MOBILE MOBILITY INFORMATION

MOBILITY MANAGEMENT

PORTO

MUNICIPAL PROFILE

LOCATION
Porto, Portugal

POPULATION
237,584

LAND AREA
42 km²

CIVITAS BUDGET
EUR 3,757,297.94, with an EC contribution of EUR 2,299,927.80
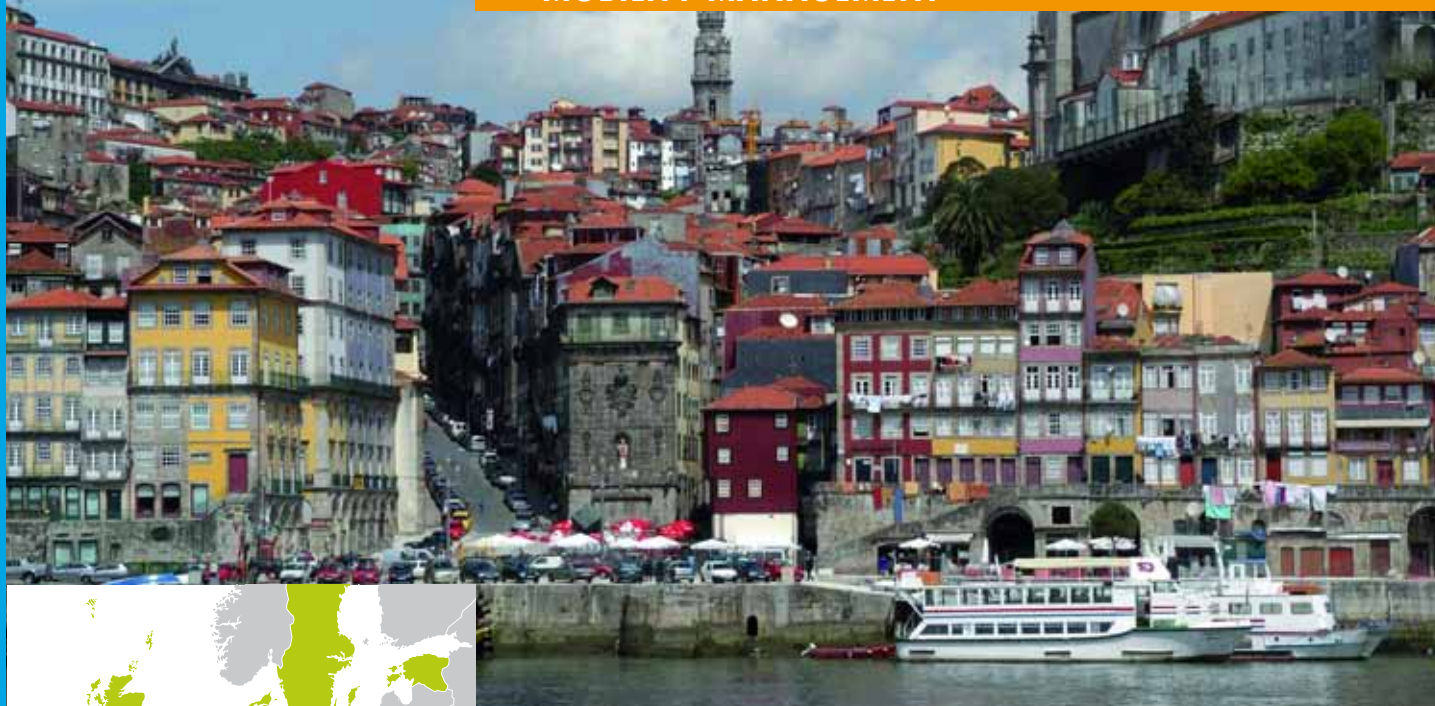
During CIVITAS Plus, Porto aimed to develop a decision making tool for public transport, in order to help people plan trips based on the real time information of different operators. Such a tool and information is now available through mobile phones and other geo-referenced mobile equipment. Users can now select the best combination of routes and modes for their journey. The information is also available on LCD displays located inside institutions, such as hospitals, university faculties or at public transport stations.

Municipal context

Porto is known as the "city of bridges" for the six outstanding structures that connect the banks of the Douro River. As one of Europe's oldest cities, it is steeped in tradition.

The University of Porto is one of the largest and most prestigious academic institutions in the country. Altogether, Porto is home to 60,000 university-level students. The city is also the hub of a highly industrialised region.

As people have increasingly moved from the centre to the suburbs, new mobility patterns have emerged. These are characterised by longer trips and urban sprawl, which caused serious congestion problems at the city's main entry and exit points.

The car is the first-choice mode of transport with a share of 43 percent. This compares to a modal share of 25 percent for public transport and 32 percent for walking. In the past, transport policy primarily focused on the extension of road capacity, but is now increasingly concerned with the improvement of the public transport system. Particularly the new metro system is seen as an important element in the mix.

The city has a mobility plan in place that takes a participatory approach to transport planning.

PORTO IN CIVITAS

Porto (Portugal) participated in CIVITAS ELAN, an innovative collaboration between the cities of Ljubljana (Slovenia), Ghent (Belgium), Zagreb (Croatia), Brno (Czech Republic) and Porto (Portugal). The motto of the project is "Mobilising citizens for vital cities."

CIVITAS ELAN

CIVITAS ELAN took an approach where "Putting the citizen first" was at the core of the work in the five cities. Aside from encouraging involvement, its cities pro-actively worked to convince citizens that clean mobility solutions are in their interest. With its 68 activities, ELAN increased the modal share of walking and cycling, supported innovative freight delivery solutions, implemented innovative demand management, and increased the use of cleaner and energy-efficient vehicles. It ran from 2008-2012.

READ MORE AT:

www.civitas.eu/display-all-projects

Introduction

The mobile transport information measure was innovative not only for Porto, but also for Portugal. It offers new real time solutions and new ways to convey information in public transportation.

It has been observed that often people do not use public transport because they are not properly informed. For such people, it is difficult to find the right information. This measure ensured correct and easy access to data, such as: bus routes and stops; walking paths to the bus stops; soonest and fastest options to reach the desired destination. Also, for people that normally use and are familiar with the public transport network, the usage of such a system ensures trip optimisation, as they can choose the best option in real time. This combination contributes to increased user satistfaction towards public transport.

Taking a closer look

InfoBoards were developed for this measure, based on LCD displays and the mobile app MOVE-ME.

These two products are based on a unique system - Information for Mobility Support (IMS) - which provides real time information on the location of the vehicles. Whenever real time

data is not available, the provided information is based on the planned schedules.

This system design integrates different technologies from several public transport operators. It accesses the geographic positioning of the vehicles in real time and displays this information as an easily interpreted schematic diagramme.

Requirement specifications and alternative graphical displays were designed and tested with users during several stages of the process. During these phases, the specification of

the interfaces between the existing systems were refined in order to provide the efficient integration of all the components used. The proper algorithms and usability solutions were identified and developed. The finished product is optimised for both LCD displays and smartphone applications.

The second stage of the project was the development of a dynamic application to support transport planning in real time. This involved more technical resources and more development work and represented the most innovative aspect of the measure. Research

Destinations info board
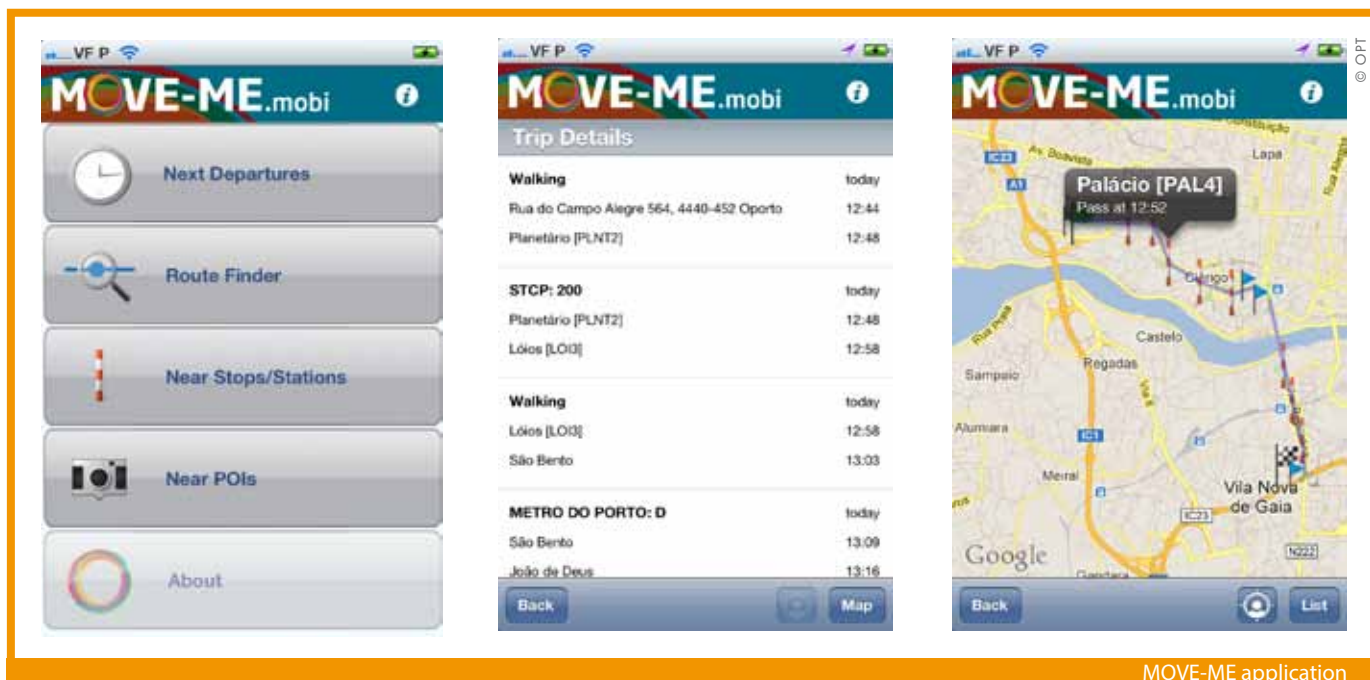
MOVE-ME application

and development of this phase were the most ambitious and demanding, as they involved planning algorithms with timetables that are permanently changing, combined with stable timetables and scheduled situations. This technical work allowed the system to provide services, such as route definition. By considering the actual position of vehicles, the system provides information regarding the best current route at the moment of inquiry. It informs about the schedules at each particular stop, interchanges and the available walking routes.

Thanks to the development of MOVE-ME, geographical information can be communicated in a user-friendly manner. Previous systems were quite rudimentary in terms of usability.
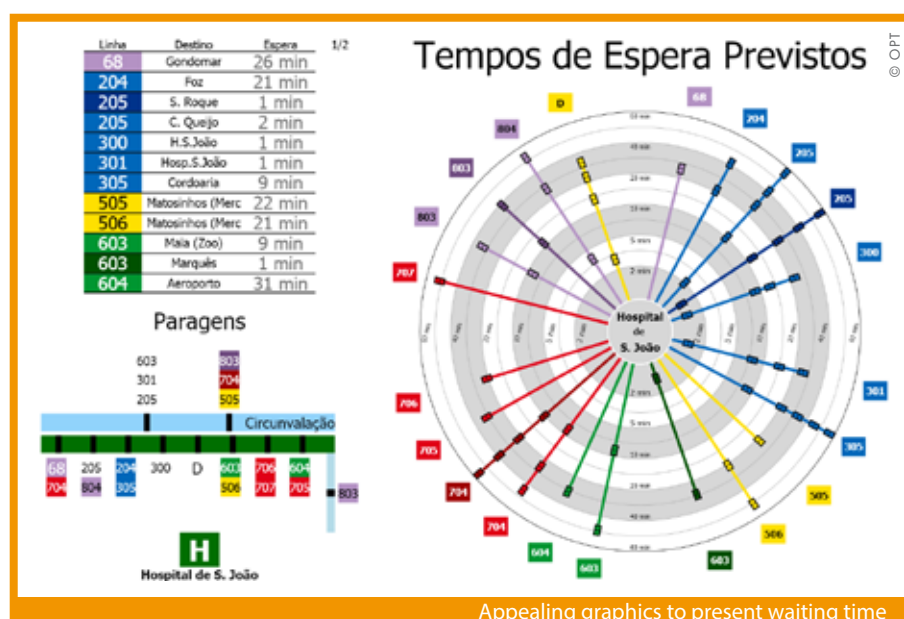
Results

In conclusion, the current measure is a hallmark of national innovation. For the first time in Portugal a system that avails of real time information for more than one transport operator was presented. Another first was getting operators to work together for the benefit of users.

The IMS system proved to be useful and efficient. It accomplished its main objectives: it improved transport information; gathered data from 14 different operators in a single platform; centralised its functionalities; and promoted public transport in Porto. The two new products developed are a success, especially the mobile application.

The results of interviews and questionnaires (drawing on a sample of 203 people) showed that 80 percent of the users returned excellent feedback and asked for the continuation of the service. They also stated that they would be willing to pay for a service like MOVE-ME. Moreover, 21 percent of the people interviewed stated that they use their private cars less since MOVE-ME is available on the market.

MOVE-ME currently receives over 1,000 requests per day.

Appealing graphics to present waiting time

Lessons learned

A good and centralised marketing campaign was vital to the success of the measure. It has increased user satisfaction, resulting in the participation of several companies and other cities in the project.

The evaluation of the measure through surveys to end users was of crucial importance for its success. The reinforcement of the systems usefulness builds a strong case for further development. For any continuation, more resources should be invested in efforts to support the correct understanding of the services available. The marketing campaign had very positive results, promoting the use of the system and exponentially increasing the use of the available applications.

At all stages of the project, political commitment was vital to guarantee that the main actions to overcome the barriers were taken.

It is essential to invest time in maintaining good communcation with local partners and stakeholders. By demonstrating that such activities also support business interests it is possible to gather more stakeholders, solidify support and ensure replicability.

Upscaling and transferability

The next activities related to this measure involve the definition of a business model to exploit the service in order to ensure the service's continuity and maintenance after CIVITAS.

The system developed during the measure is expected to evolve into a product or a service that may be offered to other areas outside the testing area, and to other cities.

The positive results of this project were shared with and promoted in other cities with complex transport networks. Lisbon, for example, has already implemented the MOVE-ME app. It is expected that the system will evolve and be adopted by other cities in Portugal and further afield.

The main plan of action is to continue following and accomplishing all user requirements within the next phases of the system, also ensuring a fast and efficient data maintenance and update from the partners involved.

As said before, user satisfaction encourages other companies and cities to participate in the project. During the implementation of the measure, users gave positive feedback and requested more information and an additional operator, and this resulted in the train company also joining the project.

The InfoBoard system was implemented in the Porto Airport in September 2012.

Showing real time information in public