



POLICY LEARNING IN INFORMATION TECHNOLOGIES  
FOR PUBLIC TRANSPORT ENHANCEMENT

## GOOD PRACTICES – PUBLIC TRANSPORT PRIORITY SYSTEMS

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# REAL TIME PASSENGER INFORMATION SYSTEM, BUS PRIORITY AT SIGNALS, PUBLIC TRANSPORT MOBILE APPS, CITY ACCESS CONTROL. SMART CARD

### General information

#### **Description**

The City and County of Swansea has introduced an urban transit bus scheme in partnership with First Group. Swansea has implemented a range of infrastructure measures that have been supported by information and bus priority measures to maximise the benefits of the scheme. As part of the scheme visually impaired users can trigger sign information via the use of fobs and this system has been extended to the new bus station and aids navigation around the building.

#### **Background and Context**

The City and County of Swansea is a unitary civil authority in south west Wales. The city urban population is 170,000 residents with the wider authority administrative area covering a total population of around 300,000. Swansea is the second city of Wales and is also the gateway to the more rural counties of Pembrokeshire and Carmarthenshire. It has good transport links to the Welsh capital, Cardiff.

The city highway network has a number of arterial routes which are generally congested during the peak periods. Swansea was severely damaged during the second world war and its layout reflects the substantial rebuild in the 1950's. In recent years the city center has been going through a £1 billion redevelopment.

The delivery of the scheme is a public / private partnership where the infrastructure has been delivered by the Highway Authority and the bus service has been delivered commercially by First Group.

Following a 3 year implementation phase the Metro scheme has now been operational since 2009. The route covers a distance of approximately 8.3 miles connecting The University and Singleton Hospital to the south and Morriston to the north and travels through Swansea city centre. Significant alterations to the highway network were made to provide high quality bus priority together with the construction of 2 sections of dedicated bus only route which bypass particularly congested sections of highway in Hafod and Dyfatty.

As part of an arrangement with First Group, First committed to the purchase and operation of the ftrMetro street style buses to operate on the route. These operate a 12 minute frequency during the day on Mondays to Fridays and 15 minutes on Saturdays.

## **Policy design details**

### ***Policy Design Steps and Timing***

Bus priority has long been a political priority in Swansea and they were early implementers of bus priority at traffic signals.

The City and County of Swansea prepared a Local Transport Plan in 2000 which set the Council's sustainable transport policies including the promotion of public transport.

One of the themes in Swansea's Community Plan (2004) (Ambition is Critical) was developing sustainable transport and accessibility including the provision of high quality bus services.

### ***Actors Involved***

Welsh Assembly Government – provided the funding for the scheme (European Objective One and Transport Grant)

City and County of Swansea - Highway and Planning Authority are responsible for overseeing the design and implementation of the infrastructure.

First Group - Bus operator – First Group identified that they could deliver a service commercially. They supply the vehicles and operate the service.

Arup - Consultant - Undertook the feasibility study of the service and undertook the outline infrastructure design of the bus priority measures

### ***Decision Making Process***

Swansea Council Performance Review Board looked at public transport provision in the City in 2003.. This review identified that there would be a demand for a cross city service.

This coincided with a review by First Group of their operations in the area. First then approached the Council with a view to investigating the possibility of bringing their ftrMetro service to the City. They considered that a route across Swansea would potentially be suitable for a bus rapid transit system providing links between key attractors including two major hospitals, the University, Railway Station, City Centre, Bus Station, Civic Centre and Liberty Stadium.

Swansea was awarded funding for the scheme through the Welsh Assembly Government in 2005. Arup were commissioned to undertake the wider feasibility study and to bring forward the principles of bus priority measures for a cross Swansea system. The results of this were then progressed to the full scheme.

## Implementation details

### ***Implementation Steps and Timing***

The infrastructure was implemented during a 3 year period from 2007 to 2009 in a 2 phase program.

The implementation required significant network alterations with the introduction of a bus only section and altering junctions to maximize the bus priority. There were considerable local concerns about some of the proposed measures. Extensive consultation was therefore required, which added to the original time scales.

The construction was delivered in two phases. The first phase focused on the city centre where it offered the widest improvements to a large number of bus services and this was complete in 2008. The second phase completed the works to the rest of the corridor and these were complete towards the end of 2009.

The first service used the full system in late 2009.

### ***ICT/Infrastructures needed***

The buses were purchased by First Group. The ftrMetro vehicles were installed with the Wright buses telemetric package which includes a Vix Real Time Passenger Information (RTPI) system that is used to trigger priority at the traffic signal junctions. Onboard the buses have CCTV for security and there are information screens that show the next stop information. The system also has audio messages that are either triggered by the on-board customer host or via the RNIB (Royal National Institute for the Blind) fobs.

The shelters at the main bus stops and key interchange points include real time passenger information displays and the Vix RTPI system also offers real time information over the web and via SMS messaging to mobile phones.

The scheme involved a significant adjustment to the highway infrastructure to facilitate the ftrMetro track over the 8.3 mile route length. This has included bus only lanes and alterations to junctions to allow priority for buses.

There were significant alterations to the city center road layout, including the removal of two main roundabouts and pedestrian subways and replacement with signal controlled junctions. This was to minimize delays and to ensure that reliability of service was at the highest level.

The ftrMetro vehicles supplied by First Group were articulated buses that have been designed to maximize the user experience whilst on board by creating a car like environment.

### ***Human Resources***

4 Swansea officers were involved with managing and assisting the delivery during the 3 year implementation stage of the project. The on-going support from the Swansea officers has reduced since the system has been operational.

### ***Monitoring Procedures***

First Group monitor the patronage and reliability of their service. Some post implementation customer satisfaction surveys have been undertaken and there are regular meetings with the Council to monitor the on going performance of the scheme and how it can be developed further.

## Supporting Mechanism

### ***Awareness/Information Campaigns***

When the scheme was opened there was a local media campaign to raise awareness of the scheme and the benefits. The service has also been given a distinctive livery which is carried through onto the marketing material, roadside infrastructure and signage thereby assisting in raising the profile of the project.

## Results

### ***Expected vs Actual Benefits***

It was predicted at the beginning of the project that implementing the scheme would allow a 20 minute route saving across the whole of the route.

***This has been achieved and considerable journey time savings have been made by removing the need for passengers to change buses in the city centre when travelling across the city. The Metro service continues to operate fully commercially with no revenue support from the authority whereas other bus services have been reduced in frequency, periods of operation have been curtailed and some have required financial support from the Council.***

### ***Quantitative Results Achieved***

It has been reported that there were 1 million passengers within the first 9 months of operation. The service operates commercially with no subsidy from the Council.

Customer satisfaction with the quality and reliability of the service is very high.

Cross city journey times have been significantly reduced.

### ***Qualitative Results Achieved***

A user survey was undertaken in 2010 by the County and City of Swansea with a poll of users attitudes to the service. The following key findings have been reported.

92.2% of users surveyed thought that the ftr route journey time was very or fairly good.

21% thought the service encouraged them to use their car less.

85% of users thought the information provided by the service was very good or fairly good.

## Key Considerations

### ***Lessons Learned***

The automated messages which are triggered by the RNIB fobs can be overridden by the customer host on the bus. If the scheme were to be undertaken again then the units would not allow the override function as some drivers / passengers are annoyed by the announcements and the service is turned off.

### ***Critical Success Factors***

It is thought that the strong branding has assisted in the success of the project.

Clearly identified roles for each party and good communication between the partners and the Welsh Government over funding bids and the phasing of the project were essential.

A Partnership Agreement has meant that both parties have given a formal commitment to meeting clearly defined objectives.

***Taking a wider approach to the infrastructure measures to provide a comprehensive system of priority has meant that a high level of success has been achieved.***

### ***Transferability Considerations***

The scheme demonstrates the successful partnership of public and private sector to provide a high quality public transport system.

Having clear roles and a good contract has enabled both parties to invest with confidence and a good working relationship which has ensured a successful scheme.

Good product and strong branding ensured ridership and financial success.

### ***Up-scaling Considerations***

The key factors are the public transport demand for a service and securing the funding for the necessary priority measures to deliver a high quality scheme.

### ***Contact***

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