



Fostering citizen-focused urban mobility
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Superblocks: streets designed for sustainable mobility in Vitoria-Gasteiz

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Introduction to Vitoria-Gasteiz.

- **Some facts**

- Administrative Capital of the Basque Country
- 252,574 inhabitants
- ~100 inhabitant/ha
- A city where everything is at hand, accessible on foot and by bicycle
- No metropolitan area
- >80% of the citizens work in the city (low % of commuters)
- Significant motor industry (~35.000 employees) and >400 vehicles/1000 inh.
- European Green Capital 2012





Threats to a sustainable mobility

- **Modal split trend in 2006: a quick motorization in the daily mobility**
 - And expected to get much worse due to the new city extension

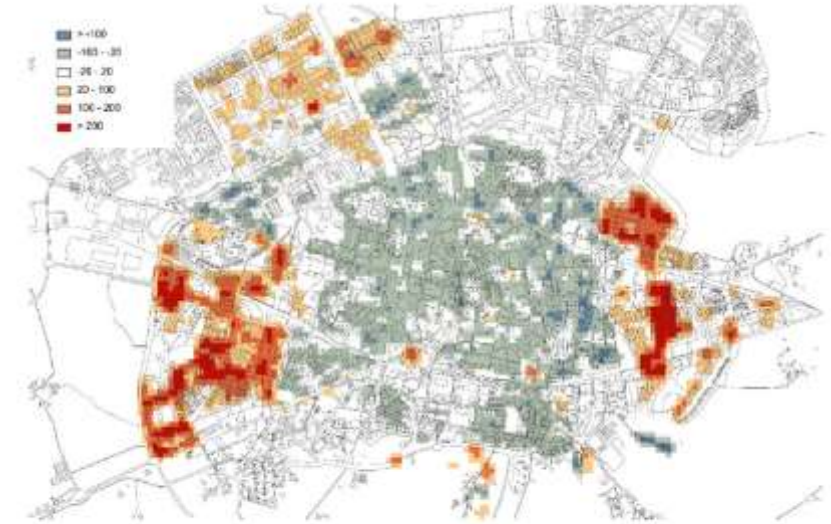
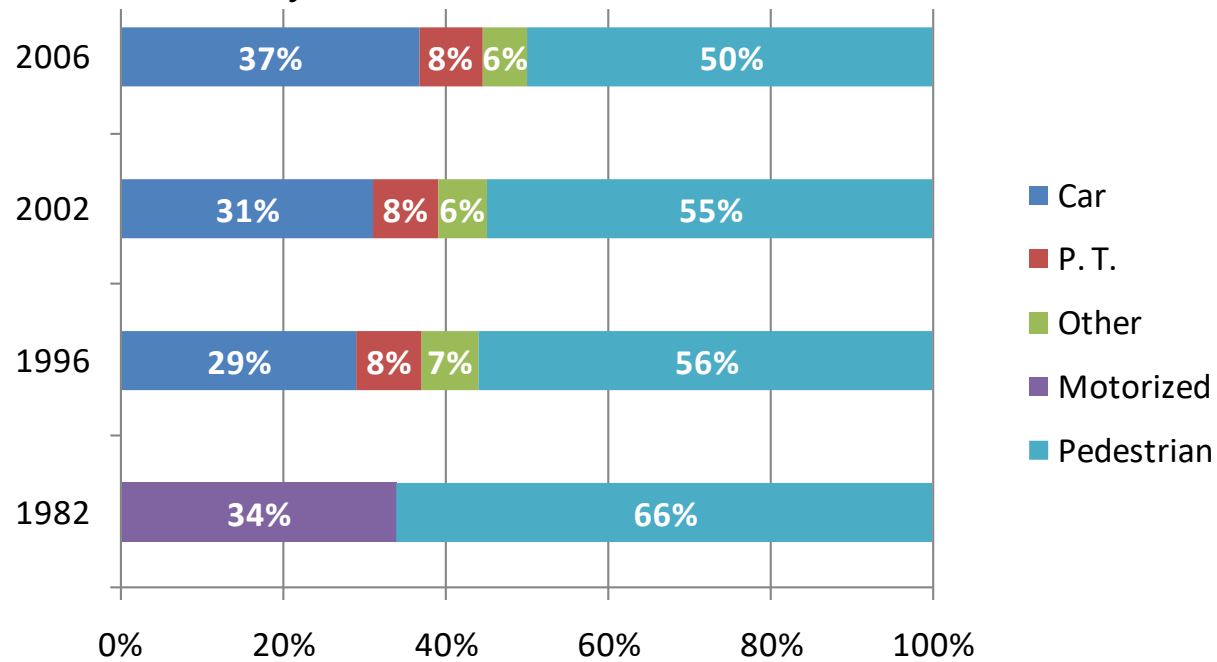


Figure 8. Evolution of the density of the population in Vitoria-Gasteiz in the period from 2006-2016

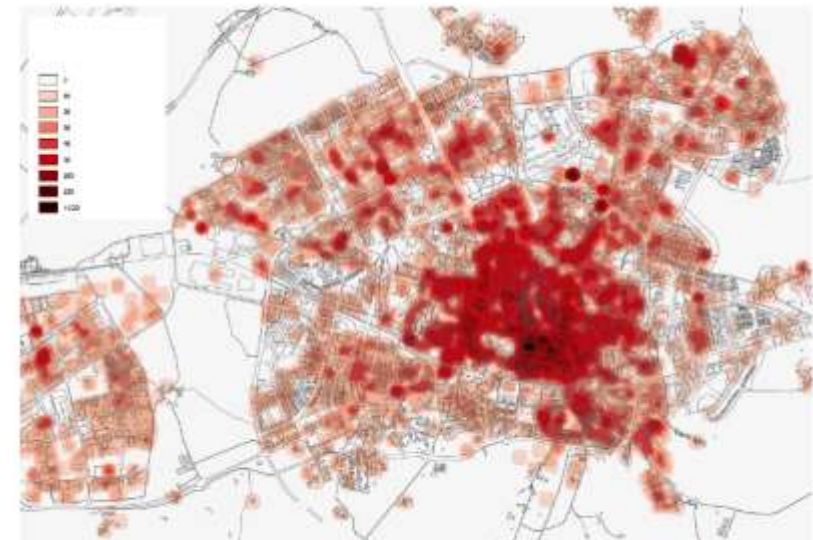


Figure 10. Density of economic activities per areas

- **What to do? Discouraging private vehicle use whilst, at the same time, improving public transport and promoting active mobility modes (walking/cycling)**

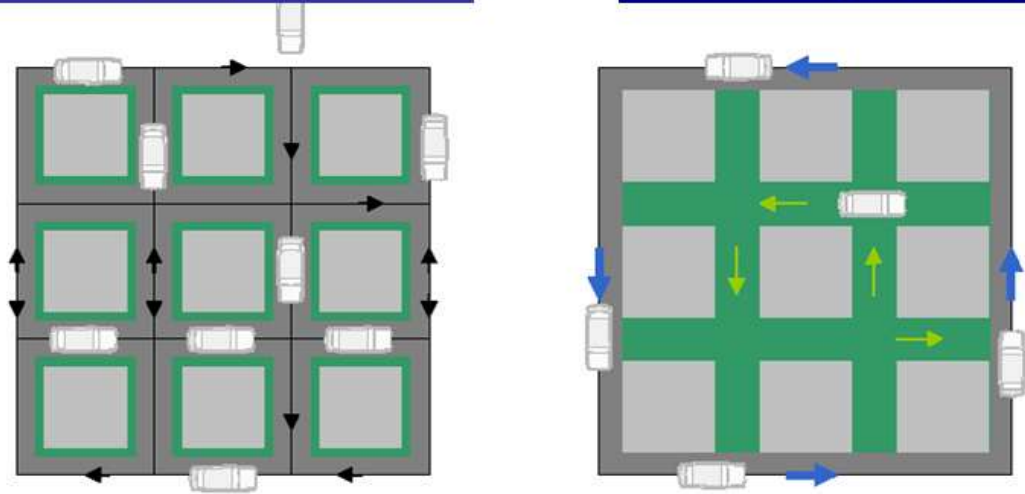
SUMpsP 2007. Superblocks: a new road hierarchy for Vitoria-Gasteiz



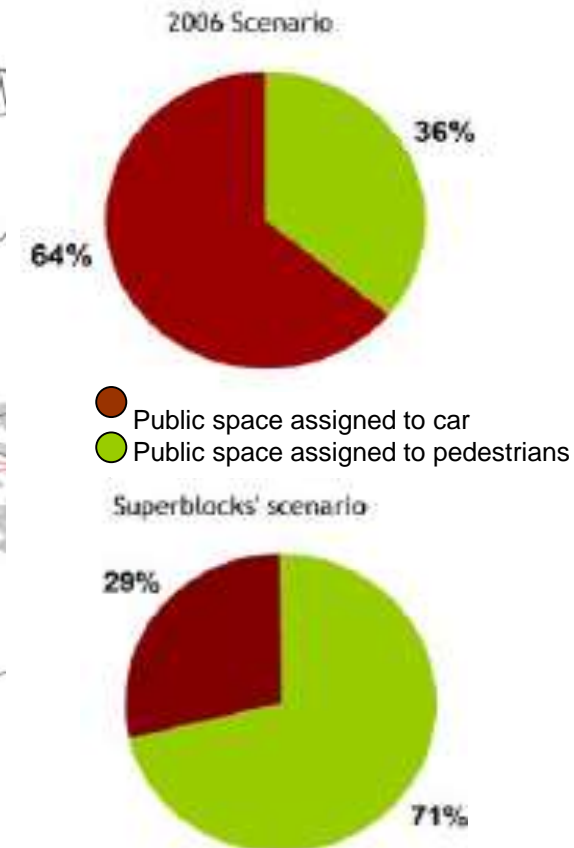
- SUMpsP main motto: “Giving back the Public Space to the people”

Without super-blocks

With super-blocks



- current network
- basic network
- secondary network
- private cars & public transport
- Residents, emergency, freight dist.
- Motorized transport road
- Pedestrian & other uses streets



Pilot superblock

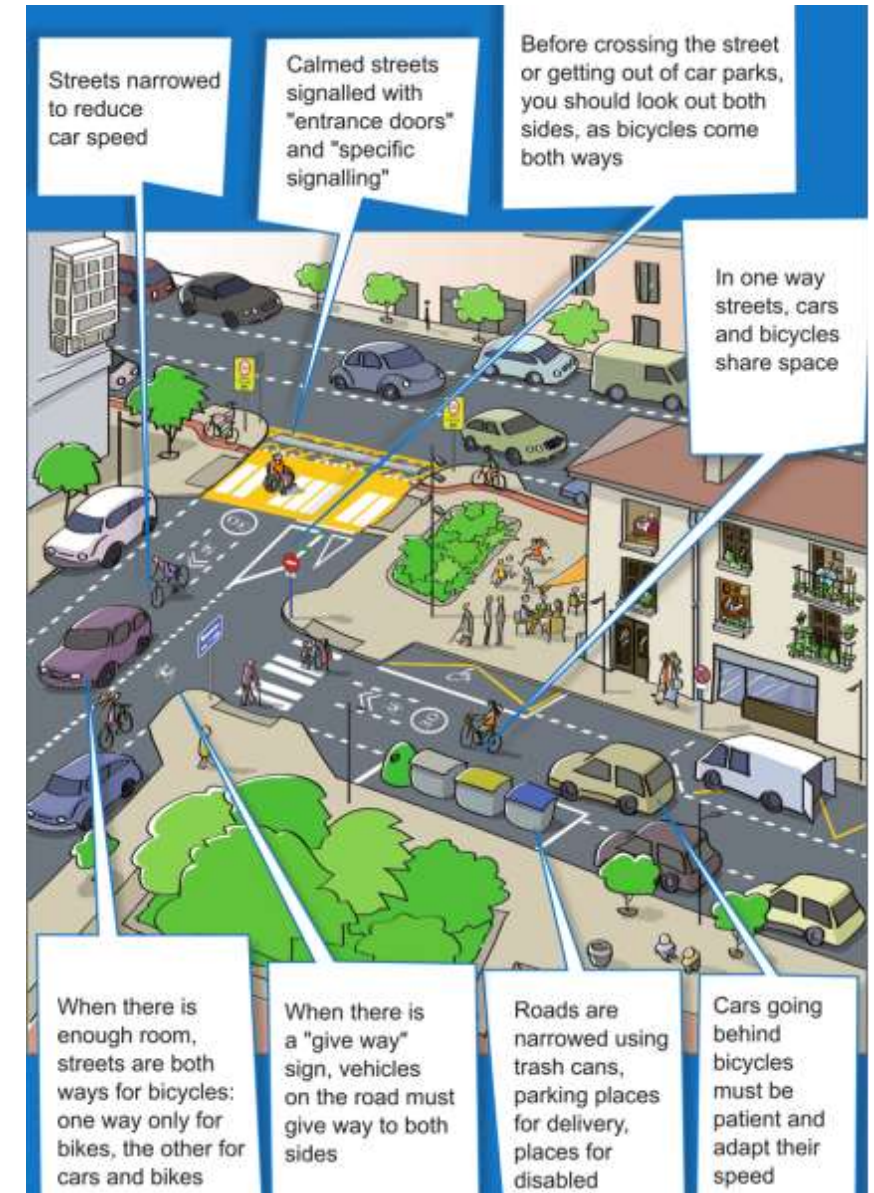


- 5,000,000 euros.
Costs were partially funded by the Spanish Government, as part of its effort to overcome the 2000s recession



Traffic calming as a transition

- It represents a transition (functional superblock; 30 km/h) towards the superblock scheme (10 km/h)
 - Allows a quick and affordable intervention aiming the same objective of giving public space back to the citizen and discouraging the use of the private car





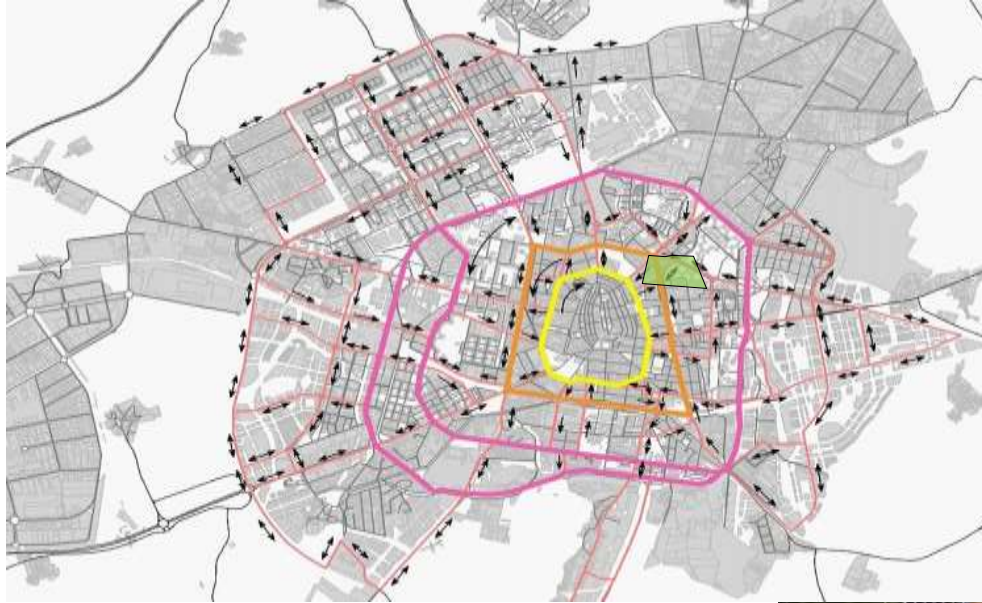
Before



After



Taking profit of opportunities... in compliance with the new road hierarchy



And following the pattern when designing public transport network

- In 2009 Vitoria-Gasteiz created a new bus & tram network: highly optimized and in compliance with the new road hierarchy...
- allowing the city to accommodate the superblocks/traffic calming to come (two interventions currently ongoing and three more foreseen for 2020)



Evolución del transporte público en Vitoria

Año	Evolución demográfica	TOTAL VIAJEROS
1998	217.628	11.440.653
1999	218.774	11.523.504
2000	218.950	11.383.474
2001	220.254	11.474.560
2002	222.329	11.560.716
2003	224.586	11.717.606
2004	224.965	11.482.471
2005	227.194	11.218.597
2006	229.080	10.582.940
2007	230.585	12.043.305
2008 ¹	233.399	12.542.640 + 111.180 12.753.828
2009 ²	236.525	10.544.413 + 4.689.282 15.233.695
2010	239.361	11.090.070 + 6.977.941 18.068.519
2011	240.580	11.881.073 + 7.425.646 19.256.709
2012 ³	243.298	12.164.910 + 7.275.965 19.440.875
2013	242.147	12.761.540 + 7.279.296 20.040.845
2014	242.924	13.064.298 + 7.296.723 20.381.021
2015	245.016	13.766.128 + 7.699.814 21.465.952
2016	246.042	14.522.888 + 7.723.445 22.246.429
2017	247.820	15.162.164 + 8.137.654 23.299.818
2018	250.051	15.759.827 + 8.304.395 24.064.222

¹ A principios de 2008: Llegan los primeros vehículos de Zabalzana y Sotarría

² Diciembre de 2008: Puesta en marcha del tranvía

³ Julio de 2009: Arranca el ramal de Abetxuko



Monitoring the impact of the pilot superbblock

Indicator	Before (2009)	B-a-U (2010)	After (2010)	Difference:		Difference:	
				After	Before	After	B-a-U
8. CO2 emissions (tn)	755	759	438	-317	-42%	-321	-42%
10. NOx emissions (tn)	2.4	2.41	1.4	-1	-42%	-1.01	-42%
11. Small particulate emissions (tn)	0.13	0.13	0.08	-0.05	-38%	-0.05	-39%
12. Noise perception (dBA)	66.5	66.85	61	-5.5	-8%	-5.85	-9%
14. Acceptance level	0	0	7.4	7.4	-	7.4	-
103. Pedestrian surface	45%	45%	74%	29	64%	29	64%
Indicator	Before (2012)	B-a-U (2013)	After (2013)	Difference:		Difference:	
23. Average vehicles speed	27.8	27.77	25.58	-2.22	-8%	-2.19	-8%
Indicator	Before (2009)	B-a-U (2011)	After (2011)	Difference:		Difference:	
24. Average modal split	86% / 11% / 3%	88% / 9% / 3%	19% / 68% / 12%	-67% / 57% / 9%		-69% / 59% / 9%	

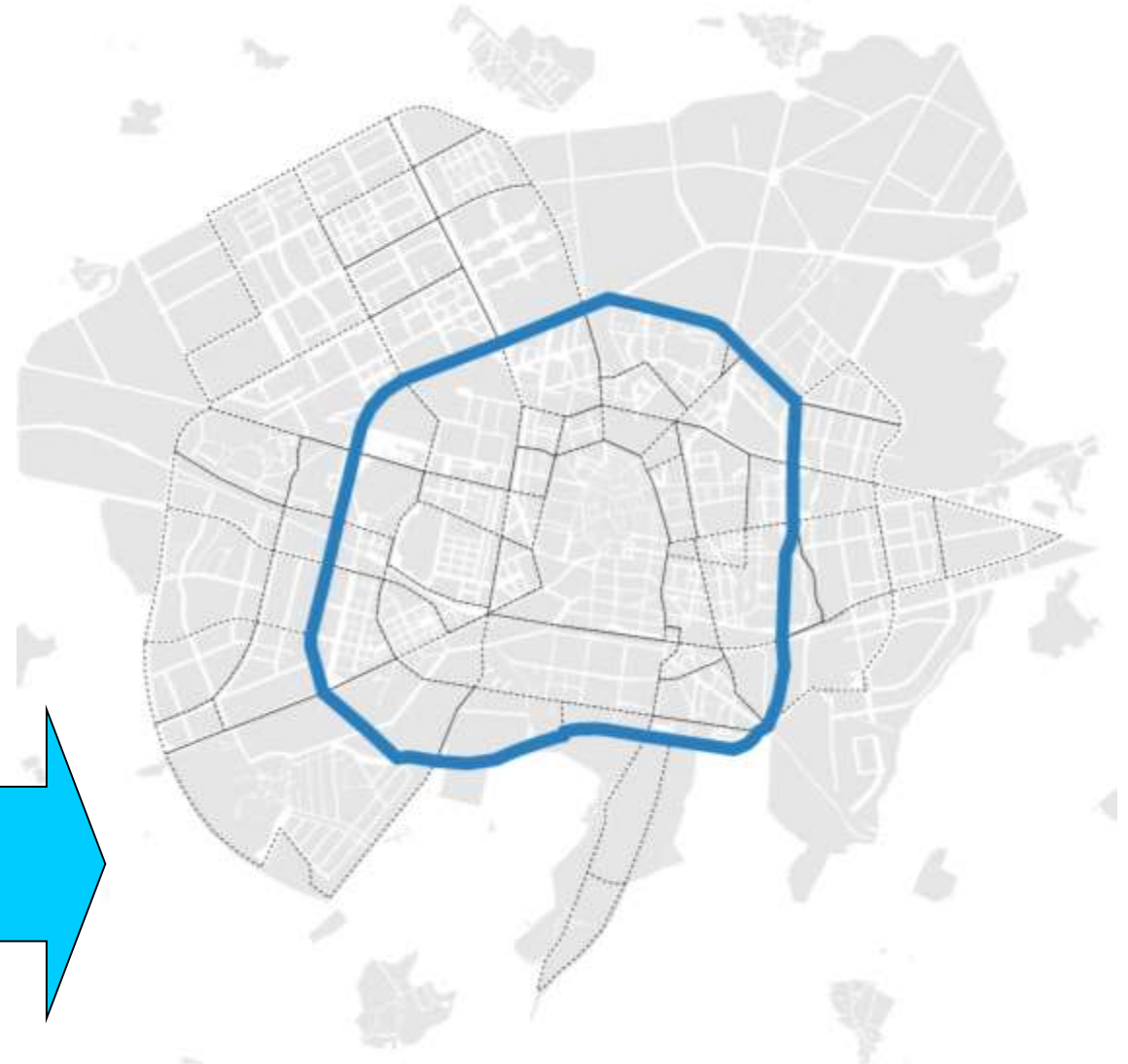
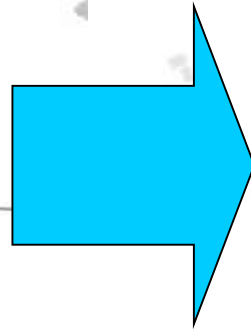
No.	Target	Rating
1	To increase the free public space for citizens activities in the area up to 10%. <i>It is increased the pedestrian surface (64%) in the pilot superbblock.</i>	***
2	To improve the acoustical quality of the area up to 10%. <i>It is decreased the noise perception (-8%).</i>	*
3	To reduce emissions of polluting gasses in the area up to 10%. <i>It is decreased the emissions (-40%).</i>	***
4	To obtain a higher level of use of pedestrians and bicycles and a reduction of use of cars in the area up to 10%. <i>The modal split change from cars (-63%) to pedestrians (55%) and bicycles (8%).</i>	***
5	To reduce the average speed of vehicles in the inner streets of superbblocks up to 5%. <i>The average speed of vehicles in the inner street has decreased (-8%).</i>	***

NA = Not Assessed, O = Not Achieved, * = Substantially achieved (at least 50%), ** = Achieved in full, *** = Exceeded



- 400 surveys were carried out by telephone. Acceptance levels for the measure were quite high at 7.43 out of 10.

SUMpsP currently being updated (to be approved in 2020)





Potential for learning or transfer

- In general, the model worked properly, reaching the targets and objectives set in the plan.
- However, there were some aspects that need further rethinking, mainly the type of solution used in the pilot superblock, that proved to be very expensive and not applicable in other superblocks.
- Therefore, results in the pilot superblock are transferable as long as plans with similar objectives in other cities are based on the same foundations of heavy infrastructural changes and powerful participation, communication and promotion campaigns.
- The extension of the measure to >17 more superblocks in the city centre with lighter (and cheaper) actions are more transferable to other cities.
- Paramount to redesign PT network to accommodate the foreseen superblocks and to take profit of any opportunity (such as roads/pipes renovation works) to implement traffic calming as a transition state.

Thank you!

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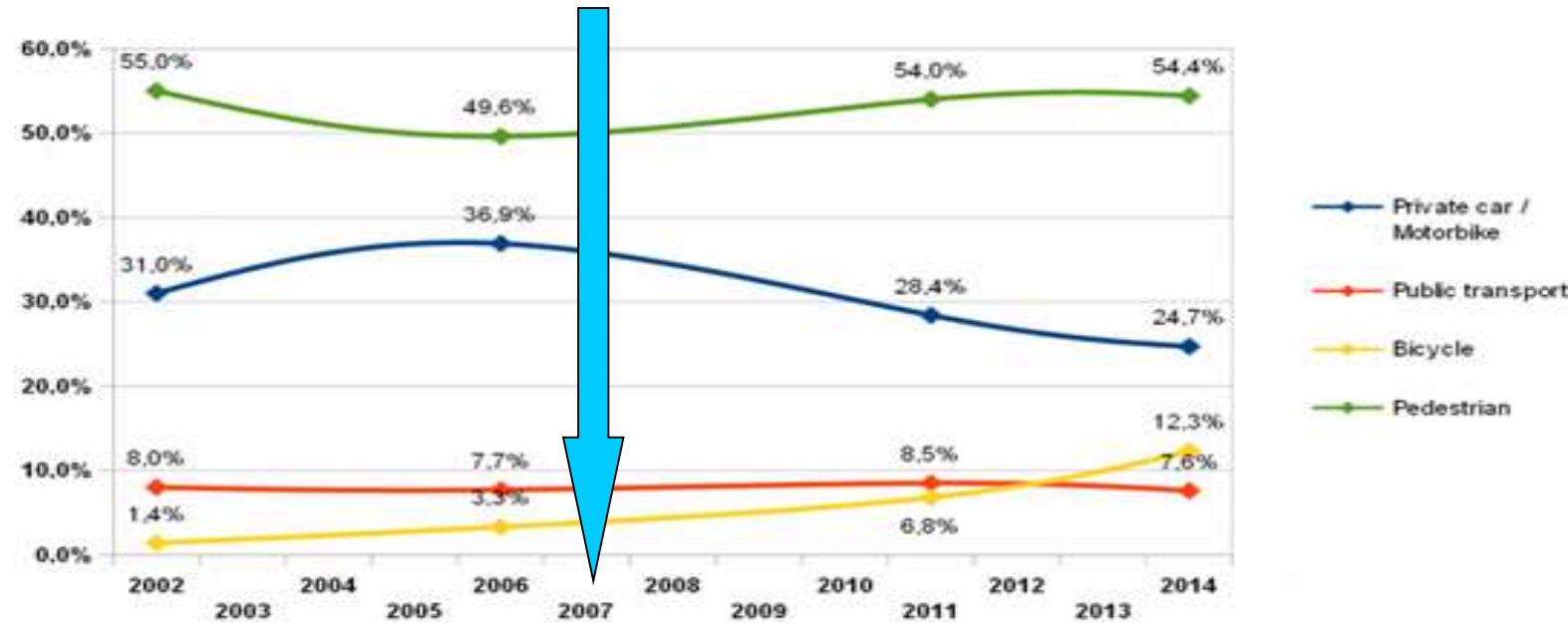
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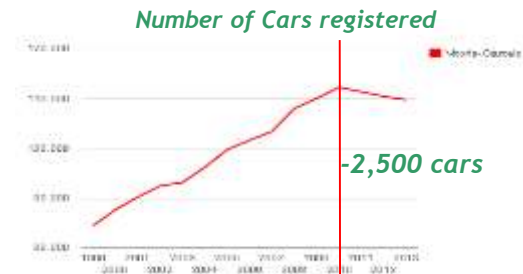
Modal share (up to 2014, last mobility survey).

We succeeded in reversing the rising trend in private car use, raising the pedestrian share to 2002 levels and increasing the use of bicycle.

- Walking modal split increased from 49.9 up to 54.4% (~2002 levels)
- Bicycle modal split increased from 3.4 (2006) up to 12.3% (2014)
- Private cars modal split went from 36.6% (2006) down to 24.7%



Trips		2006	2011	2014
General Modal Share	Pedestrian	288.141	447.911	495.427
	Bicycle	19.051	56.400	111.851
	Public Transport	45.045	70.854	69.491
	Car or motorbike	214.224	236.008	224.892
	Others	14.875	18.653	9.665
		581.336	829.826	911.326



Municipio	Δ emisiones 2006/13	Δ energía 2006/13
Residencial	-5,2%	+14,7%
Servicios	-18,8%	+15,1%
Movilidad	-9,7%	- 8,9%
Primario	+11,5%	+13,5%
Total	-8,7%	+6,8%