



POLICY LEARNING IN INFORMATION TECHNOLOGIES
FOR PUBLIC TRANSPORT ENHANCEMENT

GOOD PRACTICES – PUBLIC TRANSPORT PRIORITY SYSTEMS

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BUS LANE ENFORCEMENT

General information

Description

Bus lane enforcement uses Closed Circuit Television (CCTV) and Automatic Number Plate Recognition (ANPR) to enforce the use of bus lanes and bus only gates in Reading and discourage contraventions by general traffic. Bus lanes can be used by buses, taxis, emergency vehicles and cyclists but not private hire vehicles.

There are 23 enforcement sites in total of which half are automated using ANPR and half are attended enforcement using CCTV. In addition Reading has a camera car, introduced in 2012, which is used to identify parking offences such as parking in bus lanes.

Reading is able to use their civil enforcement powers to issue penalty charges to the owners, or the confirmed driver, for bus lane and bus gate contraventions of the Traffic Regulation Order.

The revenue raised from the payment of the fines is currently around £3.5m per annum which is used to support the free provision of 'dial a ride' bus services within Reading.

Background and Context

A strong policy of investing in public transport and public transport priority over recent years has resulted in Reading having more bus lanes per kilometre of road than anywhere else in the UK. Whilst enforcement of the bus lanes was under the jurisdiction of the police they were periodically enforced, but it was not possible to prevent contravention of the bus lanes and bus gates when the police were not present. This use of the bus lanes by traffic reduced the benefit of the investment in the bus lanes to public transport.

An Act of Parliament in 2000 enabled the powers for civil enforcement for certain traffic offences, including bus lane enforcement, to be transferred to Highway Authorities. However it was not until 2005 that the necessary supporting legislation

came into place to enable it to be done and Reading was one of 10 authorities who worked to implement this and in 2006 were the first authority to deliver bus lane enforcement outside of London.

The original enforcement used CCTV video and then digital recordings. This was known as attended enforcement and involves the enforcement officers viewing the full recordings from the CCTV on fast forward and identifying contraventions which were then passed on to the enforcement team who issued the fixed penalty notices. The fixed penalty notices are currently £70 or £35 if paid early.

Reading Borough Council (RBC) has been switching to an automated system since 2008 and around a half of the sites now use Automatic Number Plate Recognition (ANPR). These automatically identify a vehicle in the bus lane, check it against a 'white list' of approved vehicles and if it is not approved it sends back the image of the number plate and a 60 second video recording of the offence covering 30 seconds before and 30 seconds after. The video recording is to ensure that there was not a legitimate reason why the vehicle moved into the bus lane, for example moving over to create space for an emergency vehicle coming the other way in the centre of the road. All video clips still require manual checking before an enforcement notice is issued.

Policy design details

Policy Design Steps and Timing

Reading Borough Council's policy closely followed the national policy to decriminalize bus lane enforcement in the 2000 Act. Policy implementation timing necessarily had to follow the national government timing for putting the instruments in place to enable the Act to be delivered. This led to RBC having their policy in place before 2005 and led to RBC being the first to implement outside of London.

Actors Involved

The main parties involved include:

- DfT – Advisory / expert role on the implementation of the Act – they took the lead role in the early days and then stepped back as the highway authorities took on the role of enforcement and the Adjudication Service was set up.
- Adjudication Service - was formed as part of the implementation of the Act to deal with bus lane enforcement appeals. It was based on the existing Parking Appeals service whose legal powers were extended. This service consists of people of prominent standing in the public arena such as ex-magistrates, ex-army officers etc.
- Vehicle Certification Agency – Government Agency responsible for the type approval of the system including cameras and back office systems for the enforcement of bus lanes. System type approval ensures: minimum quality standards of images recorded; security of personal data; and accuracy and reliability of systems to avoid incorrect notices being issued. They are responsible for approving the automatic ANPR system.
- Reading Borough Council - Highway Authority responsible for the civil enforcement of bus lanes and bus gates.
- JAI streetwatch – supplier of the original video capture system to meet DfT type approval – system had to time / date and unique identifier stamp each frame of the video.
- Tyco – supplier of CCTV and ANPR cameras for JAI Streetwatch and Zenco back office image processing and enforcement management systems.

- Zenco – manufacturer of the type approved bus lane enforcement system for ANPR based enforcement installed in 2008.
- Driver and Vehicle Licensing Agency (DVLA) – UK national body which holds all the records of number-plates and vehicle ownership information which is used by RBC to issue civil enforcement notices.

Decision Making Process

The decision making process was through meetings where the 10 authorities, Adjudication Service and Highways Agency came together.

Implementation details

Implementation Steps and Timing

The implementation in Reading was undertaken in 2006 with the system live in September 2006. Initially an attended system was implemented using Tyco CCTV cameras and a JAI Streetwatch image capture system in accordance with specifications under the 2005 statutory instrument. Originally videos were used to record the images and then these were switched to digital DVD recordings.

In 2008, with the superseding of the 2005 statutory instrument, the Vehicle Certification Agency made it possible for Reading to implement the Zenco ANPR digital data capture systems and this started the process of converting to digital in Reading.

As digital is more cost effective and it is quicker to identify and process contraventions it has been possible to extend the system with the same number of staff. The system includes a 'white list' of approved vehicles which are stored in the cameras and these are not sent to the back office. There is a further white list in the back office to allow for vehicles, such as maintenance vehicles with approval to be in the bus lane that day, to be ignored by the system.

The current situation is that Reading are currently operating 12 CCTV attended cameras and 12 ANPR cameras. A further 6 ANPR cameras will be installed during the later months of 2013 leaving only 12 bus lanes / bus gates with no enforcement.

ICT/Infrastructures needed

The ICT required for the ANPR based system have to be approved by the Vehicle Certification Agency and include:

- Automatic Number Plate (ANPR) Cameras – Type approved cameras on street which include a 'white list' of approved vehicles to travel in the bus lane. The camera records the vehicle number plate and a video clip so that the context of the violation can be manually checked before any enforcement notice is issued.
- Communications between camera and back office. RBC is currently using 3G mobile services for these, but any reliable digital communications can be used.
- Back office enforcement system – Provides an interface for the traffic enforcement officer to review each potential contravention and identify those which require a notice to be issued. It also provides a secure store of the evidence of the contravention. The notices are printed and issued through the existing parking enforcement system.

Infrastructure is minimal as it requires an ANRP camera, a pole (where it cannot be fitted to existing infrastructure) and a power supply. The supply, installation and commissioning of the fully compliant ANPR equipment is around 15,000 Euro's per site. In Reading, as the back office system is Zenco, Zenco cameras must be purchased to ensure that the system is as Type Approved although Zenco do not sell

their cameras direct and there are a number of resellers of these cameras who can supply and install.

Human Resources

RBC started their attended CCTV system with 2 part time members of staff (equivalent to one full time member of staff) to review the video from 3 cameras plus support from the parking enforcement team. This has increased to 4 full time members of staff + supervisor (part time) for the current system + 2 additional members of staff in the parking enforcement team providing part time support for the appeals process. Increasing automation has enabled increased ANPR coverage without a change in the number of staff.

Monitoring Procedures

RBC publish annual reports on number of offences committed, the number of payments made, including the proportion paid early, the number of reduced cost early payments, the number of challenges to the enforcement and number of challenges upheld.

Supporting Mechanism

Awareness/Information Campaigns

There is clear signing of bus lanes and bus gates on the highway. Different colour surfacing is used as well as road side signs and enforcement camera signs. In addition there is clear information on the council's website and articles were published in the local press when it was introduced.

Marketing of what is done with the revenue has ensured public support with the ring fencing of money for 'dial a ride' transport services. This funding is making a big difference to these services for the mobility impaired and elderly where funding cuts have meant that other authorities are struggling to support these services.

Results

Expected vs Actual Benefits

The policy has been effective in removing the main infringement of traffic into bus lanes and through bus gates and has therefore been successful.

In addition significant revenue continues to be made from the enforcement. At the beginning of the scheme and when new cameras are added there are a high number of locals who get caught by the scheme, but this rapidly falls off over 8 – 12 months as generally people do not re-offend. After that the majority of the contraventions are visitors to Reading.

Quantitative Results Achieved

- In 2011/12 approx £3.5m was raised for the funding of the 'dial a ride' scheme.
- The first bus lane penalty charge notice (PCN) was issued in September 2006.
- Between Sep-06 and Apr-13 over 270,000 bus lane/gate PCNs have been issued.
- In 2011/12 only 1.02% of bus lane/gate PCNs were appealed, of which only 7% were overturned.

Qualitative Results Achieved

There is no longer queuing in bus lanes by general traffic on the approach to junctions. This has not been specifically measured but has been observed. Also this leads to improved bus journey times and a clear message that buses have priority over traffic in Reading.

Key Considerations

Lessons Learned

For a successful scheme with public and political support it is important that the monies raised can be demonstrated to be put to good use and not just go into a central local authority budget.

The bus lanes and bus gates need to be clearly signed to demonstrate that the enforcement is fair and that this is not just a revenue generation scheme.

Automated systems using ANPR maximize the cost effectiveness of the scheme and enable expansion of coverage without increasing the size of the team. Full automation may be technically possible which would remove the need for any manual checking of the data however this would result in more errors and this manual check requirement is part of the legislation in the UK.

Primary Obstacles

The primary obstacle is the need for legislation to enable authorities to be able to undertake bus lane enforcement.

There is strong public opinion against anonymous fines through the post in the UK (too much CCTV - 'big brother') rather than a discussion with an enforcement officer and this has to be addressed through 'selling' the benefits of the scheme and the responsible use of the monies raised.

There is a local political argument that with a large amount of revenue which is allowed for in the next year's budgets that enforcement becomes a financial target. There is a political argument that despite fully according with the design requirements that RBC should be taking more steps to stop people contravening.

Critical Success Factors

The main success of the project was the DfT support for making bus lane enforcement a civil offence and the DfT support for the coordination of the Highway Authorities in setting up the technical and procedural requirements for implementation.

Transferability Considerations

The key considerations for transfer are:

- The legislation for enforcement of bus lanes and who has the powers to enforce. It does not necessarily have to be the Highway Authorities who implement the systems.
- Public and political attitudes to fiscal penalties and whether the 'ring fenced' approach in the UK will translate into local policy.
- The standards for markings and signing of bus lanes and bus gates to ensure that enforced areas are clear. UK standards may not translate directly but there will be equivalent national standards.
- The technology for enforcement. There are varying attitudes to CCTV and ANPR technology across Europe which could effect transferability.

Up-scaling Considerations

Easy to upscale and add enforcement cameras to the system. Staffing needs to increase but cost of staffing is low compared to the value of the income to the local authority.

Contact

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