



CiViTAS
Cleaner and better transport in cities
ARCHIMEDES

CASE STUDY



CYCLING, WALKING AND VERTICAL TRANSPORT

CAR INDEPENDENT LIFESTYLES



During the time life of the CIVITAS ARCHIMEDES project in Donostia-San Sebastian, the Municipality emphasised the promotion of car free lifestyles through the development of alternative mobility options to reduce car dependency. Some of the key activities that the city carried out to offer its citizens the possibility to have an efficient mobility without owning or using a private car, are: the enhancement of public transport services; the further promotion of cycling by improving the cycling network and enlarging the bike sharing scheme; the development of vertical transport systems and infrastructure improvements to foster walking.

Municipal context

Donostia-San Sebastian, located in the Basque Country in northern Spain, is home to over 185,000 inhabitants. The city overlooks the sea in a spectacular bay embraced by small mountains. The welcoming and friendly city also attracts visitors with its passion for good food. The city is the capital of the Gipuzkoa province and the centre of a metropolitan area with around 400,000 inhabitants.

reducing the on street parking and returning the public space to pedestrians, the city managed to become an even more attractive place to be. Before CIVITAS ARCHIMEDES, the city already had a cycling network of 28 kilometres. During the lifetime of ARCHIMEDES the cycling network was expanded by 22 kilometres. In addition, the municipal public transport operator, DonostiaBus has implemented an ambitious set of measures to further increase the high bus patronage.

In the last 20 years Donostia-San Sebastian has been applying integrated policies favouring pedestrians, cyclists and public transport. By

In 2002, 48 percent of urban trips were made on foot, 28 percent by private car, 18 percent by public transport and 6 percent by other

MUNICIPAL PROFILE

LOCATION

Donostia-San Sebastian, Spain

POPULATION

185,000

LAND AREA

61 km²

CIVITAS BUDGET

Approx. EUR 5,900,000
for all five partners
in Donostia-San Sebastian



DONOSTIA-SAN SEBASTIAN IN CIVITAS

Donostia-San Sebastian participated in CIVITAS ARCHIMEDES, an innovative collaboration between the cities of Aalborg (Denmark), Brighton and Hove (United Kingdom), Donostia-San Sebastian (Spain), Iasi (Romania), Monza (Italy) and Usti nad Labem (Czech Republic). ARCHIMEDES stands for “Achieving Real CHange with Innovative transport MEasures Demonstrating Energy Savings”

PROJECT INFORMATION

The ARCHIMEDES cities implemented a strong and coherent package of 83 activities to make transport more energy efficient, safer and more convenient. An increased share of clean engine technology and fuels has significantly contributed to achieving this goal. With a strong focus on education and trainings for students, citizens and practitioners, ARCHIMEDES cities greatly benefited from sharing their experiences and learning from each other. The project ran from 2008-2012.

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modes including cycling. The progress towards sustainable transport has been underpinned by extensive public debate that led to the creation of a permanent channel for stakeholder participation called the “Consejo Asesor de Movilidad”. This Mobility Advisory Board provides a forum for reviewing and approving the Civic Mobility Pact 1999, which is being endorsed by social, institutional and financial stakeholders.

Introduction

Over the last years, the City of Donostia-San Sebastian has been active in the promotion of sustainable mobility in the city: cycle paths, pedestrian areas, bike sharing scheme, efficient bus lines and more. Guidelines for further action were defined within the Sustainable Urban Mobility Plan for the city and several activities started before CIVITAS ARCHIMEDES.

However, in order to succeed in the achievement of car-free lifestyles, further steps needed to be taken in the promotion of cycling and walking in the city to demonstrate that life in the city without owning a car is possible – although car ownership has always been very deeply rooted among citizens.

In this context, in 2008 the CIVITAS ARCHIMEDES project provided an opportunity to further promote sustainable mobility in the city, defining a comprehensive strategy whose development has benefitted from the work of the Mobility Advisory Board.

Taking a closer look

Over the four years of CIVITAS ARCHIMEDES, significant improvements in non-motorised mobility has been undertaken in Donostia-San Sebastian.

The city has extended its pedestrian area by four kilometres and improvements have been made along the whole pedestrian network. The cycle network has been completed with 22 kilometres of additional cycling lanes, and now reaches over 50 kilometres. Connections between the former network and the new extensions were made to provide continuity. The main cycling arteries developed include:

- Amara – Antiguo cycle lane (tunnel of Morlans): 1.95 km

A very important connection, exclusive for cyclists, was built connecting the two CIVITAS

corridors, and reducing the distance from one neighbourhood to another from four km to two km. The users of this cycle lane are mainly students from the public university and workers from industries located in those neighbourhoods.

- Anoeta Stadium – Concha beach (city centre): 2.10 km

An important connection has been opened between the Paseo de la Concha and the stadium of Anoeta, going through one of the CIVITAS corridors (Amara). To build this cycle lane, a car lane and car parking spaces have been removed.

- Donostia – Pasaia cycle lane (tunnel and bridge Txaparrene): 1.80 km

This cycle lane includes a tunnel and a bridge over a highway that avoids a hilly route and links important neighbourhoods from the outskirts of the city with the city centre.

In order to further promote cycling among residents and visitors, a public bike scheme was launched in 2008, including five dispatch points and 100 bicycles readily available for users along



for assisting pedestrians and cyclists to go uphill. In order to encourage citizens in these areas to travel by non-motorised modes, as well as to improve accessibility conditions to these neighbourhoods, the Municipality initiated the development of a vertical transport network in 2007. Proving the effectiveness of the system, within the CIVITAS ARCHIMEDES project the city has expanded the existing vertical transport network by implementing seven additional elevators and six new escalators/ramps to support cycling and walking inside and towards the city centre.

The further development of vertical transport resulted in an improved access to existing pedestrian and cycling infrastructures, and fostered the creation of new pedestrian and cyclists routes interconnecting them.

Results

the flat neighbourhoods of the city. In 2010 the system was extended to nine dispatch points and 150 public bicycles. Currently, the system is about to be upscaled to the whole city, including the hilly areas, thanks to electrical aided bicycles.

Other cycling improvements include the implementation of 600 new bicycle parking spaces, distributed in 60 locations around the city. At the same time, the provision of mass storage for bicycles in underground car parks is being initiated.

Both cycling and walking conditions have also improved by means of the implementation of safe districts and 30-km-zones. These measures are focused on achieving a change in drivers' behaviour; promoting new driving patterns which are expected to influence non-motorised mobility; reducing the perceived risk, especially by cyclists who share the road with motorised traffic. 30-km-zones have been conceived to provide continuity to the cycling networks connecting the interested neighbourhoods. Physical interventions at crossings have been implemented to improve safety for cyclists and pedestrians in these areas.

Last but not least, in a city like Donostia-San Sebastian, surrounded by mountains and with half of the population living in hilly neighbourhoods, it is important to find solutions

Walking and cycling improvements in Donostia-San Sebastian have resulted in a steady increase in the use of the bicycle, which reached a 33 percent rise during the CIVITAS project (2008-2011). In 2011, the increase in cycling levels was 26 percent compared with the previous year.

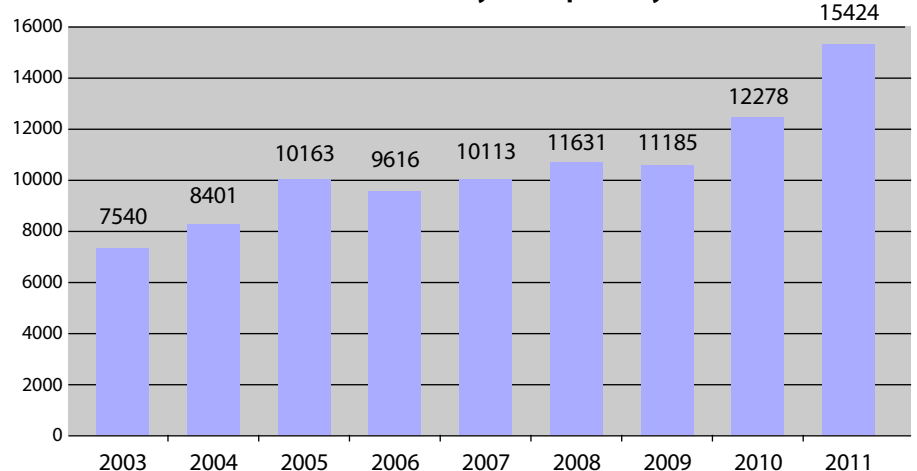
In terms of modal shift in favour of sustainable modes of transport, results are moderate in the short term, achieving an overall reduction in car use of 0.1 percent as compared with the situation before the CIVITAS project started. In a context of steady increase in car travel, this achievement can be considered as a positive result.

An increase in energy efficiency has been registered as a consequence of the CIVITAS project, although energy consumption of the overall system raised by 2.3 percent between 2008 and 2011. It is estimated that in 2011 energy savings accounted for nearly 15 PET as compared with the business-as-usual scenario.

Consequently, there is an overall increase in emission levels as compared with the situation before the CIVITAS project, due to the increased mobility levels experienced in the city. Nevertheless, both in terms of GHG and pollutant emission levels, significant reduction have been achieved by the CIVITAS project as compared to a business-as-usual scenario (e.g. 2.5 percent reduction in particulate matter emission levels in 2011).

As for the public bike scheme, the number of registered users has steadily increased, reaching over 5,000 subscribers in 2011. The number of trips made using the system reached a total of 167,659 in 2011, representing a 64 percent increase as compared to the previous year (in 2010, a 50 percent increase was accounted as compared to 2009). Also the number of uses per bicycle per day has increased since the system started operating, from 1.84 uses per bike per day in 2009 to 4.59 in 2011. The majority of the city bike uses lasts below 15 minutes and is made in working days, which means that the service is being used mostly for daily mobility and not for leisure.

Number of cyclists per day





Lessons learned

Behavioural changes take time. It is not easy to change people mobility habits, especially in the framework of a strong car oriented culture as experienced in most European cities nowadays. Long term strategies are required in order to effectively achieve a behavioural change towards sustainable mobility.

Actions such as the implementation of dedicated cycle infrastructures or the pedestrianisation of historic city centres should be the starting points for sustainable mobility strategies. However, they should be complemented by other actions to further promote non-motorised mobility:

- A comprehensive network infrastructure for walking and cycling, providing continuity of cycling and walking itineraries across the whole city area, is essential.
- Perceived risk is a key deterrent factor associated to cycling and walking. Even if injuries and deaths figures are not high, measures to improve the perceived traffic safety are required.
- The promotion of pedestrian mobility not only calls for pedestrian areas, but mostly for improved public space and enhanced accessibility conditions.

- Traffic calming reduces the need for dedicated cycle lanes, making it easy to implement a comprehensive cycle network.
- Incentive measures should be accompanied by traffic restriction, especially parking management schemes, in order to fully deploy their potential.
- Ongoing awareness rising campaigns are essential in order to further promote the required cultural change of individuals.

Upscaling and transferability

The Municipality of Donostia-San Sebastian is determined to upscale improved walking and cycling conditions to the whole city. Although the CIVITAS project has mainly focused on the so-called CIVITAS corridor, corresponding to the city centre, the same approach is being adopted to other neighbourhoods in the city. Infrastructure improvements are being developed and complementary services enlarged.

The public bike scheme will be upscaled with the inclusion of electric bicycles for the hilly areas of the city as of 2013, when a new company will start operating the system.

As for the transferability potential of the measure, walking improvements can easily be replicated in other territories, with optimal accessibility conditions for pedestrians as the main prerequisite for their development. On the contrary, dedicated cycling infrastructures are more context-dependent and would require a detailed study for its development. Still, general principles, such as connectivity and continuity of itineraries, are to be used as main guidelines in any cycling infrastructure development.

Improvement of perceived traffic safety can also be regarded as a key element for the promotion of non-motorised mobility, suitable in all possible contexts.

Budget and finances

All the actions have been funded mainly by the local budget, and co-financed by the CIVITAS funds allocated to the city.

Key contacts

Andrés Martínez
Mobility expert, City of Donostia-San Sebastian
[Andres_martinez@donostia.org]



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Sean Carroll
Ciara Leonard
Gloria Spezzano (ICLEI)

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