

RTD Fact Sheet Template

Pricing and monitoring policy for parking	
Reference Measure	BOL 3.2 Pricing and monitoring policy for parking
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Context and Purpose

The R&D activity is carried out within the measure 3.2 whose aim is to improve parking policies optimizing the use of public spaces on urban streets. Urban space is a limited resource, and parking rules (i.e. level of fares, categories allowed to enter in the Limited Traffic Zones) can be a very effective “tool” to drive people to use it just for the time they really need. Enforcement activity is necessary to support parking policies and let them fully achieve their goals.

The technological update was decided to give operators stronger tools to accomplish their assignment. Furthermore, a general system upgrade was meant to be done: a central management of data can make the controls easier and more punctual, and data collected can give important feedbacks on the use of the streets. All data collected, through several procedures can be used, for different purposes, either for on-field operations or for central management.

Description of RTD Activity

Several activities have been carried out to reach the general target. The common goal was to adopt tools and put them together to have integrated information and manage them in more effective way.

New fares were set in order to discourage citizens to leave their cars in congested streets longer than necessary.

Consequently parking tickets have been changed and now the parking meters issue it with a barcode, that let a faster and more reliable check by the control personnel, as they can read that code with their palmtops, and avoid frauds.

Parking meters have been upgraded not only referring to the issue of tickets, but also taking care of their functioning and management. In fact all the parking meters have been equipped with GPRS network, and GPS location system to have a remote control on all them, in order to achieve in real time all the useful information of their activity, both on the mechanical functioning and the fare related operations. This upgrade allowed important new features, such as:

- visualization of information on a cartographic map;
- introduction of the alarm signal escalation if the alarm is not managed;
- creation of the historical database;
- sharing of operation alarms with the supplier as concerns breakdowns and “paper end”
- optimisation of operational alarms as concerns strongboxes substitutions.

On the side of the parking policies enforcement, another item of the measure was the introduction of the OCR (Optical Character Recognition) feature on the palmtops of the controllers, in order to scan car plates. In fact, it can help the operator in controlling, because the devices read the car plate and use it to complete the fine. On the other hand, operators can also scan plates of the cars

regularly parked along the street having a valid permit or correctly paid the parking fare: This allows to achieve detailed data and to have punctual information about the parking places occupancy.

Barcodes have been put not only on short-term tickets (from parking meters), but also on long-term tickets (1 month or 6 months).

We also projected to put barcodes also on permits (for residents, etc.), and to integrate all data in the central management system.

The goal was:

- to improve and rationalize the management of the permits and make faster and easier to link them to the owner's;
- to reduce the needs for users to go physically to the permit office thanks to the possibility of using the Internet, e-mails, faxes and letters to communicate variations concerning the permits;
- to reduce the costs of the card production and the administrative costs for service management.

Outputs and Results

The implementation of the technologies involved in this measure have contributed to increase the efficiency of the parking meters and, consequently, the fare collection. The increase of effectiveness of the enforcement activity represents the other side of the activities, pushing the car owners to pay the fare for parking.

Parking meters collect around 90% of the revenues for short term tickets (and around 80% of the total revenues for parking fares): their correct working and management is fundamental for the realisation of those policies.

According to Municipality measurements, application of policies on access to LTZ and parking fares, from 2006 to 2011, has led to a significant reduction of daily access to the centre by 20%.

Resulting Decision-making

Results of the parking meters confirmed the reliability of our approach.

Referring to the implementation of the PocketPC, we had to improve the communication with control operators, in order to collect in the proper way their opinions to about the tools and the operative aspects, going on step by step.

Lessons Learnt

We observed that one of the most critical aspect is the fine tuning of the systems (devices and software). Reliability has increased through monitoring. Feedbacks from the operators have been fundamental, and taken into consideration, not only for items strictly related to devices technical operation, but also on human behaviour (how the agent make the control itself).

Involvement is has been a key issue for the success of projects that rely on field operation. We had to refine internal communication.

Both the technical monitoring and the return of the information from operators about their everyday experience led to set new releases of the PocketPC software.

Cost-effectiveness

The new enforcement system and devices gave higher reliability of the control activity and increased the quantity of data collected.

Referring to the devices, we adopted solutions that can achieve the targets with standard technologies (barcode readers) which are fairly cheaper and less energy consuming, comparing with other, such as RFID. For the device software we decided to use windows-based standards, in order to have a solid base and to have a wide market for possible upgrades.

Referring to the parking meters upgrade, it let us to be alerted on problems of the devices, and allowed us to reduce dramatically the out-of-service times, and consequently, reduce losses of fares.

Dissemination and Exploitation

Activities of this measure were highly focused on city management and mobility-related services to the citizens, thus, results can be used in this domain.

Data collected by the systems give a better knowledge of most of the aspect related to mobility and use of public space, and this allow to take more focused and effective decisions.

Other subjects interested in follow our experience could use it in different ways:

- adopt our technology in general (devices and software);
- adopt general know-how and the management system (as the standard technology can be easily understood and implemented);
- use just the know-how achieved and our analysis about the management of the system.