



Barcelona, Spain

The second-most populous city in Spainⁱ is a frequent destination for tourists, known globally for its popular soccer team FC Barcelona. In recent years, however, the capital of Catalonia has been receiving attention for its efforts to become a Green and smarter city. Voted the #1 Smart City in 2015 by Juniper Researchⁱⁱ, Barcelona has been trying to improve “the quality of life for residents”ⁱⁱⁱ with its projects, and this has been the driving force behind the changes the city has been undergoing.



The smart city team stresses that changes are being made with citizens in the forefront. This team, in charge of the initiative, is called Smart City Barcelona and was formed by previous mayor Xavier Trias. Its goals are to make life and the city better for residents.^{iv}

Barcelona has been focusing on projects that change the makeup of the city and how it ‘runs’. The whole bus system has been overhauled, running routes that are based off of data gathered about common traffic flows.^v

The city calls it an “orthogonal bus network”, and claims that it will work hand-in-hand with the

“smart” traffic signals to give buses more green lights.^{vi} One of the main selling points that has been repeatedly pushed is that, thanks to connectivity and GPS applications, engineers can set all lights to greens for emergency vehicles while keeping traffic flowing regularly.^{vii}

The other changes have arguably been subtle, even unnoticeable to many citizens.^{viii} The city has upgraded its waste disposal and garbage collection sectors into smarter and connected versions, making operations more efficient and less obtrusive.^{ix}

Garbage containers have sensors that tell workers when they’re full/empty, and trash is vacuumed underground to a storage point, reducing noise pollution that trucks normally would have caused.^x



Most of the ventures that have been completed or installed bring clear benefits to the table for Barcelonans: the multiple hotspots^{xi} along beaches, parks, and “public spaces” enable free Wi-Fi and connectivity^{xii}, and parking space sensors send data to phone apps that then notify drivers whether the spot is occupied or not^{xiii}.

Pursuing the same goal as many other smart cities have, Barcelona has been attempting to make itself more “green”. Smart lighting, seawater-powered air conditioning, and use of solar energy are all being put to use by the city.^{xiv} As a self-proclaimed cyclist-friendly city as well, bicycle-sharing and renting system Bicing lowers emissions and cuts down on traffic and noise pollution for the city in addition to being a valuable service for tourists.^{xv}

Held up as one of the best examples of what a smart city can achieve, Barcelona has made changes to its streets and buildings that are meant to better the lives of citizens.^{xvi} It is displaying the true potential of connected smart cities, and Barcelona is a good example of what you can achieve if you “rewire” your city.^{xvii}



(written by Cameron Squance)

ⁱ <http://fortune.com/2015/07/29/barcelona-wired-city/>

ⁱⁱ www.fortune.com

ⁱⁱⁱ <http://datasmart.ash.harvard.edu/news/article/how-smart-city-barcelona-brought-the-internet-of-things-to-life-789>

^{iv} www.fortune.com

^v https://en.wikipedia.org/wiki/Smart_city#Barcelona

^{vi} Wikipedia.org

^{vii} <http://talkincloud.com/cloud-computing/smart-city-spotlight-barcelona>

^{viii} <http://eandt.theiet.org/magazine/2016/05/barcelona-smartest-city.cfm>

^{ix} <http://www.vilaweb.cat/noticia/4175829/20140226/ten-reasons-why-barcelona-is-smart-city.html>

^x www.vilaweb.cat

^{xi} www.bcn.cat/barcelonawifi/en/

^{xii} www.fortune.com

^{xiii} www.vilaweb.cat

^{xiv} www.vilaweb.cat

^{xv} www.vilaweb.cat

^{xvi} www.talkincloud.com

^{xvii} www.fortune.com