

Measure title : Urban renewal and the rational use of parking spaces**Country:** Spain**City:** Barcelona

A1 Objectives

To modernize the city by transforming the urban environment to reinforce commercial, economic and leisure activities in the city centre. Implementation of the Area Verde system that regulates the demand for private transport applying important parking fees combined with efficient controlling activities. The area verde model is an efficient alternative model to “electronic” congestion-combating measures implemented in other cities.

A2 Description of the CS

A summary of key statistics are presented below:

- 1.6 million residents
- 102 bus lines
- 1,065 buses
- 7 metro lines
- 102,6 Km
- 141 stations
- 165 trains
- 585,000 registered cars
- 214,000 motorcycles
- 83,000 mopeds
- 776.602 parking spaces
- 59.723 motorbike spaces
- 11.252 loading and unloading spaces



Ciutat Veilla: Underground car parks containing 6,401 parking spaces.

Changes in the layout and capacity of roads and pavements from 2003 – 2013

- Roads: reduction in the surface area from 56 to 50% area
- Pavements: increase in the surface area from 43 to 50% area
- 18% on-street parking
- 141,747 spaces (54.000 paid parking spaces)
- 82% off street parking
- 646,107 spaces (120.000 paid parking spaces)

In total 42% of all parking in Barcelona is paid or controlled.

B Costs and who paid them

The Barcelona urban renewal transformation followed the strategic plan developed in preparation for the 1992 Olympic Games. This event sparked a total transformation of the city and its economic development, which has generated continuous growth and development. The new mobility infrastructures have enabled a virtuous development enabling the generation of resources to progressively implement new metro lines, parking structures, pedestrian areas, bike sharing initiatives etc. The overall project is the result of economic resources generated by both public and private parking revenues. The overall investment by the city for the setting up of more than 54,000 paid parking on street spaces and 25,000 off street spaces in structures built directly by the city and the overall management system amounts to roughly € 650 million. The development process is dynamic and progressive and recently a public tender enabled the city contract out the management of 25 car parks in a public (40%) / private (60%) operation for all the parking structures serving the central area of Barcelona. The Public/private network enabled the city to obtain a financial contribution of €232million for a 25 year management concession.

C Project objectives, indicators, data and impact/results

OBJECTIVE	INDICATOR	DATA USED	IMPACT/RESULTS
<p><i>Create an integrated parking system of both on-street and off-street parking in order to satisfy overall mobility demand, by freeing up of inner city road space to enable the transformation of the inner city into a dynamic urban pedestrian space</i></p>	<p><i>Parking fee scale has been developed to condition the use, in a selected manner, of the private vehicle. The parking fees together with efficient controlling measures have enabled the realisation of a balanced co-mobility system.</i></p>	<p><i>Traffic counts during a monitored ten year period for modal split data</i></p>	<p><i>The number of on street parking spaces have been decreased to 18% of the total supply and the increase to 82% of the portion of the off street parking supply</i></p>
	<p><i>The modal split data and the extension of the pavement areas are the indicators of the effective results obtained</i></p>	<p><i>Statistical data indicating increase in tourist activities and the growth of the tourist industry</i></p>	<p><i>The urban mobility model has enabled the increase of pavement surfaces and streets with pedestrian priority</i></p>
	<p><i>Tourism</i></p>	<p><i>Geo-referenced data indicating the ratio between vehicle space and pedestrian space.</i></p>	<p><i>The tourist industry has doubled the presence of tourist over the last ten years</i></p>
			<p><i>The employment of dedicated staff in the tourist industry has more that doubled</i></p>
			<p><i>New soft mobility measures, (bike sharing) has been financed by the parking revenue (10 €/mil./yearly)</i></p>

Tourism (2003 – 2013)		
Tourists		3,8 → 7,6 million
Profile	40,9% 50,6% 8,5%	Congresses/fairs Holidays Other
Origin	73% 27%	Europe Rest of World
Accommodation		37,2 → 72,8 Thousand beds
Tourist activities	+ 13%	Hotels, restaurants, travel agencies, etc
Workers employed	+ 130%	51,6 → 120 thousand

Of particular political, social and economical interest is the positive employment enabling aspect generated by the renewal scheme.

There have been major changes in framework conditions in relation to the local economy and political governance that have affected the impacts of the case study. However, the overall structure and integrated systems approach of the Barcelona model have enabled the overall integrated structure to withstand and in certain cases to continue its development and economic feasibility.

D Implementation process

An important aspect of the implementation process was the implementation of the 1998 Mobility Pact. This innovative process involved a forum of public participation involving public institutions, experts, associations and stakeholder representatives. The objective was to establish strategies and actions concentrating on the quality of public services, road safety and the promotion of cycling with the intention to reduce traffic in the central area improve the urban quality and revitalise the centre. This ongoing process implemented promotional activity in schools and offices, promotional activity for the use of the public transport, the reorganisation of the parking plan (Area Verde) and the strategic plan for the bicycles (2006). The intention behind the Area Verde system was to reduce the number of trips made to the city centre in private vehicles. The system was not based on a congestion charge, as in London, but rather on the application of tariffs to all parking in the city centre.

D1. Stages

The case study was implemented in the following stages:

- **Stage 1:** 1983 – The first 281 blue parking spaces
- **Stage 2:** 1992: - The Olympic Games
- **Stage 3:** 1998 - The mobility pact
 - **2000 – 2004** – Proposal to alter the trend of increasing volumes by comprehensively regulating parking spaces in center city.
- **Stage 4:** 2001 – The introduction of short stay spaces and regulation loading and unloading spaces in Ciutat Veilla e Eixample
- **Stage 5:** 2005 – The new Area Verde regulation of 7000 high demand parking spaces
- **Stage 6:** 2006 – 2012 - the new urban mobility plan 2006 – 2012
- **Stage 7:** 2007 - The introduction of biking
- **Stage 8:** 2013 - Over 54,000 blu spaces and green spaces, 11,000 loading and unloading spaces, 55,000 motor cycle spaces

D2 Barriers

The introduction of a complete change in the way public space was useable was the cause of continuous interaction between the operators, the politicians and the residents and stakeholders. Having a base line reference to the decision making process in the Mobility Pact there was a good consensus on the initiatives, but it had to be shared and the time factor tended to dilute the processes.

D3 Drivers

The Mobility Pact on the one hand and the planning and management intelligence that constantly developed, fine tuned and implemented the operation were key to success. Another success factor relates to the fact that the parking policy is placed at the centre of the urban mobility policy and parking is seen as a service to clients who are the motorists.

- Bannerman, L.A – Urban Dynamics, Public opinion and Parking. 14th EPA Congress Vienna., Austria – September 2009
- Roig i Alegre, Antoni – Parking Planning & Management – cruising for parking. 15th: www.car-parking.eu/spain/barcelona, <http://www.bsmsa.cat/activitats/mobilitat/#>
- EPA Congress Torino, Italy – September 2011
- The city of Barcelona www.bcn.cat website: www.bcn.cat/estadistica/angles/index.htm

Photographs and images – Laurence A. Bannerman:
<http://www.areaverda.cat/en/images of the Ciutat Veilla – Barcelona>

