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Superblocks, Barcelona Answer to Car-Centric City

Posted on July 21, 2016 by Pablo Valerio (<http://www.citiesofthefuture.eu/author/pvfrontwave.eu/>) | 1 Comment (<http://www.citiesofthefuture.eu/superblocks-barcelona-answer-to-car-centric-city/#comments>)

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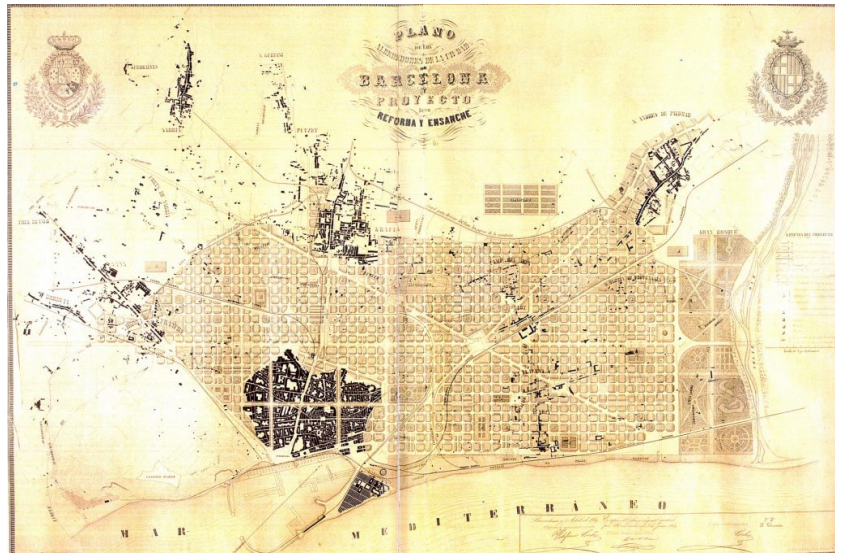
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Barcelona wants to be the world’s best city for people. To reclaim the public space and community living that residents lost to cars over the last century, the city, in the spirit of the original design by Cerdà, is transforming mobility and access to public space by introducing the Superblock.

When Catalan urban planner [Ildefons Cerdà i Sunyer](https://en.wikipedia.org/wiki/Ildefons_Cerd%C3%A0) (https://en.wikipedia.org/wiki/Ildefons_Cerd%C3%A0), back in the 1850s, designed the Eixample, the expansion of Barcelona outside the old city walls, he envisioned a city based on community living, where people could interact on wide streets, with a wealth of public and private gardens, and where transportation of people and goods wouldn’t dominate public space.

As Geoff Boeing, of the University of California, Berkeley – Department of City and Regional Planning, wrote on his recent paper [International Lessons from Barcelona in Linking Urban Form, Design, and Transportation](http://geoffboeing.com/publications/honolulu-rail-transit-barcelona/) (<http://geoffboeing.com/publications/honolulu-rail-transit-barcelona/>): “Ildefons Cerdà’s 19th century utopian plan for Barcelona’s Eixample district produced a renowned, livable urban form. The Eixample, with its well-integrated rail transit, serves as a model of urban design, land use, transportation planning, and pedestrian-scaled streets working in synergy to produce accessibility,”

The Eixample is widely considered one of the best designed city areas in the world and a case study for urban planners. It is mentioned by leading architects, such as [Jan Gehl](#)



<http://www.citiesofthefuture.eu/wp-content/uploads/2016/07/Ensanche - eixample - Barcelona-e1469095077483.jpg>

Original Cerdà plan

http://www.urbandesignaustralia.com.au/images/Docs/Papers/Jan_Gehlgold_PublicSpaces_life.pdf –a global leader in people-centered urban design– in the same breath as Copenhagen and Lyon, as the epitome of a great European city.

What Cerdà could not foresee in his plan, approved by the city on 1859, was the arrival of the automobile and the resulting transformation of mobility that took place in the middle of the 20th century.

Fortunately, by the time cars became an important part of city life, most of the Eixample’s original plan had been executed, maintaining the “human scale” across the urban landscape.

[Read Arrogance of Space: Barcelona (<http://www.citiesofthefuture.eu/arrogance-of-space-barcelona/>)]

In order to accommodate the surge in private car ownership, however, most of Barcelona’s streets became car oriented during the second half of the 20th century, reducing the space that pedestrians could use, and making it impossible to enjoy other activities on the street. The only “right” people could exercise on the street was mobility. Currently, Barcelona has 912 km (567 mi) of roads and streets dedicated to motorized traffic.

The situation has been getting worse in the past few years, and pollution –including particulate matter, CO2, and noise– have been rising to dangerous levels. The financial crisis also had a significant impact on the stock of motorized vehicles in the city, since people have been keeping their older, more polluting, cars longer. And, most importantly, Barcelona residents cannot use the streets that were originally designed for community activities because they are now dedicated to motorized vehicles.

The Barcelona government, however, has a new plan, which aims to reclaim most of the streets for the community, without reducing traffic flow. The plan is modeled on the original idea of the Eixample, and expands the area into “Superilles (<http://www.bcnecologia.net/en/conceptual-model/superblocks>)”, the Catalan term for Superblocks.

To understand better the concept of the Superblock, its origin, implementation, and the impact that it will have on the city, I sat down with Salvador Rueda, Director of the Urban Ecology Agency of Barcelona (<http://www.bcnecologia.net/en>), and the designer and leader of the plan’s implementation.

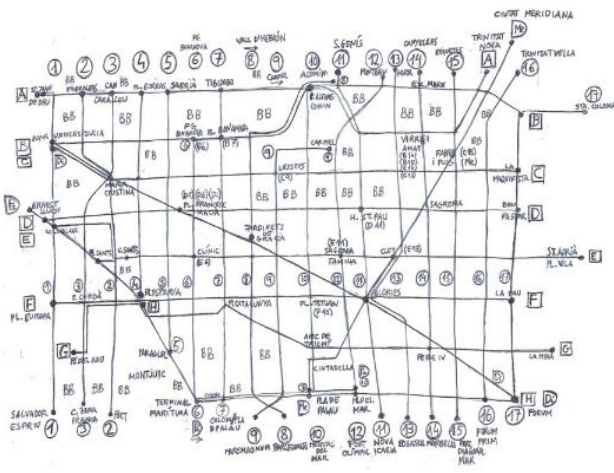


Salvador Rueda

Rueda said the idea of Superblocks came to him in 2002 when he was designing the new bus network for the city. Barcelona is still running bus routes that replaced the original tram network of the industrial age, designed to move workers from mostly working class neighborhoods to textile factories and back again.

In 2000, the city decided to study the possibility of a new more efficient bus network, reducing the number of routes, but keeping the same number of buses and increasing the frequency to cut waiting times and traffic.

Rueda and his team designed an orthogonal network of bus routes that it is being implemented today. The new system, when completed, will reduce the number of routes from 94 to 28, waiting time to less than five minutes, and trip time –with one connection– to less than 35 minutes across the city.



Original design by Salvador Rueda and current bus route network

Based on this orthogonal design, using the main streets of Barcelona to move the buses in a grid format, some city blocks appeared clear of bus traffic. This gave Rueda the idea of the Superblocks.

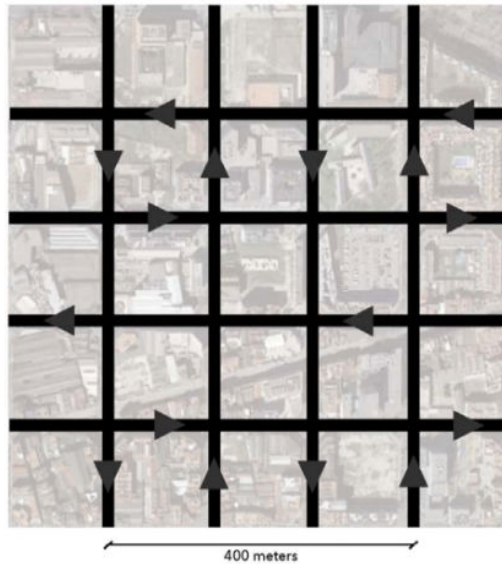
What is a Superblock?

According to Rueda, a Superblock is defined by a grid of nine blocks where the main mobility happens on the roads around the outside the Superblock, and the roads within the Superblock are for local transport. The one-way system inside the Superblock makes it impossible to

cut through to the other side of the Superblock. That gives neighbours access to their garages and parking spaces but keeps the Superblock clear of through traffic.

Road hierarchy in a Superblock model

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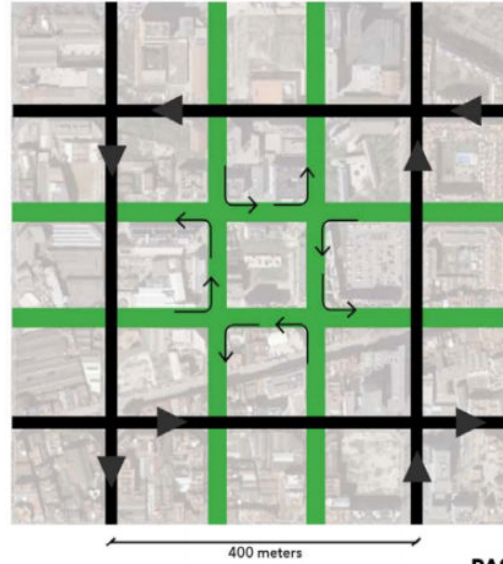


Basic network: 50 km/h



SOLE RIGHT: DISPLACEMENT.
HIGHEST AIM: PEDESTRIAN.

SUPERBLOCK



Local network: 10 km/h



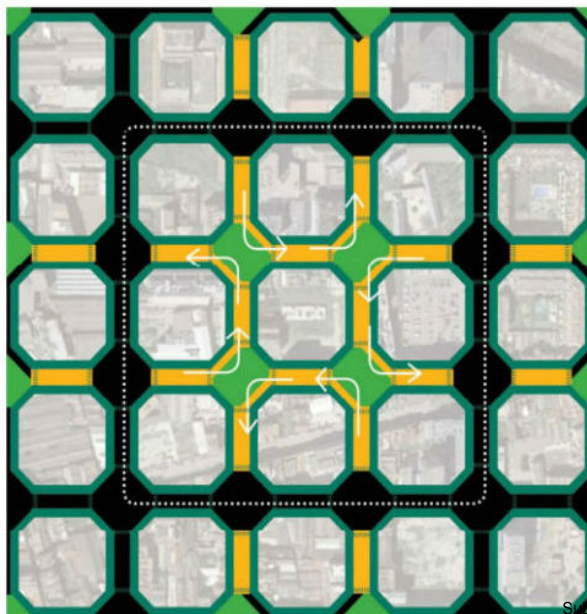
EXERCISE OF ALL THE RIGHTS THAT THE CITY
OFFERS. HIGHEST AIM: CITIZEN.

**PASSING
VEHICLES
DO NOT GO
THROUGH**

Flow of Traffic on Superblock

In the first phase of the plan, which is now being implemented in a few areas, the maximum speed on the roads within the Superblock is limited to 20 km/h (12.5 m/h). Phase one of the Superblocks can be implemented easily, at low cost, mainly through the changing traffic signals. Rueda estimates that Barcelona can implement phase one across the city for less than € 20 million (\$22 million).

Phase two is more ambitious. It will transform city life and the way people use public space. Curbside parking within the Superblocks will disappear (by building off-street garages), and the maximum speed will be 10 km/h (6 m/h), allowing people to use the streets for games, sport and cultural activities, such as outdoor cinema.



Phase 1

Phase 2

Two Phases of Superblocks

Rueda estimates that when phase two is implemented, Barcelona will have cut 355 km of roads dedicated to motorized traffic (a 61% reduction), and pedestrians will enjoy 94% of the space on the inner streets of the Superblocks. Pollution will be reduced dramatically, ensuring that 94% of the population will not be exposed to dangerous levels of particulate matter, and 73.5% will not experience noise levels over 65 dB.

Rueda and his team estimate that the volume of traffic, after implementing phase two, will be reduced by 21%.

The future of citizen focused cities

Superblocks and Barcelona's new mobility plan were approved by the previous city administration led by Xavier Trias. The new mayor, Ada Colau, and her administration, are fierce advocates of the Superblock idea, and Rueda expects, and hopes, that Phase one will be completed within two years.

The Superblocks are not only being deployed in Barcelona. Rueda has been working with other cities (<http://www.bcnecologia.net/en/projects/central-superblock-vitoria-gasteiz>) and the concept is already at work in Vitoria (Basque country), Ferrol and La Coruña (Galicia)

"It's no secret that the good days of the automobile are over," urban planner Jan Gehl says (<http://www.fastcodesign.com/3061586/slicker-city/5-rules-for-designing-great-cities-from-denmarks-star-urbanist>). "In 2009, we saw the peak of driving in the world, and it's on the way down. The automobile was a good thing in the 'Wild West' of Detroit in 1905.... The days of the automobile as something for everyone in the world are definitely over.... In a denser city, with walking and bicycling you can get anywhere quickly."

[Read [Barcelona Facing New Housing Problems, and Airbnb](http://www.citiesofthefuture.eu/barcelona-facing-new-housing-problems-airbnb/) (<http://www.citiesofthefuture.eu/barcelona-facing-new-housing-problems-airbnb/>)]

Barcelona wants to be the best city for people in the world, Salvador Rueda says, and the Superblock is the key to reclaim public space that people lost over the last century. Now it is up to the politicians to be bold and implement the plan without delay.

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Pablo Valerio (<http://www.citiesofthefuture.eu/author/pvfrontwave-eu/>)

Pablo Valerio has been in the IT industry for 30+ years, mostly working for American companies in Europe. As a technology journalist his work appears in InformationWeek, EE Times, Enterprise Efficiency, Dell's Tech Page One, and SAP Business Innovation, among others. He holds an MS in electrical engineering from The Ohio State University. You can follow him on Twitter @frontwave_eu.

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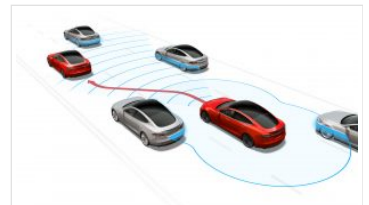
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