



CIVITAS

Cleaner and better transport in cities

M O D E R N

CASE STUDY



PROMOTING QUALITY AND INTEGRATED PUBLIC TRANSPORT IN BRESCIA

COLLECTIVE PASSENGER TRANSPORT



© FISCHER KARIN



BRESCIA

The objective of this group of measures was to strengthen intermodality among different public transport (PT) modes through the integrated ticketing systems. The measures included research and demonstration activities, in order to better prototype and implement the e-ticketing system in Brescia. These activities, partly tasked with identifying the technical solutions acceptable from an economic point of view, explored smart cards that allow users to utilise the same ticket for trips offered by different companies. The tickets provide access to a range of services such as buses and metro systems, bicycle sharing, car sharing, and Park and Ride.

Municipal context

Brescia is a medium-sized town located in the Lombardy region of Italy, at the Alpine foothills, about 100 kilometres from Milan.

The Province of Brescia is the largest in Lombardy and covers an area of about one fifth of the whole region. The landscape varies from the vast southern plain (27 percent) to more hilly terrain (21 percent), to the northern mountains (52 percent).

Brescia attracts a lot of traffic from the densely populated province and is one of the areas in Europe with the highest number of vehicles per capita. In 2000, Brescia introduced its Cycle Mobility Plan. This established a cycling network that was extended from 30 kilometres in the 1990s to 115 kilometres. The city has developed a transport plan that specifically works to improve the quality of public transport and enhance sustainable modes in general. These initiatives were received very positively, particularly because they were implemented as part of a participatory and consensus-building process in which citizens felt truly involved.

MUNICIPAL PROFILE

LOCATION

Brescia, Italy

POPULATION

190,000

LAND AREA

90,68 km²

CIVITAS BUDGET

EUR 521,488 (measure budget)

EUR 658,887 (BSM total budget)



BRESCIA IN CIVITAS

Brescia (Italy) 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 (Spain).

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 > About us



© FISCHER KARIN

The public transport system will be completed with a light metro line. Construction began in 2005 and service started in 2013.

Introduction

Many European cities are facing growing congestion. An integrated public transport network can dissuade citizens from the use of private transport. CIVITAS cities have been working for years to maximise the potential of local public transport, and the knowledge shared within the CIVITAS project, especially within the MODERN consortium, was essential for the set up phase of this undertaking. To aid with the linking of the various modes, as well as the technological development of the integrated ticketing systems and smart cards, practical examples have been used as a handy reference.

Brescia has been traditionally characterised by mono-modal means of transport. The realisation of a metro line scheduled for this year, in addition to traditional local PT (namely, bus lines) was considered a good occasion to improve the integration among public and private transport systems. The integration of transport systems was the objective of the so called “Metropackage”, a set of preparatory measures that includes the new ticketing system, the bus network reconfiguration, the

Park & Ride fares policies and the smartphone application “Brescia Mobile Channel”. This new approach allowed the city to actually become a multi-modal reality.

Taking a closer look

With the ultimate aim of strengthening intermodality among different public transport modes, the City of Brescia started developing several research and demonstration activities in 2008. The technical approach consisted of considering both systematic and occasional users through the realisation of two different ticketing systems: season tickets based on contactless smart cards technology (oMnibus Card) and non-season tickets based on “double face” paper tickets. In particular, oMnibus cards allowed for four different season tickets, including local public transport (metro and buses), car sharing, bike sharing, and park & ride. The technological aspect of the project centred on the integration of four different ticketing systems.

The investment in research and technology enabled Brescia administrators to offer citizens improved and innovative services that could better respond to the changing needs of the population. The research plan aimed to identify technical solutions for a large scale application of integrated ticketing. The research activity was fundamental to developing the technical

features of the software/hardware required. It was the first time that new multiservice tickets (both season and non-season) were introduced in the city, upgrading the existing ticketing system for public transport.

This technology is considered particularly innovative in Italy, therefore, the definition of its technical features was quite a sensitive issue that involved not only the administration, but its suppliers as well. On the one hand, the double face ticket development solved the problems of readability by providing two different ticketing systems, improving intermodality for occasional users and optimising the costs of the systems upgrading. On the other hand, the contactless cards were conceived to meet the systematic users’ needs, offering the possibility to manage four kinds of season tickets within one single card, facilitating the tickets validation on board and travel documents charging. At the same time, the implemented technology allows for a potential future upgrade of the ticketing system, moving towards “Near Field Communication technologies” that allows public transport users to pay through their smartphones.

The main activities related to the new ticketing system involved: the development of contactless readers on board, able to identify and exchange information (for contactless card); the installation of contactless rechargers (for oMnibus Cards);



the definition of services for MIFARE contactless new cards and the definition of new special fares for Park & Ride; and the ticket machine software integration for MIFARE contactless mobility cards and for double face tickets.

Results

One of the main results achieved during the measure implementation is the significant improvements in intermodality brought about by the e-ticketing system. As a matter of fact, the CIVITAS initiative facilitated the transition of Brescia from a mono-modal to a multi-modal city.

The realisation of a new prototype in Brescia – the integrated contactless ticketing system – has also been an important goal from a technological point of view and will significantly improve users' multimodal transport needs.

From the administration point of view, these new implemented technologies allowed the city to better manage and plan the mobility services, also thanks to the availability of data concerning users' travel attitudes.

The distribution of new cards for local public transport is considered a major achievement. 1,250 cards were distributed in April 2012 in addition to the 6,000 already distributed to bike sharing users. Card distribution was accompanied by an information campaign to raise awareness on the opportunity offered by the new cards.

From the user point of view, the new cards were well accepted. The acceptance level of the card is shown by a survey conducted in November 2011, where the possibility to pay a EUR 5 symbolic deposit at the moment of the card withdrawal was seen positively by 88.9% of those interviewed.

Thanks to these results, the Municipality of Brescia decided to distribute free oMnibus Card to all citizens older than 16 years (about 100,000) at the opening of the Metrobus service in January or February 2013. The cards will have pre-paid runs for the metro service and free subscription to Bicimia (bike sharing) service.

From a technological point of view, it's important to underline the high reliability of the new contactless card – the number of registered broken cards has been less than 2% of all distributed cards.

Lessons learned

The main lesson learned through this project, and in particular through the implementation of these measures, is that careful planning is vital to obtain effective results.

To implement similar measures, it is recommended to pay attention to the feasibility analysis: a close collaboration with providers is necessary to identify suitable technologies and to develop reliable and fully integrated systems.

The second lesson learned is that the collaboration among stakeholders needs to be seen as a process that happens over time. Even if the decision making process might, some time, take longer than expected, shared decisions are the only proper basis for effective improvement.

The third lesson is about the importance of effective dissemination campaigns aimed at sensitising and informing end users, and spreading information throughout the city. Targeted information campaigns to reach different end users, public events to sensitise stakeholders and politicians, and meetings with the technicians involved in the implementation are all essential to the achievement of successful results.



oMnibus card: one card, four ticketing systems



In the end, the main lessons learned from the continuous cooperation within CIVITAS are that innovative tools can really make the difference when facing new problems, and that knowledge sharing is essential for the effective implementation of ideas.

Brescia's experience could be easily replicated elsewhere; in doing so, it will be important to carefully analyse needs and possible solutions, to constructively involve all stakeholders, to carefully define shared priorities, and to disseminate widespread information to all the relevant beneficiaries pointing out the potential for improvement brought by the new system in daily life.

Upscaling and transferability

The measure implementation took into account all the urban and suburban territory, not only for local PT services, but also for bike sharing and parking. All existing small payment parking terminals (ticketing machines) have been equipped with the new validation support in order to be used with the new cards.

The service coverage included the whole municipality and 14 suburbs around Brescia; the cards were distributed to all interested local public transport users. Nevertheless, a massive distribution of the new integrated cards took place in January/February 2013 in order to promote the new integrated transport services.

Future activities of the ticketing system will consist of a promotional campaign, in light of the metro start up, in order to spread information about the new integrated card and Park & Ride service. It will be important to inform citizens about the opportunity of charging the new card with the metro subscription, to increase acceptance levels in Brescia of integrated mobility systems.

Technological options explored for the ticketing system are of high interest for other operators. The flexibility of the ticketing system allows transferability to other Local PT services that could be integrated at a wider territorial scale, as well as to other local and regional operators.

Budget and finances

More than half of the budget was spent on the purchase of durable equipment such as Automatic Vending Machines and the development of "Mifare" technology.

The rest of the budget was spent on personnel costs.

No further funding was provided.

Key contacts

Severo Pace
City of Brescia
[space@bresciamobilita.it]

References or sources

www.civitas.eu > Cities > Brescia



Acknowledgements

A first thanks goes to the Brescia Mobilità group, for their internal collaboration. A special thanks goes to Brescia Trasporti and SINTESI for the creation of the OmniBus Card and to the Municipality of Brescia for their support, including economic, to the integration of BICIMIA's service extensions.

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

