



CIVITAS

Cleaner and better transport in cities

ARCHIMEDES

CASE STUDY

PUBLIC TRANSPORT INFORMATION FOR BLIND AND PARTIALLY SIGHTED PEOPLE IN BRIGHTON & HOVE



TRANSPORT TELEMATICS



BRIGHTON & HOVE

MUNICIPAL PROFILE

LOCATION

Brighton & Hove, United Kingdom

POPULATION

250,000

LAND AREA

87 km²

CIVITAS BUDGET

EUR 2,577,900

This measure aimed to improve accessibility and public transport provision for people who are blind or partially sighted in Brighton & Hove by providing audio devices, known as react units, or talking bus stops, to relay the information displayed on real time bus information (RTI) signage.

Municipal context

The city of Brighton & Hove is a thriving “city by the sea” and the largest urban centre on the south coast of Britain lying approximately 50 miles south of London and attracting in excess of 8 million visitors a year.

The city has an estimated population of 250,000 and is a popular base for London commuters, benefitting from excellent communication links.

The city is a major tourist, leisure and conference destination and hosts a year round calendar of festivals and events. Tourism supports nearly 12 percent of the city’s full time equivalent jobs. The city has two universities with 32,000 students, many of whom stay to live in the city post graduation.

These facts, together with key regional road corridors coming into the city on a Victorian road network and constraints of Regency buildings, the South Downs and the seafront, bring specific challenges creating high levels of traffic congestion and air pollution. The vision for the city as a place with a co-ordinated transport system that balances the need of all users and minimises damage to the environment is key.

The transport strategy to deliver that vision was developed within the framework of a local transport plan. The CIVITAS ARCHIMEDES measures were therefore also developed to support the vision and have a collective aim to reduce road traffic, address congestion and improve air quality by using innovative tools and techniques.



BRIGHTON & HOVE IN CIVITAS

Brighton & Hove (United Kingdom) participated in CIVITAS ARCHIMEDES, an innovative collaboration between the cities of Aalborg (Denmark), Brighton & 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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As winner of National Transport Authority of the year in 2005 and 2010, and runner-up in the CIVITAS 2012 City of the Year Award, Brighton & Hove has a reputation for innovation and delivering leading edge solutions.

A selection of user comments is provided below:

“I just wish other councils such as East Sussex would look at installing the system. I think the RealTime Information when spoken is often lost in the noise of the traffic, but overall I think it is great and I find the system really useful.”

“The system works for me very nicely but I have heard it in other areas and it has a real speak voice which sounds a lot clearer.”

Expand to “as many [bus stops] as possible.”

“I only wish that other local authorities including my own local authority come down

to Brighton to see just how valuable this service is and follow your lead, I envy the [blind or partially sighted people] that live in Brighton, they are extremely lucky to have you as a local authority and a service like this. Most of us [blind or partially sighted people] in the rest of the country are still very much struggling when [it] comes to using buses.”

“The idea is great and it helps but it is not reliable enough.”

“Thank you very much.”

Introduction

In 2007 Brighton & Hove became the first UK city to introduce “talking bus stops” for blind and partially sighted passengers. React units were developed with the Royal National Institution for the Blind (RNIB) which linked into the city’s real time bus information system.

This has made a huge difference to users, giving them greater confidence and independence when travelling by bus. Users have a battery-operated key fob which alerts them when they are near one of the talking bus stops. By pressing the fob the bus stop ‘talks’ to them, giving them details of which services are due, and where they are going to. The bus stops have won several national awards for innovation and promotion of accessibility.

CIVITAS helped to fund facilities for a further 12 talking bus stops and to provide a further 200 key fobs to enable greater access and increase users.

There are now 42 “Talking Bus Stops” in the city.

In addition to this, the initiative also allowed a full evaluation of the scheme to be conducted, exploring the drivers and barriers, and recording the lessons learned. These enhancements were



designed to inform the potential expansion of the scheme to other cities.

Taking a closer look

Stage 1: React Location (April – May 2009)

- Information from the existing RNIB react units on usage and discussions with stakeholders resulted in a number of additional locations being proposed.
- The recommended sites for new react units were circulated to the blind and partially sighted working group, comprising of members from the city's blind and partially sighted community, a member of staff from the BHCC's access team and a member from a local blind and partially sighted organisation for comment.
- The group was then brought together and asked to comment on and agree the final locations for the 12 new units.

Stage 2: Formation of orientation messages and ordering of units (June – July 2009)

- Once the final shortlist for new units had been agreed, work was undertaken in conjunction with the user group, project working group and the RNIB to agree on the content of the React unit orientation/location messages for each unit.
- Once finalised, the order for the new units was placed. The messages were then recorded by the unit supplier.

Stage 3: Installation of React units (September 2009 – March 2010)

- The installation programme was agreed with the contractor and the first React unit was installed in September 2009 with the remaining 11 following between January and March 2010.

Stage 4: Distribution of key fobs (January – March 2010)

- The key fobs were passed to the Brighton & Hove City Council's access team for distribution within the blind and partially sighted community. Key fobs were offered to those for whom they identified talking bus stops as being a useful service.
- This stage of the measure was accompanied by promotion of the scheme. The project was promoted through a number of press releases and through the Brighton & Hove City Council's website and travel information website www.journeyon.co.uk. The council also produced a leaflet which was widely distributed across the city. Further promotion took place at various events in the city.

Stage 5: Demonstration, monitoring, and evaluation (March 2010 – July 2012)

- Following the installation of the react units and distribution of the key fobs, a user survey and a general public survey to test awareness were conducted in summer 2012.
- This sought to examine how awareness and usage of the scheme has changed since a user baseline survey was conducted in March 2008, and the baseline public survey conducted in November 2009.

The measure contains a wide range of innovative aspects:

- The measure was the first in the UK to provide orientation and real time bus information in an audible format for blind or partially sighted users.
- The measure incorporated the already successful real time passenger information system with the well established RNIB React orientation system.
- The measure aimed to improve the accessibility of real time information for those who are blind or partially sighted.
- The measure improved the working partnership with the RNIB, colleagues in the adult social care department and the local and regional blind/partially sighted community.

- The measure provided equipment which allows blind or partially sighted users to access real time information and encourage them to use public transport in an attempt to promote modal shift.

Results

A survey was undertaken in March 2008 with users of the talking bus stops prior to the CIVITAS intervention which assessed the impact of an initial trial prior to CIVITAS. This survey was repeated in July 2012 to assess the impact of the CIVITAS project. The first survey received 23 responses and the second 10 responses, so the low response rates do mean that the results need to be treated with caution. Nevertheless, the indications are that the measure has had a positive impact.

Before the scheme was introduced, 30 percent of respondents used the bus 3-5 times a week which rose to 47 percent following the pre-CIVITAS trial. In 2012, this had risen to 60 percent, whilst there was a 25 percent increase in those travelling by bus more than once a week and 20 percent said they now use a greater number of buses or routes. It is worth noting that these figures may well be higher for a city beginning with no talking bus stop infrastructure, as shown by the results of the pre-CIVITAS trial in Brighton & Hove.

The figures for usage are positive. 78 percent of respondents found it "difficult" or "very difficult" to obtain bus information prior to the introduction of talking bus stops, with this falling to 13 percent following the initial intervention and zero percent by the end of the CIVITAS intervention.

This can be directly attributed to the talking bus stops as 70 percent now say it is their primary source of bus information. Although it has not been possible to provide downloaded information from the react units, an indication of usage can be provided by data from a unit installed in the CIVITAS corridor (Eastern Road, Brighton) before the project commenced. This indicates that information was requested on 23 occasions during the first five month period (5 May 2007 – 5 May 2008), representing 0.15 requests per day or 0.6 requests for every one user registered at this time. During the five month period to 5 May 2009 the number



of requests had risen by over 100 percent to 51, representing 0.34 requests per day or 0.8 requests for every one user registered at this time. Were data to be available for the CIVITAS-funded units, a direct comparison with those installed previously would not be appropriate owing to the differences in bus frequencies and other characteristics between bus stops.

- Given the results presented in this section, it is unsurprising that satisfaction with the service is high, with 100 percent of respondents requesting that it be rolled out to further locations in the city and beyond. This can be elaborated upon further by reference to the comments offered by users which are overwhelming positive, though suggestions for improvements have been put forward such as reliability and clarity.

Lessons learned

The presence of a local society representing blind and partially sighted people in the immediate area would contribute greatly to the likely success of the project. Coordination with this society is very valuable to planning, uptake and success of such measures.

There is a need to consider the full journey and the system would benefit from an extension of audio visual information available on buses in order to help people disembark at the correct stop (complementing the units at bus stops which help them board the correct bus).

Consideration should be given to expanding the system for use by those with other forms of disability such as learning difficulties. This will increase uptake and reduce the cost per person of the infrastructure.

If the measure is replicated, there is an opportunity to offer it to a greater range of people and groups who would benefit from the technology. This may include the elderly and people with learning difficulties or other forms of disability.

There is scope to further develop the system to enable compatibility with smart phones and other personal electronic devices which would reduce the need for the key fobs and their distribution.

Success is dependent on good communication with working and user groups together with a good level of promotion to ensure that there is awareness of the system.

Undertake a number of trials by activating fobs at new units is essential in order to be confident that the message is being triggered within a reasonable distance of the bus stop and that the audio is clear. This is important as an initial poor experience of the technology by a first time user is likely to dissuade them from using it again in the future. As such, Brighton & Hove City Council avoided promotion of the new React units until software problems had been rectified which positive results from the user survey would suggest was the correct approach.

Upscaling and transferability

Fobs will continue to be issued to new users who have applied or the relevant bodies have identified as being likely to benefit from the system.

Further expansion of the system is to be part of a forthcoming project. A GPRS upgrade to the city's RealTime Information system is also to take place, as it currently operates using outdated technology which is limiting its expansion.

Brighton & Hove City Council will be working closely with the RNIB to determine how the development of talking bus stops in Brighton & Hove is continued beyond the CIVITAS project.

Budget and finances

The combined project capital and maintenance costs for the implementation of this measure came to EUR 49,916.

Key contacts

Tom Campbell
Site Manager, CIVITAS Plus Archimedes Project
Brighton & Hove City Council
[tom.campbell@brighton-hove.gov.uk]
Tel: 00441273 293328

Debbie Reed
Local Dissemination Manager, CIVITAS Plus Archimedes Project
Brighton & Hove City Council
[debbie.reed@brighton-hove.gov.uk]
Tel: 00441273 290367

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Brighton & Hove City Council measure evaluation report



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Sean Carroll
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Gloria Spezzano (ICLEI)

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