

*Measure title:* **Intermodal infomobility platform**

*City:* **Genoa**

*Project:* **Civitas Caravel** *Measure number:* **12.1**

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## **A Introduction**

### **A1 Objectives**

The measure objectives are:

- To provide traffic and travel information services (TTI) based on Intelligent Transport Systems including real-time and mode specific information, delivered on different media.
- To implement specific special services for people with reduced mobility.

### **A2 Description**

In 2004 in the city of Genoa there were some available services concerning traffic and travel information, mainly on traditional media (radio, televisions, newspapers), but they were not integrated and only cover traffic congestion problems.

The new system, developed in CIVITAS CARAVEL, aggregates different contents (road traffic, PT information, public information, city information) and deliver various services through different medias (i.e. web, mobile phone and radio). The services can be personalised according to the users preferences. The infomobility platform is web based, offering also other multimedia services such us:

- sms and e-mail traffic congestion alerts
- radio news
- specific services for disabled

The most innovative part of the system is the use of real time bus speed that is used in order to deliver real time information on traffic level.

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## **B Measure implementation**

### **B1 Innovative aspects**

- **New conceptual approach** - Collection and management of traffic and travelers information coming from different sources. The idea is to collect in a single place a good number of information travel-related (real time congestion of urban way, highway, real time information coming from TPL operators, web cam, available parking places, etc). Consequentially a traveler can find several information regarding his urban travel without having to consult different web sites or other media.
- **Use of new technology/ITS** – The realized infomobility platform can be defined a Content management systems that has been developed using an open source software. The aim to collect the maximum number of content –travel related- has been reach also thanks to web services, SOA, Feed RSS, use of Google Maps,

use of real time bus speed in order to deliver real time information on private traffic level.

- **Targeting specific user groups** – Personalized services for specific groups including services for disabled people. The platform can manage different level of personalization of information in terms of: number of information per day, time slot, urban area, etc. where people are interested, according the user's profiling.
- **New economic instrument** – research of new financial way in order to contribute to the economic sustainability of the platform; for example experimentation of "Google AdSense".
- **New organizational arrangements or relationships** – Attempt to organize an organizational and contractual model in order to regulate the data exchange and reach an economical and legal agreement between content owners, content providers and service provider.

## **B2 Situation before CIVITAS**

In 2004 in the city of Genoa there were some available services concerning traffic and travel information, mainly on traditional media (radio, televisions, newspapers), but they were not integrated at all and only covered traffic congestion problems.

## **B3 Actual implementation of the measure**

The measure was implemented in the following stages:

1-12 TTI framework design: design of the Traffic and Travel Information framework including awareness raising and consensus building among stakeholders.

1-12 TTI platform design

1-10 Technical and functional specification of the IT platform Definition of technical and functional specification of the ITS platform to aggregate different data coming from different sources and to deliver different services using different media

10 – 28 Development of the IT platform.

29 – 48 Demonstration of the platform including the new web portal, the congestion alert services, new mobile information services and new contents (mobility and city related) and more personalised services.

The Genoese infomobility web portal [www.guidotiquida.it](http://www.guidotiquida.it) is on line since the 1st of July 2007 as a intermediary version (waiting for its final name in line with the overall mobility policy of the city of Genoa); the web mobility portal aims at providing the users through different medias, of several traffic information in order to obtain more efficient choices in their transport modes. It is being continuously updated with lots of information on: Public Transport, private car web services, parking places, road safety, means of transport which can be used to arrive at and to leave from Genoa, car sharing, car pooling, flexible on demand public transport buses (Drinbus), traffic webcams. Moreover, "premium services" are available, such as: the "personal mobility page" (web personalized page with specific traffic information chosen by the users), the SMS and email alerts.

Two special editions of the portal have been launched on the occasion of 47° Salone Nautico<sup>1</sup> and of the Festival della Scienza 2007<sup>2</sup> (localisation on a map of the location of exhibition and other relative events, how to reach the locations, time tables of public transport, parking availability, etc.).

<sup>1</sup> International exposition of boats and crafts.

<sup>2</sup> Educational happening mostly dedicated to the students and based on science experiments, demonstrations, etc.

The web portal [www.guidotiguida.it](http://www.guidotiguida.it) has been renamed [www.mobilitypoint.it](http://www.mobilitypoint.it); according to the suggestion of the Municipality (the second one is more formal).

[www.mobilitypoint.it](http://www.mobilitypoint.it) has been officially launched Tuesday the 22nd of January 2008 at the Municipality headquarters in the presence of the Mobility Councillor of the Municipality of Genoa and a large numbers of journalists.

A special edition of the web portal was realized in May 2008 in occasion of Pope Benedetto XVI visit at Genoa. Also in this case the information provided have been: localisation on a map of the location of events, venues, etc.; how to reach the locations, time tables of public transport, parking availability, etc.

Another special edition was realized in September 2008 in occasion of The Notte Bianca<sup>3</sup>

Again: two special editions are foreseen: in occasion of 48 Salone Nautico (4-12 October 2008) and for the Festival della Scienza 2008 (23 October – 4 November 2008).

## **B4 Deviations from the original plan**

In comparison with the proposal description, due to the division of AMT in two companies, this activity/ measure has been totally assigned to AMI.

At the end of 2006 it has been defined that the infomobility platform will be web based, offering also other multimedia services such as sms and e-mail traffic congestion alerts, call centre services and specific services for disabled.

Similarly to measure 8.4 it has been assessed that the hardware requirements are less than expected in terms of durable equipments and at the same time the software requirements are more than expected (development of the congestion alert system, able to recognised traffic jams in the main roads of the city, using the real time bus speed as source, and to deliver them using different media such as sms, web, e-mail, and specific software able to adapt to the platform different contents coming from different sources and providers).

This also lead to a reduction of hardware budget, a reduction of men months for AMI and an increase budget for SOFTECO. The overall funding for the measure remained unchanged. The EC has been officially informed in November 2006 of this shift; all the documents for the final approval have been submitted in August 2007.

## **B5 Inter-relationships with other measures**

The measure is related to other measures as follows:

- **11.8 S.Martino Mobility Plan in Genoa** – 2 multimedial kiosks have been installed in the biggest hospital of the city in order to provide free access to the web infomobility platform “Mobility Point”
- **8.4A Agency for flexible services in Genoa** – Some of the services developed by the Agency (i.e. car pooling) are accessible for the users via the web infomobility platform “Mobility Point”

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<sup>3</sup> An happening carry out during the night between Saturday the 13<sup>th</sup> and Sunday the 14<sup>th</sup> September when the shops, museums, restaurants, bar, etc. are open and on the streets of Genoa there are concerts, theatrical performances and so on.

## C Evaluation – methodology and results

### C1 Measurement methodology

#### C1.1 Impacts and Indicators

Table of Indicators.

No.	Impact	Indicator	Used	Etc..
1		Infomobility platform users		
2		Usage statistics		

Detailed description of the indicator methodologies:

- Indicator 1** (Infomobility platform users) – every single access to the infomobility web portal is recorded and stored in a database, consequentially it will be possible to monitored the number of the users per day, week, month, or to coincide with particular events. In these cases it will be realised a dedicated report while, generally, it will be realised a monthly report. The period of observation will start on January 2008 and it ends on October 2008. The data will be available in two ways: tabular and graphic one.
- Indicator 2** (Usage statistics) – Thanks to the Google analytics tool, a very potent means to investigate the user’s behaviours and characteristics, it will be possible to produce a very detailed statistics about visitors (trending, loyalty, languages, length and depth of visit, etc.). Also the usage statistics will be performed on a monthly basis, even if necessary the observation period could be change. The period of observation will start on January 2008 and it ends on October 2008. The data will be presented as a report with tables, charts, etc.

#### C1.2 Establishing a baseline

Given the fact that the infomobility platform didn’t exist as an information tool before its creation within this measure, there is no baseline available.

#### C1.3 Building the business-as-usual scenario

Not applicable because the platform did not exist before CARAVEL.

## C2 Measure results

The results are presented under sub headings corresponding to the areas used for indicators – economy, energy, environment, society and transport.

### C2.1 Economy

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### C2.2 Energy

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### C2.3 Environment

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### C2.4 Transport

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### C2.5 Society

Despite what indicated at C 1.1 the observation's period, in order to collect data is January-September 2008; actually this document is updated at beginning of October.

The first indicator to investigate is the number of Infomobility platform users:

## Visits for all visitors

1 Jan 2008 - 30 Sep 2008

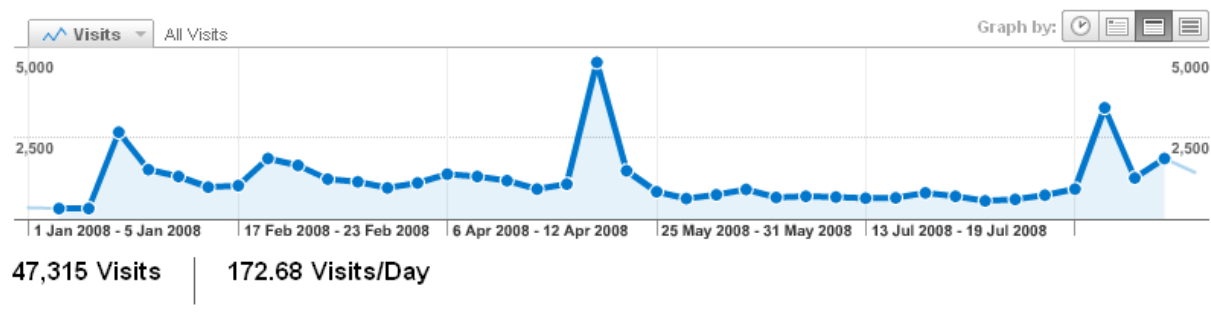
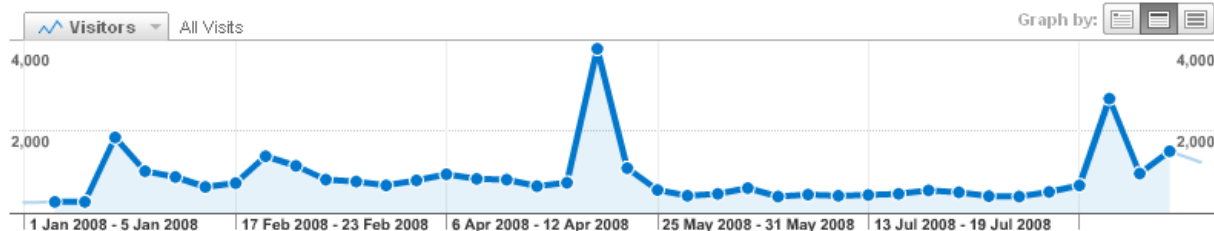


Figure 1

The graph above (figure 1) shows the total number of visits and the average number of visits per day; obviously the number of Infomobility platform users per day is less than visits per day (a visitor can visit more than one time the site). The number of unique visitors (the number of unduplicated visitors to Infomobility platform – excluding visitors coming from AMI network) is 29.387; it means that the average number of visitor per day is 110.

## Visitors Overview

1 Jan 2008 - 30 Sep 2008



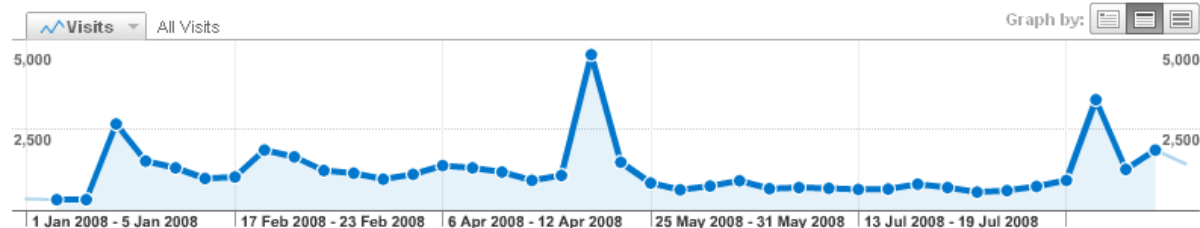
**29,387 people visited this site**

Figure 2

The following graph (figure 3) shows the number of pages visited:

## Dashboard

1 Jan 2008 - 30 Sep 2008



### Site Usage



Figure 3

Generally speaking the trend of the above graphs shows three peaks both in terms of visits and visitors along the observation period, particularly:

- The 23<sup>rd</sup> of January (808 visitors), the day after the official launch of the web portal
- The 16<sup>th</sup> of May (1408 visitors), in occasion of the visit in Genoa of Pope Benedetto XVI (portal's the special edition)
- The 13<sup>th</sup> of September (1111 visitors), in occasion of "Notte Bianca" see note 3 above

The following graph (figure 4) shows the traffic sources that are well balanced; anyway an effort should be done in order to improve the visitors for example augmenting the referring sites.

**All traffic sources sent a total of 47,315 visits**



**Figure 4**

The following figure5 e summarise the first 15 pages viewed by the Infomobility platform users:

Page	Page views	%
Home page	50609	56%
Web cam	9713	11%
Special edition "Notte bianca"	6499	7%
Parking	4563	5%
Public Transport	2982	3%
Signals from citizens	2414	3%
Downloads	2310	3%
To arrive and to leave Genoa	1697	2%
Cars and bike	1672	2%
Special edition for the visit of Pope Benedetto XVI	1661	2%
Info for mobility impaired people	1615	2%
Car sharing	1613	2%
Archive news mobility	1247	1%
Archive news mobility Genoa	1241	1%
Car pooling	1138	1%

**Figure 5**

The two “special edition” were on line only few days; consequentially the number of pages viewed could be considered a good result.

Infomobility platform users show interest in the traffic web cams and in the web 2.0 opportunities (to send signal, photo etc about problems mobility related or to download contents from the Infomobility platform).

**C3 Achievement of quantifiable targets**

No.	Target	Rating
1	2.500 info-mobility platform users per day	<b>*</b>
2	200 users for special services for disabled users	<b>NA</b>
3		
4		
<b>NA = Not Assessed    * = Not achieved    ** = Achieved in full    *** = Exceeded</b>		

Actually the target of 2.500 info-mobility platform users per day is not achieved, it was not even achieved in occasion of particular happenings; for this reason a strong marketing campaign to promote the web site is planned before Christmas period.

The target of 200 users for special services for disabled users is not assessed, actually the users of info-mobility platform can to register himself (for example to join the community) but any data about impairment is requested. Anyway only 1615 pages viewed in the period are not a good result.

The main problem is to obtain useful information for mobility impaired people from institutions, associations, etc. and the authorisation to publish them mainly for problems related to the property of data.

Anyway, the info-mobility platform is ready to host and publish several useful contents for disabled people consequentially the effort is to obtain this contents.

#### **C4 Up-scaling of results**

Not applicable because the portal is already covering the city as a whole.

#### **C5 Appraisal of evaluation approach .**

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#### **C6 Summary of evaluation results**

The key results are as follows:

- **Key result 1** – the services provided by the infomobility platform are appreciated mainly in occasion of particular events that attract a large number of people. In these cases the need is: to have quickly reliable information mobility-related (traffic congestion, parking availability, info about public transport, how to reach a venue, etc.) the infomobility platform has been able to provide this kind of services. Then the idea to gather in a unique place information coming from different content and service provider is successful.
  - **Key result 2** – infomobility platform users are interested in real time contents (traffic alarms, traffic web cams, etc.) this is obvious because real time information have a surplus value, anyway also the section of the home page that shows the news (then information mobility-related updated every two-three days) is a very frequently clicked area of the home page.
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## D Lessons learned

### D1 Barriers and drivers

#### D1.1 Barriers

- **Barrier 1** – Mobile services: cost of the services for the final users. After an in-depth analysis of the existing traffic and travel information services focused on: service offered, service logic (push/pull), nature of the service (standard/premium)<sup>4</sup> and service business model the conclusion is that it is important to cluster mobile service offerings into: ‘mobile internet services’, ‘SMS or MMS services’, ‘Navigation System services’ and ‘Radio services’ – also because they significantly differ with respect to their underlying service and business model. Particularly SMS and MMS information is mostly charged on a usage basis; this cost is comprehensive of the cost of sending information by SMS and, of course, cost of the service. The customers will pay only for a very value added, personalised and reliable information.
- **Barrier 2** – Difficulties to provide information to the platform by the different content providers. The content provider is the source of data used in information services, thus the first node in the value chain and in most cases also the content owner, i.e. the institution that collects the data and has all rights to use and to hand on the data. There are at least three “families” of difficulties to collect information coming from different content providers: technological (different communication protocols, structure of databases, data’s features, attributes, etc.), legal (property of data, agreement between content owners and service providers), organisational (an efficient change of data and information needs organisational rules, practices, modalities, etc.).
- **Barrier 3** – Economical sustainability after the end of the project. The main costs are: hosting and maintenance of the operating system. Particularly: all costs for the ongoing operation of the infomobility platform e.g. hardware maintenance costs, software license and operation costs, costs for regular marketing and communication, costs for the operative staff of the infomobility platform and other operational costs for the internet-connection, telephone, etc. An analysis of these costs lead to an amount between 60 and 250 k€ (this variability depend mainly on the number of employees; one in cheaper solution, 4 in the more expensive). Actually the personnel costs are the biggest cost driver (50 K€ is the yearly costs of one employee).

#### D1.2 Drivers

There is a strong need of a unique reference point where different multimodal information might be available. Actually most of the existing services are single modal offerings; consequentially people planning a trip have to find information navigating on several web sites. A unique reference point is opportune whether from a communication point of view or from a cost-effective method of production. Actually for the economical sustainability of the infomobility platform value-added information are required; to generate that, service operator needs access to several data sources (Traffic Information Centres, Public Transport Authorities, road network operators, etc.).

### D2 Participation of stakeholders

- Municipality of Genoa: main content owner (traffic data, traffic web cams, traffic messages, etc.)

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<sup>4</sup> Typically standard services provide basic travel-related information via mobile internet or radio in a pull fashion; Premium services provide value added offerings mostly in a push scenario, e.g. via SMS.

- AMT: Local transport operator content owner regarding TPL
- INFOBLU: content and service provider (web cams and traffic messages regarding the motorways around Genoa)
- Trenitalia: content and service provider (real time passages at urban rail stations)
- Tu6Genova: service provider (available parking places)
- Radio19: service provider (radio traffic bulletins based on infomobility platform data).

### **D3 Recommendations**

The traffic information market in today' Europe is very complex: on the one hand there is a strong need of infomobility services, on the other hand it is very difficult to have good business opportunities (services provided by public authorities and transport infrastructure operators are typically free for the end user). The reason to offer this information for free is: to avoid incidents, traffic jams, etc.

Consequently a basic level of information is provided for free by the public Authorities; premium services (more personalised and valued added services) should be provided with fee, then a commercial involvement of private companies could be possible.

Actually also other alternative sources of income (advertising, data mining, etc.) should be considered.

Consequently the very first recommendation is to prepare an accurate business plan covering the whole cycle of life of the infomobility platform before to start to project it.

A particular attention should be addressed to the infomobility platform's operating phase so that the service will be able to go over the start up phase that often is (co) financed.

### **D4 Future activities relating to the measure**

Nowadays is quite difficult to foresee the future activities relating to the measure; actually AMI, the company charged to implement the measure, is now in liquidation; the future of AMI and of the infomobility platform is being defined and the decision is in charge of the Comune di Genova.