

# Tools for modern mobility

**Joan M Bigas** on how the sustainable transport policy of Barcelona's AMB is developing the mobility of the future

**A**mong its many responsibilities, the Barcelona Metropolitan Area (AMB) faces a complex task: managing the daily mobility of more than 3 million people (more than the total population of many European countries), who make more than 10 million journeys every day in an area of just over 600km<sup>2</sup>.

With this challenge in mind, it is not only important to ensure that people reach their destination on time and in comfort, but also that they do so sustainably and efficiently. Reducing congestion, reducing air pollution

and keeping users informed at all times are new challenges for local authorities. Today, thanks to technology, these challenges are easier to meet than a few years ago.

## WE DEVELOP SOLUTIONS FOR THE CHALLENGES

Cycling is no longer just a leisure pursuit and is now recognized as a new means of daily transport. It is becoming increasingly popular as a clean, convenient and affordable mode of transport with health benefits.

However, cycling involves a number of drawbacks that could

In 2011 AMB launched the city's first safe bicycle storage facilities, Bicibox, aimed largely at commuters



discourage people from adopting it as a daily means of transport.

While bicycles account for a healthy 3 per cent share of daily journeys in the city of Barcelona, in the metropolitan area their use has always been very low. The reasons are essentially the difficulty of introducing a private cycle rental service similar to Bicing in the metropolitan area, as the hilly landscape makes some journeys too tiring, and there are also concerns about theft and vandalism.

In view of these circumstances, Bicibox, the first safe parking system for private bicycles, developed 100 per cent by the AMB, was created in 2011. The service is free for registered users. Parking modules are distributed at strategic points in 13 metropolitan municipalities (more will soon be added), offering a total of 1450 places. The service allows users to park their bicycle for 48 hours. They can thus integrate cycling in their daily journeys, combining it with

other means of public transport with no risk of theft or vandalism. Bicibox currently has almost 5,000 users and records an average of 15,000 parking services every month.

Far from stagnating, Bicibox continues to evolve under the management of the AMB. Users will soon be able to book a place in advance, and the new modules will offer the possibility of recharging electric bicycles: new developments to meet the challenges of future mobility.

### THE RIGHT RESOURCES FOR THE RIGHT SERVICE

Though the public bus service is essential, it often has negative impacts on the lives of people, and particularly on the environment. The AMB has addressed this problem in several ways. A total of 141 hybrid buses are now running on the regular lines, leading to a 30 per cent savings in emissions and noise. Three fully electric buses are also running on these lines. One of the most

recent developments, however, was the launch in 2014 of the first Bus on Demand lines. This service covers areas that usually have irregular passenger demand, such as the hangar area of Barcelona-El Prat airport. With this service, users can request the bus when they need it because the bus stops are equipped with a system that alerts drivers on the line so that they can pass through the area. The system also has a screen informing users of the time remaining until arrival. This service can be summed up with one concept: efficiency. Thanks to the Bus on Demand, during the first year of operation more than 50,000 effective kilometres were saved. More importantly, 50 tons of CO<sub>2</sub> were not emitted into the atmosphere.

### INFORMED USERS

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AMB has placed special emphasis on developing an extensive collection of tools that allow travellers, among other services, to plan their route, know the costs in advance and interact with the various mobility services. The collection of AMB mobile apps was developed 100 per cent by the AMB so that the tools could be perfectly adapted to the service.

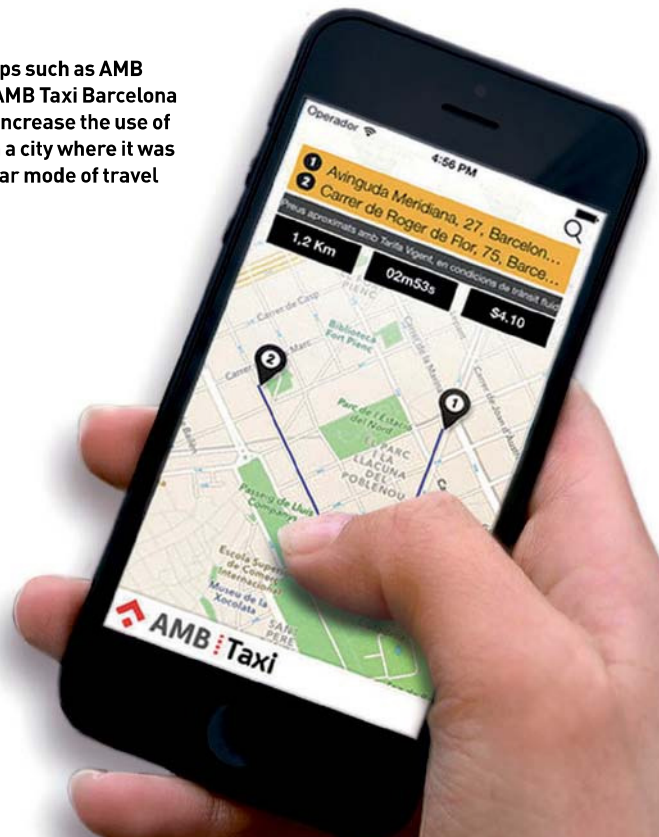
The AMBtempusbus application, now in its third version, puts the entire

transport network of the Barcelona metropolitan area in the pockets of citizens. AMBtempusbus allows users to know the arrival time of buses on all lines, to plan the connections with other modes of transport and, thanks to the geolocation system, to find the nearest stop. In addition, the system is constantly developing: with recent improvements, the application allows users to send suggestions and complaints directly to the service,

and provides real-time news of any incidents in the bus network. This development has earned the trust of citizens, as AMBtempusbus has already had 181,500 downloads and receives 200,000 queries every day.

The AMB Taxi Barcelona app aims to combat the idea that the taxi service is expensive and elitist. It allows users to know the approximate price and duration of any taxi ride within the metropolitan area.

Smartphone apps such as AMB tempusbus and AMB Taxi Barcelona have helped to increase the use of public transit in a city where it was already a popular mode of travel





AMB's innovative schemes include solar-powered, real time bus information

The third application of the AMB dedicated to mobility is the Bicibox app. Thanks to information on available places at each station, members can plan their routes better. Soon, they will also be able to book a place.

But information has no boundaries, and the tools of the AMB do not end there. Other mobile applications are the guides on metropolitan public spaces such as parks and beaches, and digital technology is also used in the many information systems on the ground, such as information screens at bus stops and onboard buses. All of these services are based on the idea that an informed citizen is an efficient citizen.

### NOW IS THE TIME FOR SUSTAINABLE METROPOLITAN MOBILITY

The Barcelona metropolitan area needs sustainable mobility. A dense, dynamic and vibrant area requires strategies that help to ensure the quality of air, to streamline circulation and, ultimately, to improve the daily lives of its citizens. Thanks to current technological developments, the time has come to make the leap to a new model of mobility. The AMB has launched numerous campaigns to promote electric mobility, providing town councils with electric cars and bicycles and offering subsidies to citizens to buy electric bicycles. Since

the average journey made every day in this metropolis is 20km, electric vehicles are the perfect tool to follow the example of countries such as Norway and Denmark, and to make the metropolitan area world renowned for providing intelligent, sustainable and efficient mobility services to more than 3 million people. 🌱

#### FYI

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