



**CiViTAS**  
Cleaner and better transport in cities  
**MODERN**

# CASE STUDY



## NEW PUBLIC TRANSPORT NETWORK

### DEMAND MANAGEMENT STRATEGIES



© ESCUDERO ACHIAGA JUAN CARLOS



● **VITORIA-GASTEIZ**

In only one night the public transport network of Vitoria-Gasteiz was completely transformed. This was done in order to reverse the upward trend in the use of private cars, through transferring car users to public transport. A transit scheme was created according to the Superblocks philosophy that benefits public transport and improves efficiency in terms of accessibility, coverage, service and frequency. The citizens of Vitoria-Gasteiz went to sleep on the 29 October 2009, seeing the old network off at 23:00 P.M., and woke up the next morning with a new network, launched at 5:00 A.M. The bus network was reduced that night from 17 lines to only nine with new itineraries, timetables, and improved frequencies, including 146 bus-stops in new locations, queue jumpers at busy junctions, more resources and updated information at bus-stops.

#### MUNICIPAL PROFILE

##### LOCATION

Vitoria-Gasteiz, Spain

##### POPULATION

239,562

##### LAND AREA

276.81 km<sup>2</sup>

##### CIVITAS BUDGET

EUR 3,700,000 for the city's CIVITAS activities (this figure includes the budget of all the partners in Vitoria-Gasteiz).

#### Municipal context

Vitoria-Gasteiz is the capital of the Basque country, an autonomous community in northern Spain. It is now known across Europe as the 2012 Green Capital and within the CIVITAS community as the host city of the CIVITAS Forum 2012. Vitoria-Gasteiz aims to become the reference city for sustainability in Europe.

King Sancho VI of Navarre founded "Nueva Victoria" in 1181 as a walled defensive outpost

that acquired its name "Gasteiz" from a hamlet that previously stood on the hill around which the city was built. The great development of the city began in the 1950s with the arrival of industry. Since the early 1990s to today, the city has almost doubled its surface. However, this increase has not matched population growth.

Vitoria-Gasteiz is a medium size city, which is both compact and high-density. It is not part of a wider metropolitan area, and most journeys' origin and destination are within the



**VITORIA-GASTEIZ IN CIVITAS**

Vitoria-Gasteiz (Spain) participated in CIVITAS MODERN. Under the motto “MObility, Development and Energy use ReductioN”, CIVITAS MODERN connects the cities of Craiova (Romania), Brescia (Italy), Coimbra (Portugal), and Vitoria-Gasteiz.

**PROJECT INFORMATION**

Representing cities across Europe, each with a desire to preserve their historic and cultural centres from damage caused by private vehicles, the CIVITAS MODERN project enacted 42 measures that led to cleaner and better urban transport. Besides promoting sustainable mobility measures and interaction among the participating cities, CIVITAS MODERN specifically focused on encouraging strong cooperation among scientists and technicians to learn from experience and best practice throughout Europe.

**READ MORE AT:**

[www.civitas.eu](http://www.civitas.eu) > About us



Dissemination campaign in Paz Street. Volunteer explains characteristics of new PT network.

© TUVISA

city itself. Around half of all journeys are made by walking.

The city is committed to a Sustainable Mobility and Public Space Plan (SMPS). Thanks to the city’s ability to favour balanced growth, careful urban planning and pursue its traditional concern for environmental and social aspects, the plan proved to be a successful endeavour.

**Introduction**

One of the main outcomes of the Public Space and Sustainable Mobility Plan (PS&SMP) implementation in Vitoria-Gasteiz was the reversal of the increase in the use of private cars, transferring those users to more sustainable modes of transport. The modal split of private cars increased from 29 percent in 1996, to 31 percent in 2002 and 36.6 percent in 2006.

To reach the outcomes of the PS&SMP the city was divided in superblocks that transformed the design of roads and the transit scheme of the city for private cars, bicycles, pedestrians and public transport.

Several measures were implemented by different departments of the Municipality. The CIVITAS Initiative offered the opportunity to enact these measures, through financial support from the European Union, and the

chance to learn from the best practices of other cities and companies.

CIVITAS provided a first class framework to put into practice those ideas, as it is directly related to urban mobility. One of its main objectives is to provide innovative solutions to mobility issues.

**Taking a closer look**

The implementation of a new public transport network is one of the main outcomes of the Public Space and Sustainable Mobility Plan of Vitoria-Gasteiz.

In October 2009 Vitoria-Gasteiz changed its public transport network for the entire city in only one night, under the following principles:

- network integration through designing streets for tram and buses (which also minimises friction with private cars);
- better continuity through forming a homogeneous network and a reticular morphology to achieve maximum efficiency;
- improved coverage, making public transport accessible to all citizens, with a rate of 97 percent of citizens with stops within 350 meters;

**BACKGROUND INFORMATION**

The sustainable mobility plan of the city aims to: reverse the upward trend in the use of private cars, transferring car users to public transport and bicycles; increase the quality of public space in terms of accessibility and car traffic reduction; redefine the overall public transport network in order to improve the efficiency of the system in terms of accessibility and coverage; set up a new traffic control system giving priority to public transport; implement innovative access and transit schemes according to the Superblocks philosophy; consolidate and extend the network of pedestrian and cycling reserved paths; test a new regulation scheme for freight distribution.

In the superblocks approach, private cars and public transport are kept outside the superblocks, while the inner streets are redesigned to be used mainly by pedestrians. Bus lines of the new network were consequently redesigned according to the new reorganisation of the city.



Bus lane in Francia Street



Public transport of Vitoria-Gasteiz

- greater simplicity through bus stops at the grid nodes, spaced only 400 metres, giving full coverage to the territory;
- better connectivity, allowing users to reach the entire city with a maximum of two transfers: and greater competitiveness, through making public transport journey times compatible with journey times of private cars.

The main characteristics of the new network and of the supporting measures implemented to support the new public transport network are the following: 17 more buses on service; less bus lines through rationalisation of bus routes from 17 to just nine; reorganisation of bus-stops locations at grid nodes, with 147 bus stops relocated within the new network; traffic light priority given to public transport buses in 17 junctions - in addition, 31 new junction priority traffic light were implemented in 2012; new platforms at bus-stops, including 1,395 metres of prefabricated platforms implemented in 93 locations in 2009, expanded with 44 non-prefabricated platforms set in 2010 - today 73 percent of non regulated bus stops are equipped with platforms placed on pavement with preference to private cars; bus lane segregation including two downtown corridors with a total length of 1,520 metres implemented for the exclusive use of public transport, services and residents, with bus lane and queue jumpers at busy junctions implemented in 22 different locations, two of them against the normal

street direction; bus/tram integrated fare (BAT Card) with contactless technology; free Park & Ride service in five strategic locations to reduce the volume of traffic coming into the city; strong dissemination and participatory initiatives, including a recruitment campaign for volunteers (several information points on streets, buses, stops and civic center gave direct information orally to 44,683 people); more than 10,000 hours of training given to bus drivers, inspectors, administrative personnel and traffic and customer service; new network incorporation on the main route planners available on the internet and smart phones (google transit and nanika metro); push and pool tools, such as changes in the regulation of surface parking and increasing prices to dissuade the use of private cars.

The main innovative aspect of the new public transport network is the transition from a scenario with a public transport network based on 17 bus lines, to a new one based on two tram lines and only nine bus lines. This was designed to be adapted to the reorganisation of the city in 68 superblocks, as outlined in the PS&SMP of Vitoria-Gasteiz that redefines the mobility of pedestrians, bicycles, buses and cars.

### Results

Several indicators were calculated to measure The reorganisation of the public transport network in line with measures to facilitate the movement of public transport buses achieved

the following results: increase in commercial speed from 10.77 to 12.73 km/h, which represent an improvement of 18.2%; increased frequency of bus runs from every 20 to every 10 minutes; reduction of fuel consumption average from 56.56 to 53.03 litres/100kms (an improvement of 6.24 percent); reduction of CO<sub>2</sub> emissions as a direct result of fuel savings (421 tons/year); a reduction of accidents per bus and year, from 5.63 to 3.55 reaching an improvement of 36.9%; and an increase in the number of public transport users.

### Lessons learned

#### Involving citizens in the development of the new network

Having a strategic sustainable mobility plan in the city that is endorsed by people and all political parties is essential to extending the strategic vision to the whole city. This is crucial to avoid frictions and to explain to citizens the importance of measures that may look controversial at first sight (e.g. raising the prices of surface parking, reducing parking spaces to build reserved paths for bicycles or buses, etc.).

The sustainable mobility plan must be based on participatory processes, through the introduction of stakeholder engagement activities, which enable technicians and government teams to implement sustainable mobility policies that are recognised by citizens as their own.



### Enhance communication and dissemination campaigns

Making such a radical change in the public transport network all over the city in such a short time requires massive communication and dissemination campaigns. The city used all possible channels to reach its citizens and to inform them of new changes.

### Upgrading the transport network

It is important to create participation forums and channels for citizens' requests. These suggestions need to be evaluated technically and consistently within the fundamentals of the strategic sustainable mobility planning, in order to have a public transport network updated to the real needs of the city and its citizens.

### Upscaling and transferability

The Public Space and Sustainable Mobility Plan of Vitoria-Gasteiz established guidelines to follow for further improvements in the public transport network. The document foretells a scenario for the year 2015 based on the expansion plans of the city developed in 2007.

The current economic situation has affected the development of urban and infrastructure planning of the city, delaying (among other projects) the underground of the railroad tracks that are currently crossing the city from east to west through the downtown area. This delayed project involved the reorganisation of public space to allow for the implementation of a bus rapid transit line that crossed the city from east to west.

This fact has forced the city to adapt the itinerary of the foreseen Bus Rapid Transit Line, planned for 2015, to a regular bus line to be implemented in streets near train tracks. In October 2010 the western section of that line was implemented in a similar manner to a shuttle. The eastern section was implemented in September 2012, improving the public transport service in new quarters of the city expansion.

The process of public participation is essential for achieving a transport network that meets the needs of citizens. A technical group with members of the bus public transport company, the Environmental Studies Centre and the municipality was formed in 2009 and sent to different neighbourhood association and local councils to discuss with them the Sustainable Mobility Plan, the new bus lines, relocated bus stops and their most relevant journeys/transfers. As a result of those meetings, changes in routes and bus stops were implemented in the final design of the new transport network. Since then territorial councils are used to channel citizen proposals to improve the transport network.

### Budget and finances

Two main financial factors affected this project: the Public Space and Sustainable Mobility Plan, whose funds served to develop new public transport solutions; and the measures to face the global economic crisis. In order to boost the economy, the Spanish Government allocated a large budget for public works for the period 2009-2010. The Municipality of Vitoria-Gasteiz used these funds to implement prefabricated and non-prefabricated platforms in 114 bus stops and queue jumpers at busy junctions.

### Key contacts

Miguel Ibarrodo,  
Traffic manager of TUVISA,  
Bus public transport company of Vitoria-Gasteiz  
Tel.: +34 945 16 10 54  
Fax: +34 945 16 10 51  
[ibarrondo@vitoria-gasteiz.org]

### References and sources

Public Space and Sustainable Mobility Plan of Vitoria-Gasteiz.  
New public transport network implementation management report.  
www.civitas.eu > Cities > Vitoria-Gasteiz



### Acknowledgements

CIVITAS PLUS programme  
CIVITAS-MODERN cities and beneficiaries  
Citizens of Vitoria-Gasteiz  
Technicians and politicians of the Municipality of Vitoria-Gasteiz

### Legal notice and copyright

The views expressed in this publication are the sole responsibility of the authors specified and do not necessarily reflect the views of the European Commission or the CIVITAS VANGUARD Initiative.

All text in this publication is based upon experiences gathered by the CIVITAS Initiative. All text and images can be republished in their current or adapted form, however, in either case, they must be attributed to the CIVITAS Initiative.

### Publisher

ICLEI – Local Governments for Sustainability,  
Freiburg, Germany  
Executive Director: Wolfgang Teubner

### Series editors

Sean Carroll  
Ciara Leonard  
Gloria Spezzano (ICLEI)

### Layout

Mostra, ICLEI

