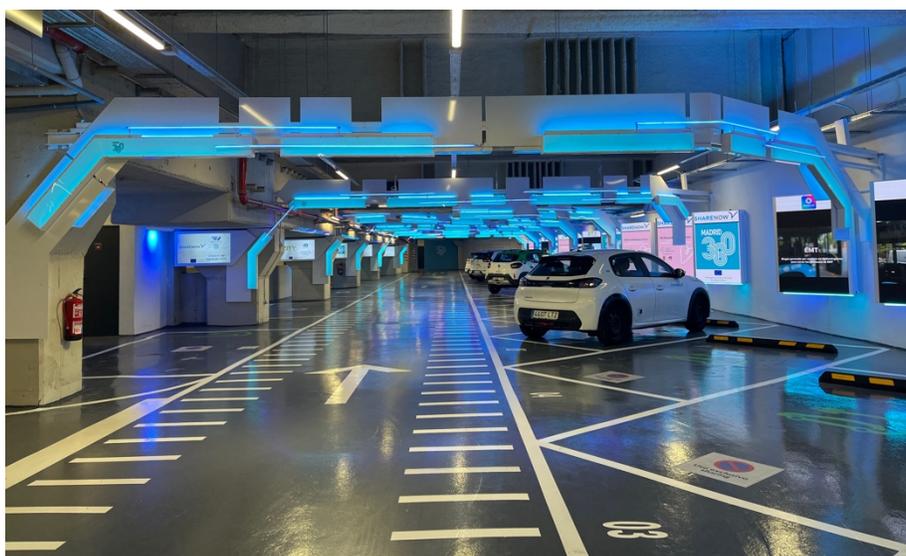
MADRID – SAN DIEGO

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The Canalejas Mobility Hub is a driver of sustainable urban mobility in Madrid, and the city of San Diego is eager to replicate it. By transforming underutilized parking structures into mobility hubs, both are becoming sustainable, accessible, and healthier cities.

EXECUTIVE SUMMARY

In 2021, the cities of Madrid, Spain, and San Diego, USA, started their cooperation as part of the International Urban and Regional Cooperation (IURC) program in North America. With a shared focus on mobility and transport, both cities eagerly exchanged challenges, solutions, and innovative ideas to enhance sustainable mobility options across their respective municipalities. One particular project that captured the attention of San Diego officials was the Canalejas Mobility Hub in Madrid, a successful example of repurposing parking structures into multifunctional spaces dedicated to sustainable mobility. Inspired by its success, San Diego aims to learn from Madrid's experience and replicate this transformative concept within its urban landscape, while Madrid anticipates gaining insights from San Diego's development and operational process. The cooperation between these cities signifies progress in expanding sustainable mobility options globally, prioritizing sustainability, accessibility, and healthier urban environments.



CHALLENGES AND SOLUTIONS

Cities are in the race to considerably reduce or become zero-emissions by 2030. Some main actions around mobility and transport include the shift to electrification, facilitating first and last-mile connections, reducing the use of private vehicles, and enabling easy transfers between public transport and other mobility modes. However, their implementation is challenging since they require new infrastructure and facilities that, in most cases, must be placed in city-owned spaces within an already dense urban fabric. Situated in the heart of Madrid's city center, the Canalejas Mobility Hub represents a shining example of repurposing city-owned space to provide a wide range of sustainable mobility solutions while reducing the area dedicated to private vehicles. The City of Madrid transformed 61,055 sq. ft. of a parking structure to create multifunctional spaces dedicated to sustainable mobility. This hub is a testament to the city's commitment to reducing carbon emissions through its Madrid 360 sustainability strategy.

One crucial aspect of the Canalejas Mobility Hub is its unique branding, which sets it apart from other areas within the parking structure. Aligned with Madrid's city-wide Madrid360 campaign, this distinct branding helps create a cohesive identity that aligns with other initiatives across the city, signaling to users that it is a comprehensive mobility and transport system.

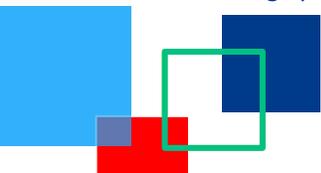
Upon entering the mobility hub, visitors are greeted by an information kiosk, where an attendant provides assistance and guidance. Additionally, a toll-free number is available for individuals seeking further information or support. This initial point of contact ensures that visitors feel confident using this new type of hub and have all the necessary information to make the most out of all the services offered.

Another vital component of the Canalejas Mobility Hub is its electric charging area. To meet the growing demand for electric vehicle charging, the hub features 12 charging stations that are operational 24/7. These stations consist of chargers with different power capacities, four 50 kW chargers, four 200 kW chargers, and four 400 kW chargers. Implementing these charging stations required significant electrical infrastructure upgrades, including adding new transformers and a comprehensive network of ceiling-mounted cables.

The Canalejas Mobility Hub also incorporates a logistics center for storing and delivering packages. The primary logistics company has installed two charging stations on-site. Large electric vehicles transport packages to the hub; afterward, they are either distributed using electric bikes or picked up directly by individuals. Furthermore, lockers are available for companies like Amazon to deliver packages, allowing convenient retrieval by the recipients.

Car and moto-sharing services also have dedicated spaces within the Canalejas Mobility Hub, with a requirement for all vehicles to be electric. Each parking spot dedicated to car sharing is equipped with a screen where managing companies can display their logos and relevant information. The EMT, Madrid's Transport and Mobility Company, also leverages this advertising space to inform the public about the city's sustainable mobility initiatives. The popularity of car-sharing spaces is evident as more companies express interest in securing spots within the hub and even request more mobility hubs throughout the city.

To cater to the needs of moped users, battery swap stations are available, allowing the swift exchange of depleted batteries for freshly charged ones. Additionally, the hub offers electric scooter stations. Cyclists are also considered, as bike parking stations allow cyclists to store their bikes securely for long periods of time. Residents can purchase bike storage plans through the Madrid360 program for a month or even several months at a time.



RESULTS AND IMPACT

By transforming a parking structure into a mobility hub, Madrid is reducing the space dedicated to private vehicles, promoting alternative mobility options and the use of clean energy. In order to make the model financially sustainable, Madrid expanded the hub's offerings beyond mobility solutions, adding, for example, a car washing service. This ensures that the facility generates income while providing essential services to visitors. The transformation of the parking structure into a mobility hub required a budget of approximately 2.4 million euros. Madrid secured 2.2 million euros in funding from the European Union through the Next Generation EU program. Consequently, EMT, the Municipal Transport Company of Madrid, only needed to invest approximately 250,000 euros in the project. This investment is already yielding returns through various revenue streams, including private vehicle electric chargers, car-sharing services, moto-sharing services, car washing services, and delivery and logistics centers and lockers. The revenue is essential to maintain, improve, and expand the mobility hub throughout the years.

The collaboration between San Diego and Madrid goes beyond mere inspiration. Both cities have been exchanging technical information about the Canalejas Mobility Hub, with San Diego actively working to replicate the model within its own urban landscape. This collaborative effort enables San Diego to learn from Madrid's successful implementation while allowing Madrid to gain valuable insights into the operational challenges and solutions San Diego will encounter.

The cooperation between the cities of San Diego and Madrid, facilitated by the IURC program, represents a significant step forward in expanding sustainable mobility options at the global level. By leveraging the success of the Canalejas Mobility Hub, San Diego aims to transform its parking structures into vibrant and functional spaces dedicated to sustainable mobility. As these cities work together and exchange ideas, they pave the way for innovative approaches to urban mobility that prioritize sustainability, accessibility, and healthier cities for all.

KEY FIGURES

61,000 sq.ft

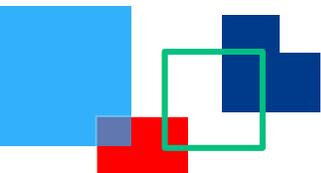
Transformed
from parking to
a mobility hub

2.4 m euros

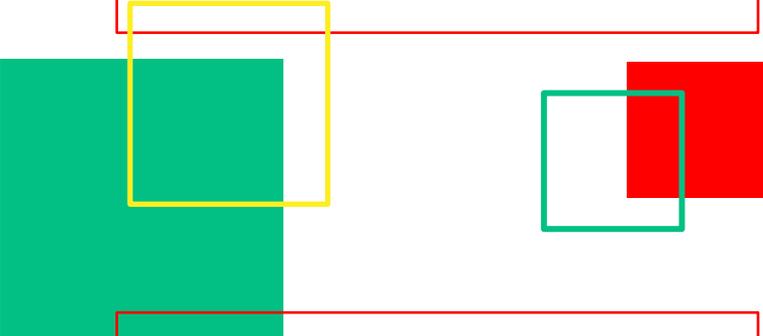
budget to develop
the Canalejas Mobility
Hub



Superficie: 5.672 m² - 61.055 pies²

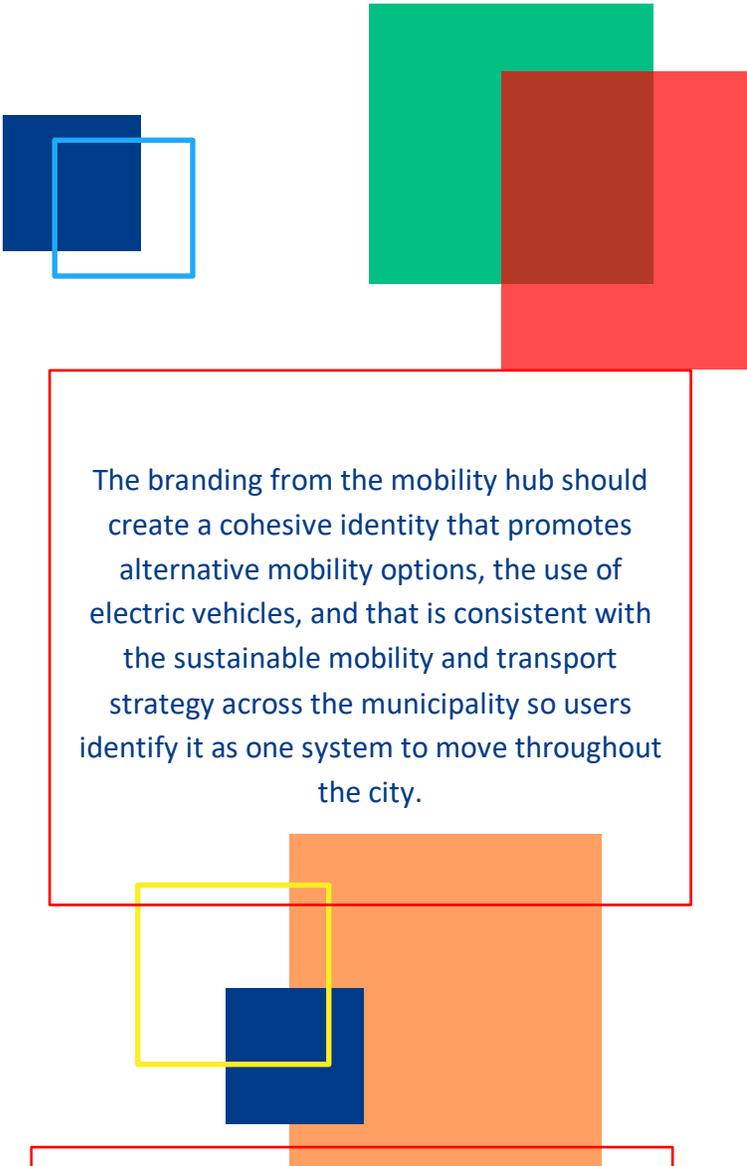


LESSONS LEARNED



Parking structures can be transformed into mobility hubs, multifunctional spaces that promote and facilitate alternative mobility options and reduce carbon emissions.

The mobility hub should offer a range of services and amenities to cater to different mobility needs. These may include electric vehicle charging stations, logistics centers for package storage and delivery, car and moto-sharing spaces, battery swap stations, electric scooter stations, and secure bike parking.



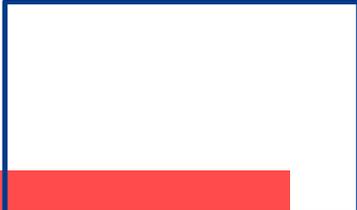
The branding from the mobility hub should create a cohesive identity that promotes alternative mobility options, the use of electric vehicles, and that is consistent with the sustainable mobility and transport strategy across the municipality so users identify it as one system to move throughout the city.

Financial sustainability is key for the long term success of the mobility hub. Therefore, the city should consider the services and amenities offered as sources of revenue that will help maintain, improve and expand the mobility hub.

THE IURC PROGRAMME

The International Urban and Regional Cooperation (IURC) programme enables cities in different global regions to link up and share solutions to common problems. It is part of a long-term strategy by the European Union to foster sustainable urban development in cooperation with the public and private sectors, as well as representatives of research and innovation, community groups and citizens. Through engaging in IURC, cities will have the chance to share and exchange knowledge with their international counterparts, building a greener, more prosperous future.

The IURC programme is an opportunity for local governments to learn from each other, set ambitious targets, forge lasting partnerships, test new solutions, and boost their city's international profile. Its activities will support the achievement of policy objectives as well as major international agreements on urban development and climate change, such as the EU Urban Agenda, the UN Sustainable Development Goals, and the Paris Agreement.



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Links to related outputs: [Canalejas Mobility Hub Presentation](#)