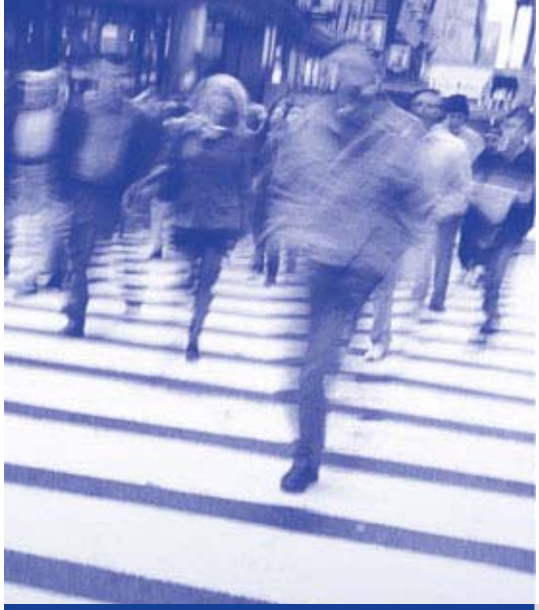

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Measure Evaluation Results

BOL 8.4 Mobile Gates to Control Reserved Bus Lanes

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Executive Summary

With the measure 'Mobile Gates to Control Reserved Bus Lanes' Bologna decided to improve its existing electronic enforcement system that monitors intrusion of bus lanes with a mobile system. The objectives of the measure were to reduce violations on the entire bus network and improve the public transport offer. Intelligent Transportation Systems (ITS) instruments can provide concrete and efficient solutions to traffic problems, in particular regarding the unauthorized use of reserved bus lanes. With this measure the public transport operator in Bologna (ATC) wanted to develop a mobile solution that can be easily placed on different stretches of bus lanes (for a limited time) and removed to control bus lanes in the entire public transport network. Technically, the device is located via GPS and the position data recorded automatically so that the place of violation cannot be rejected when notified. In this way it would be possible to have systematic checks in different places of the city in order to create a very strong deterrent for using reserved bus lanes by fines´ distribution in case of unpermitted intrusion.

From the technical point of view there were no particular problems and the technical test was successful. However, the measure **encountered legal barriers**. The Ministry of Transport (which is responsive to give permission to the municipalities for the use of enforcement cameras) did not authorise the deployment of mobile cameras as the system is not compliant with the national legislation. Indeed, only the use of fixed control devices for bus lanes control are legally allowed and legal extension for the use of mobile devices are not foreseen in a the near future. Under this condition the measure was stopped in 2009. .

From this experience **the main recommendation** is to work on a common European legislation in order to overcome such barriers and improve the control of bus lanes to the benefit of better public transport services. Indeed, in many countries national law does not regulate the use of mobile monitoring cameras, despite the availability of the technology and the proved theoretical efficiency of this type of innovative system. It is therefore necessary to elaborate a European regulation/directive that would be applicable in all European country.

A Introduction

A1 Objectives

High level objectives:

- Improve mobility conditions

Specific measure objectives:

Objective 1: Improve public transport regularity

Objective 2: Create an ITS mobile instrument to control bus lanes respect in order to cut down violations in the entire city

A2 Description

ITS instruments can provide concrete and efficient solutions to traffic problems, in particular regarding the unauthorized use of reserved bus lanes. With this measure ATC wants do develop a portable solution that can be easily placed (for a limited time) and removed to control bus lanes. The random controls in the network of bus lanes will create a strong deterrent.

Feasibility study:

Analysis of legal and authorization aspects for the system activation and use

System design:

Realization of mobile electronic gates: equipments with two characteristics:

1. able to perform the requirements of image capturing, plate recognition, white list check, plate and significant data (date, time, place) storage for fine notification;
2. small size, easy to move in order to activate in different places.

The device is located via GPS and the position data recorded automatically so that the place of violation cannot be rejected when notified. In this way it would be possible to have systematic checks in different places of the city in order to create a very strong deterrent for using reserved bus lanes.

The planned activities are:

- designing and prototyping;
- realization of 2-3 electronic mobile gates;
- testing, calibration and tuning;
- start-up and activation.

B Measure Implementation

B1 Innovative Aspects

Use of new technology: first national application of mobile equipment to control bus lanes.

B2 Research and Technology Development

From the technical point of view we don't find particular problems and the technical test was successful.

The measure met several legal burdens. After an internal analysis carried out by the local municipal police, it was asked to the Ministry of Transport the authorisation to deploy cameras (the Ministry is the one entitled to authorise the municipalities to the use of enforcement cameras).

The answer of the ministry was negative as the actual system is not compliant with the national legislation therefore it cannot be used for enforcement.

The legislation provides only the use of fixed control devices for bus lanes control and does not foresee the use of portable devices.

B3 Situation before CIVITAS

The access control cameras with Automatic Number Plate Recognition (ANPR) system have been progressively implemented in the city since 2003.

In order to improve the quality of public transport in Bologna, ATC in cooperation with the Municipality created about 40 km of bus lanes.

It is clear that the efficacy of such a measure is connected with systematic control actions in order to prevent violations. Now eight fixed video enforcement gates have been installed; as a consequence it was possible to decrease the access in bus lanes by non authorised vehicles by about 70%.

The results are important, but it emerged that car drivers' behaviour has changed and they now plan their trips in order to avoid electronic gates, but in the meanwhile they run on stretches of bus lanes known to be free from electronic gates.

In short, it is common knowledge that there is no control where electronic gates have not been installed.

B4 Actual Implementation of the Measure

The measure was stopped after the feasibility study and technical analysis.

Stage 1: Feasibility study and technical analysis *(March 09 – July 09)* A study was conducted to verify the feasibility of the system:

From the technical point of view there are no problems in implementing the system as described in the section "A". The criticalities concern the legal aspect: a portable system is at the moment not compliant with the current legislation that does not foresee the possibility of using mobile equipment to control bus lanes.

Stage 2: the measure was stopped at the end of 2009.

B5 Inter-Relationships with Other Measures

Not applicable.

C Impact Evaluation Findings

Not applicable because the measure was stopped.

D Process Evaluation Findings

D1 Deviations from the Original Plan

The measure was stopped after the feasibility study.

D2 Barriers and Drivers

D2.1 Barriers

Preparation phase

The measure met several legal burdens: after an internal analysis carried out by the municipal police concerning the legal procedure needed to realize and activate the system, the Ministry of Transport was asked for the authorisation to deploy cameras (the Ministry is the one entitled to authorise the use of enforcement cameras).

The answer of the ministry was negative as it considers the actual system is not compatible with the current legal situation and can thus not be used for enforcement.

The legal situation only allows the use of fixed control devices for bus lane control and does not foresees the use of portable devices.

D2.2 Drivers

Not applicable.

D2.3 Activities

Preparation phase

- **measure stopped** – Measure was stopped after the feasibility analysis.

D3 Participation

D3.1 Measure Partners

- **ATC spa –** local transport company
- **Comune di Bologna**

Comune di Bologna and ATC developed the feasibility study together.

D3.2 Stakeholders

- **Public transport company (ATC)**
- **Municipality**

D4 Recommendations

- **Common European legislation**: In many cases the national law of the single countries does not regulate the use of this kind of innovative system. Hence, the application of the technology is not possible due to this legislation defect. The

realization of these kinds of systems requires a European regulation/directive that should be adopted from each European country.

D4.1 Recommendations: Measure Replication

Not applicable.

D4.2 Recommendations: Process (Related to Barrier-, Driver- and Action Fields)

Not applicable.