

## M08.05 – Executive summary

The city of Brescia is building a metro line (Metrobus). Its start-up is foreseen by 2013. Historically the city has not developed intermodal services and citizens had a mono-modal attitude. Only recently several initiatives aimed at promoting an intermodal transport system were developed. One is represented by Brescia Mobile Channel (BMC).

In this framework the measure is intended as a supporting action to promote a smart image of PT in the city and it consisted of developing different applications that should be:

- compatible with the operative system of mobile phones (for example Apple and Android);
- accessible from mobile devices, primarily Smart phones;
- able to exploit the device computing, storage and communication capabilities, both online (i.e. through cellular data network, wireless LAN and mesh networks, local connectivity/personal networks, etc.) and offline.

Brescia Mobile Channel (BMC) aimed at offering a variety of free services on mobile phones, while promoting the use of public transport in all the urban area (reached by buses). It has a set of functions grouped into three key areas, namely:

- i. “Take the bus more easily”: it’s possible to check the best line (or the best combination of bus lines) calculating the route starting from origin/destination data. A map of the city is always available containing also information about the public transport.
- ii. “Find useful services in the city”: the information shared through BMC comes from a wider information database, that contains information such as bike sharing stations, parking, police stations, schools.
- iii. “Use your phone as a payment system”: for PT tickets, parking tickets, promotional events tickets, etc. through the use of only the SIM card, thanks to an integrated NFC technology. (This activity has already started, but its full implementation is foreseen after the end of the Civitas project).

The application is characterized by several kind of information:

- RSS updated news about the bus lines deviations;
- the map layer, that allows to compare the Local Public Transport (LPT) trip to the one using a car;
- several city related information as bike sharing stations, car sharing stations, future metro stations, railway station, Limited Traffic zones (LTZ) accesses, parks, cycling paths, building sites, parking areas, etc.
- links to local newspapers (namely "Giornale di Brescia", "Brescia Oggi", "Corriere di Brescia", "Brescia news").

Information is updated in real time, like the number of available parking places, available bicycle of bike sharing service and bus timetables and journeys.

Considering that the application was developed both for iOS and Android OS, it allowed Brescia Mobilità to reach a larger amount of potential users, as the second operative system was more widespread than the first one. Actually, until September 2012, the total number of download of the iOS application was more than 3350 (published in November 2011) and for Android more than 650 (published in July 2012). From the first release published till September 2012 the app. was downloaded more than 3'350 times through the Apple store (the first app. was published in November 2011) and more than 650 times (the first app. was published in July 2012) by using Google play.

From the user view point the acceptance level is high since the people interviewed gave a vote of 4 out of 5 expressing their appreciation for the service. This good result is mainly related to the number of upgrades done to improve the quality of the product. BMC users had also the possibility to leave a comment after ending the connection to the app. By analysing these feedbacks together with back-office information it has been noted the following:

- The information updated in real time related to bike sharing and parking was highly looked upon.
- Thanks to the publication of dynamic info, the time connection of BMC sessions substantially increased.
- Android users seem to have less expectations than the iOS users and their comments are generally higher.

## A. Introduction

### A1 Objectives

The measure objectives are:

(NN) High level / longer term:

- To adopt the Intelligent Mobility Plan

(OO) Strategic level:

- To improve the PT quality of service spreading out information

(PP) Measure level:

- (1) To set up a system providing information on PT services and on the city through smart phones (such as information useful to commuters, personal infomobility services, city experience, shopping and tourism, health and wellbeing, etc.).

### A2 Description

The city of Brescia is building a metro line (Metrobus). Its start up is foreseen by 2013. Historically the city hadn't developed intermodal services and its citizens had a mono-modal attitude. Only recently several initiatives aimed at promoting an intermodal transport system were developed. One is represented by Brescia Mobile Channel (BMC). In fact this measure must be intended as a supporting action to promote a smart image of PT in the city.

The measure consisted in the development of different applications which are:

- compatible with the operative system of mobile phones (for example Apple and Android),
- accessible from mobile devices, primarily Smart phones
- able to exploit the device computing, storage and communication capabilities, both in online (i.e. through cellular data network, wireless LAN -Local Area Network- and mesh networks, local connectivity/personal networks, etc.) and offline settings.

Brescia Mobile Channel (BMC) offers a variety of free services on mobile phones, while promoting the use of public transport in all the urban area (reached by buses). Furthermore it's important to highlight that in Italy the spread of the smartphone use is high (considering the filed study carried out by Nielsen Italia in 2012, over 50% of mobile phones in commerce are smartphones), therefore the number of users reachable with the application (downloadable thanks to the internet connection available on mobile phones) is growing.

BMC makes a set of functions grouped into four key areas available, they are:

- *Take the bus more easily*: it's possible to check the best line (or the best combination of bus lines) calculating the route starting from origin/destination data. A map of the city is always available containing also information about the public transport.
- *Find useful services in the city*: the information that are shared through BMC come from a wider information database. This database is called Brescia Infomobility and is available on a common web

platform (<http://maps.bresciainfo.com/maps.aspx>). It contains information such as bike sharing stations, parkings, police stations, schools, etc. (more information will be available in the future).

- *Use your phone as a payment system*: for PT tickets, parking tickets, promotional events tickets, etc. through the use of only the SIM card, thanks to an integrated NFC technology. This activity has already started, but its full implementation is foreseen after the end of the Civitas project. .

BMC was developed also through the participation of ended users. They have been considered fundamental, for the application design.

The first developed application was realized for Apple smartphones, the second one was compatible with Android operative system (O.S.). These operative systems were chosen after a benchmarking activity related to their distribution in the national and international commercial scene. By the end of 2012, Android was installed on more than 60% of the mobile devices in commerce (less than 50% in 2011) and iOS on about 19% of devices (unchanged since 2011) (data source: International Data Corporation)

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## B. Measure implementation

### B1 Innovative aspects

#### Innovative Aspects:

- New conceptual approach
- Use of new technology/ITS
- Targeting specific user groups.

The innovative aspects of the measure are:

- **Innovative aspect 1 (New conceptual approach)** – An accessible information system is an important requirement for a PT company. This system must be constantly updated and upgraded, also through the use of new technologies. That is why the development of this "Mobile" communication channel can be considered innovative for Brescia, also from a conceptual approach.
- **Innovative aspect 2 (Use of new technology/ITS)** – The new technology exploited by the BMC is already known as "Intelligent Transport System" (ITS). The innovative aspects of this system can be summed up as follows:
  - *Flexibility* – all information is constantly updated. The system is organized in external structures that are coded (in standard format) and that can be easily changed without interfering with the application;
  - *Time-to-Market* – The system is based on target users (commuters), it offers customized services and allows reactivity for what concerns marketing actions.
  - *Reliability* – BMC is reliable for what concerns the networking infrastructure, operative system, application/database of the server;
  - *Upgrade* – the system is designed to allow upgrading (new functions can be implemented and the change of the basic components is granted). The system is user-friendly according to the different kinds of users' needs;
  - *Performance* – the waiting time (related to the selection/presentation of data, included maps and audio/video contents) is minimized in order to grant the full operability of the system itself.
- **Innovative aspect 3 (Targeting specific user groups)** – BMC is mainly addressed commuters and to teenagers who are one of the most important categories served by PT in Brescia, as they use PT to go to school, but soon drop it when they get off age and have a driving licence (at eighteen). The goal is to offer them a service which uses new technological devices, to promote a smart and effective PT.

### B2 Research and Technology Development

This measure was characterized by a relevant part dedicated to Research and Technology Development (RTD) activities. First of all, original contents and information-oriented mobile services addressed to the younger users of public transport services were defined. The approach to the BMC design was holistic. The stakeholders involved were: designers, usability specialists, Human Computer Interaction professionals and Brescia public transportation system experts.

There was an emphasis on balancing complex information with usability and engineering excellence with an up-front investment in sketching and ideation. Particular attention was paid to the design of accessible interaction techniques.

The system was developed to identify and show the best possible bus routes and other means of transport in the city on mobile devices, primarily smartphones.

The system exploited the computing device, storage and communication capabilities, both online (i.e. through cellular data network, wireless LAN and mesh networks, local connectivity/personal networks, etc.) and offline.

Besides PT information the system offered also city related information such as parks, cycling paths, building sites, parking areas, etc. through interactive mapping.

The map layer was provided by Google, by means of Google Transit. The service calculates routes, transit time and cost, and can compare the trip to the one using a car, particularly relevant in the perspective of Brescia transportation system and municipality.

A user centred design process was put in place to help BMC software designers to fulfil the goal of a product engineered for the final users. In this model, user requirements were considered right from the beginning and included into the whole product cycle.

During this phase, a benchmarking activity was organized in order to choose the most widespread operative system(s) among the ones already in commerce. This study showed a varied commercial scenario, in which the yearly increase of the smartphone users was about 30% by the previous one. At the beginning of Civitas MODERN Project, Symbian was the most widespread O.S. in commerce (in 2010 it was installed on 70% of the mobile phones in commerce, mainly on Nokia supports). This operative system wasn't open source and it was difficult to be used for the mobile application development. At the same time, iOS, designed by Apple, was installed on about 10% of smartphones in commerce. This one wasn't open source, but the possibility to develop non-Apple application was given with the realization of the SDK support (which is a software useful to simulate the iPhone on a pc). At the beginning of Civitas MODERN project, Android O.S., designed by Google, that was in embryo, was an open source system and installable on every kind of smartphone. These were the characteristics at the root of the fast spread of this last O.S. among the smartphones producers. Therefore, in light of this fast technological developments occurred during the RTD phase, the BMC was developed for iOS and Android (which represented about 80% of users at international and national level).

### **B3 Situation before CIVITAS**

Currently, the only way to reach citizens with up-to-date and portable information about public transport are paper, scheduled brochures, call centres, and web sites; each of them has its own limitations in terms of costs, reachability, availability, upgradability.

People are used to immediate communication through mobile phones, social networks, etc.

Thanks to Civitas contribution, the goal of the measure was to develop and offer free and friendly navigation services about Brescia PT network on citizens' mobile phones,

Information allow a better planning of public transport trips and modal split related choices.

### **B4 Actual implementation of the measure**

The measure was implemented in the following stages:

**Stage 1: Initial scenarios, requirements and business models definition and prototype design/specification** (from October 2008 to July 2009) – *The objective of this stage was to design the reference architecture and features of BMC using the assumptions of the existing open service platform.*

*Besides the reference architecture of BMC was designed coherently with the planned activities for the future development of Brescia Mobilità Web Portal, Brescia Mobilità manages the Local Public Transport (LPT) in Brescia, together with Brescia Trasporti s.p.a..*

*During the first months of this stage, the attention was focused on the general architecture and on the positioning of the components (Fig.1: the general architecture and on the positioning of the components).*

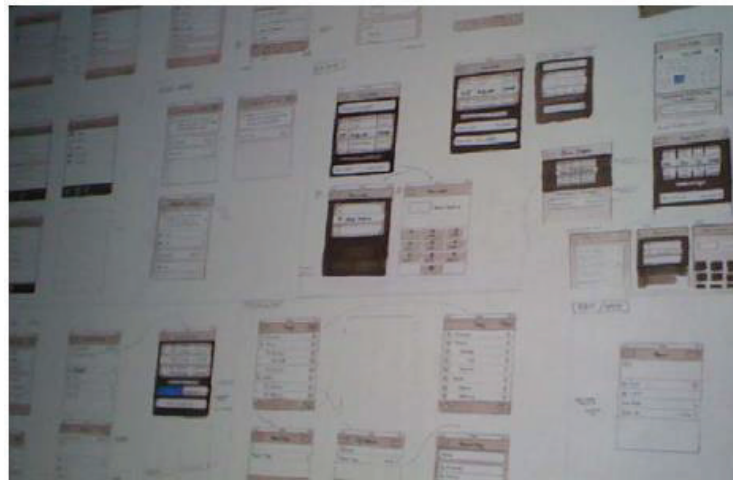


Fig.1: the general architecture and on the positioning of the components

Then, a uniform definition of the user requirements was defined (each with a different level of in-depth specification).

The scope and objectives were studied by a Working Group (July 2009) in which the scenarios/requirements/business models definition and prototype design/specification were deepened.

**Stage 2: Prototype development, evaluation and validation (from July 2009 to July 2010)** – During this stage, a prototype of the application was developed and a test phase was set up in order to verify the info-mobile service.

The implemented application was based on the data, which periodically Brescia Mobilità s.p.a. provides to Google Transit support (in fact, each new level of transportation information services requires a change of the data transmitted to Google Transit).

In November 2009, a meeting with the application developers was arranged to analyze a first presentation of the trial version compatible with iPhone operative system.

In December 2009, the presentation of the demo application was organized, simulating it via internet with browser Safari, to begin the collection of comments about the functionalities being developed.

In January 2010, the actual start up of the demonstration test on an iPhone was carried out (see figure 2).

During January, February and March 2010 several tests were performed and application updates were released to obtain a version that could be used by some volunteer users.



*Fig.2: design of BMC application: user interface and presentation layer*

**Stage 3: Requirements and business models refinement, system design/architecture/technical specification and development** (from July 2010 to October 2011) - Thanks to the prototype tests, it was possible to point out the necessary upgrades to be made before the release of the final application to be published on Apple Store.

Once this process was completed, a group of people, composed by volunteer students was involved in order to gather useful indications about further upgrades of the BMC application.

Some meetings were arranged to present the application and several feedbacks were collected. At the same time, the integration between the infomobility web portal and BMC was carried out, in order to synchronize the information available on the BMC. Brescia Mobilità decided to extract information directly from its own directly upgraded web portal instead of using the Municipality infomobility web portal ("BrescialInfo")

In the meantime, technicians updated the application, after verifying its compatibility with iPhone 4.

At the beginning Brescia Mobilità intended to sell the BMC application, but changed its mind since the first releases of the application were free because considered as experimental.

The first BMC app. was published on the Apple Store and it was free; furthermore it was considered comparable to the other free applications usually available on App Stores (both for iOS and Adroid operative system).

The final decision was to leave the application free of charge till after the start up of the metro service (by the beginning of 2013).

**Stage 4: Customer test, stakeholders' workshop and respective minutes** (from October 2011 to May 2012) - The selected group of students tested the services and solutions implemented to assess their technical and operational effectiveness and acceptance at different stages. A judgement about the reliability, scalability and flexibility of the system was investigated among the target group, as the device at their disposal was able to load the city/urban area map highlighting the interest points and to identify the best bus routs possible. Thanks to the students target group evaluation, some criticalities emerged in relation to the accessibility and to the in real-time updating of the information. Among the suggestions of the target group, the most important issues were related to the updated data of the free parking, available bicycle of the bike sharing service, the in real time information about the delays of the LPT buses and the possibility to access more easily to the LPT timetables. As described in the stage 5 "General public presentation and start up of the system", thanks to the collaboration with Sintesi s.p.a., it was possible to insert information about parking and bike sharing services. The collection of the target group opinions was arranged periodically, thanks to the compilation of a form, containing the following items: name-date, kind of OS (iOS or Android), evaluation of the application utilization, problems noticed, suggestions, weekly number of connections, level of satisfaction (from the lower 1 to higher 5), as reported in the figure 3.



Modulo di valutazione sistema Brescia Mobile Channel

Nome Testatore ..... Data .....

Modello Utilizzato iOS - Android

Impressioni d'uso:  
 .....  
 .....  
 .....  
 .....

Problemi riscontrati:  
 .....  
 .....  
 .....  
 .....

Proposte e Suggestimenti:  
 .....  
 .....  
 .....  
 .....

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1) Numero di connessioni Settimanali .....

2) Grado di soddisfazione (Basso) 1 2 3 4 5 (Alto)

Fig.3: BMC application questionnaire addressed to the target group

**Stage 5: General public presentation and start up of the system** (from November 2011 to October 2012) - The application compatible with iOS was published as the first one for BMC and updated during the stage implementation. The first release was published in November 2011, compatible with iPhone 4, and it foresaw only the possibility to view all the bus lines. the second release (published in January 2012) consisted in the upgrade of the previous, adding bus timetables (in pdf format).

These app were mainly static, because the data weren't managed by a server.

The last version of the application was published at the end of August 2012 and this new release is dynamic.

Users can see in real time the available Bicimia bikes (bike-sharing) and free car parking.

This upgrade was possible thanks to the collaboration with Sintesi s.p.a. (the society which manages parkings and bike sharing service). Sintesi made the data available from it's server. A significant work was carried out to implement web services to make these data compatible with the iOS client format (SOAP -Simple Object Access Protocol- was the transmission protocol of the bike sharing and parkings data and "connector" services were implemented to translate and lighten the server data and to make them available on smartphone devices and processors. The processed data was sent to POI -Points of Interest- kml files which, through a parameter system, indexed the data and updated them directly in the correspondent category in POI section of the application). in particular, in POI section the information available were: parking, info point of Brescia Mobilità, metro stations, bike sharing stations, police, hospitals, taxi stations, railway station, car sharing parkings spaces, LTZ access road sections, etc.).

Finally a new release of the application was tested for the compatibility with iOS6, through the use of the SDK -Software Development Kit- 4.5 simulator. This was functional to this latest update of the operative system of Apple smartphone and tablet (as a matter of fact, the iOS6 is the same for iPhone and iPad, therefore the application is also installable on iPad).

The content of this new release was related also to the introduction of dynamic information system about bus lines and timetables. The release has not been published on the store yet, but it has already been submitted for publication

It is important to underline that before the design of this last release, the server was improved in order to make Brescia Mobilità able to directly update information about buses.

The new dynamic data system allowed to join lines with timetables downloading only useful data.

As, before the publication, every release written for iOS needs to be submitted to Apple review procedures, which last about two weeks or more.

During this stage, also an application for Andorid OS was made and at the end of July the first release was published on Android App Store.

This application and its download is free (users' interface is reported in figure 4).

It's important to point out that the first Android release has different contents from the first one designed for Apple as it takes into account the comments made by Apple users through the web survey.

The second release for Android was published at the end of September 2012, within the European Mobility Week and the third release was published at the beginning of October 2012.

This last application has the same information of the iOS6 one. It offers information in real time of bike sharing bicycles available and parkings available, bus lines, timetables and news. Every release written for Android OS is published through "Google play": this procedure takes only few working days.



Fig. 4: Design of Android BMC application: user interface and presentation layer

This stage was important for the design and for the implementation of the quality of the releases as an evaluation system was introduced on the stores.

The evaluation system consisted in a pop up, which was shown to the application user after a certain time, during which the user himself used BMC.

In the pop up message a synthetic opinion was asked using "stars" for evaluation (and brief comments for particular suggestions). All opinions were sent to the application administrator. This kind of evaluation system was implemented on iOS from June 2012 (by an update of the release) and for Android from 27<sup>th</sup> of July (directly on the first release).

During this stage a test phase regarding the payment of the application was foreseen, but this wasn't done because both applications for Apple and Android still are free of charge.

**Stage 6: Dissemination** (from March 2009 to October 2012) – The dissemination activity was fundamental, in order involve stakeholders in the realization of the application.

Dissemination activities mainly consisted in meetings with potential users and volunteers - selected among University of Brescia students (see figure 5 reported below)- , to collect suggestions on the possible upgrades. Then, communication campaigns and official

*presentations of the app - such as during the European Mobility Week held on September - were arranged to launch the service to the public.*



*Fig.5: Meeting with the students for the presentation of the BMC prototype (Nov 19<sup>th</sup> 2010)*

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

This measure from the theoretical point of view has potential interactions with all the other measures proposed in Brescia, using Civitas plus funding, to develop a smart image of the city after metro start up foreseen by 2013..

The afore mentioned image of the city is given by both Brescia Mobility Channel and the following measures:

- **Measure 1 no. 02.03** “Development and upgrade of the e-ticketing system”;
- **Measure 2 no 02.02** “Intermodality with public transport”;
- **Measure 3 no 03.03** “P&R facilities for underground and public transport system”.

From the quantitative point of view there isn't interaction among indicators, as for this measure the indicators were set up to measure the use of the app..

## C. Evaluation – methodology and results

### C1 Measurement methodology

Brescia Mobile Channel (BMC) could be an effective support for commuters providing information not only about LPT transport (buses and metrobus – which start up foreseen by 2013), but also about other mobility services of the city, such as bike sharing, car sharing, parking.

The indicators pointed out for the measure evaluate the set up the system developed for smartphones both for iOS and Android OS. In particular, the evaluation objective was to monitor the spread of the smartphone application, through the downloads and the awareness level from Brescia Mobilità survey, and the customer satisfaction, through the direct evaluation and the acceptance level from Brescia Mobilità survey, which may change after every application update. Furthermore, the "Economy" indicators, chosen in the beginning of the project, when the BMC was designed to be downloaded for a fee, weren't collected because it was decided to publish free the application.

#### C1.1 Impacts and Indicators

Table C1.1: Indicators.

No.	Impact	Indicator	Data used	Comments
1	Economy	N. of downloads of the BMC application	Server connections tracking, provided by the application manager	First data collection after the o.p.in January 2012
2	Economy	Total cost/Cost of estimated (or target) users		No more collected as the BMC is free for customers
3	Economy	Total cost/Cost of real users		No more collected as the BMC is free for customers
4	Transport	Number of satisfied customers	Satisfaction index from comments recorded in iTunes Apple and Android application store	No ex ante foreseen.
5	Society	Awareness level	BST customer (specific question)	
6	Society	Acceptance level	BST customer (specific question)	

Detailed description of the indicator methodologies:

- **Indicator 1** (*N. of downloads of the BMC application*) – This indicator is collected tracking the number of users who downloaded BMC from the App store, in order to monitor the success of the initiative.
- **Indicator 2** (*Total cost/Cost of estimated (or target) users*) – the BMC application is free for customers, therefore indicator was no longer collected.
- **Indicator 3** (*Total cost/Cost of real users*) - the BMC application is free for customers, therefore indicator was no longer collected.

- **Indicator 4** (*Number of satisfied customers*) - In order to monitor this indicator, a specific evaluation by the BMC users was performed. A temporary “block” (both on iOS and Android) into the BMC app (that can be unlocked answering to a fast set of questions) was implemented. These answers were collected to evaluate the applications and to update them
- **Indicator 5** (*Awareness level*) and **Indicator 6** (*Acceptance level*) - In order to monitor the selected indicators, before and after the release of the BMC application, specific questions were introduced in the “standard” customer satisfaction survey regularly carried out by Brescia Trasporti, namely:
  - awareness level about the BMC application;
  - general use of Smart Phones for data exchange;
  - in case of positive answer to the previous question, the following question was put: Acceptance level toward the BMC application.

## C1.2 Establishing a Baseline

Brescia Mobilità s.p.a. (Brescia mobility company) for years has aimed at promoting the use of public transport making the information about transports modes in Brescia more accessible.

Before the participation to the Civitas project, information about the Local Public Transport (LPT) service were the paper bus timetables brochures, the info points distributed in the city centre, the call centres and the dedicated web site.

The Civitas measure consisted in implementing a modern tool for the access to the information concerning the mobility of the city (the Brescia Mobility Channel application for smart phones) that didn't exist before, therefore, the baseline for the selected indicators is referred to year 2010.

Indicators 1 (N. of downloads of the BMC application) and 4 (Number of satisfied customers) were selected to monitor the success of the released application, after the publication on the AppStore in November 2011 and on "Google Play" Store in July 2012. The Baseline value for these indicators is therefore 0.

Indicators	Baseline (November 2010)
1. N. of downloads of the BMC application	0
4. Number of satisfied customers	0

*Tab.1: baseline of indicators 1 and 4*

Also the remaining indicators n. 5 and 6 (awareness and acceptance level) are referred to the launch of the BMC application, they monitor its success among the LPT users in terms of promotion (ind. 5) and they investigate the attitude of the LPT users toward innovative devices like the smart phones to collect the desired information (ind.6).

In order to evaluate these aspects of the BMC initiative, the indicators were collected in November 2010 (about one year before the release of the application) and their values were taken as reference for the baseline situation.

Indicators	Baseline (November 2010)
5. Awareness level	1,8 %
6. Acceptance level	62,7 %

*Tab.2: baseline of indicators 5 and 6*

### C1.3 Building the Business-as-Usual scenario

The building of the BaU scenario was carried out on qualitative assumptions, mainly based on the interview made by the Brescia Evaluation Group to the Brescia Mobilità SpA General Director in July 2011. In that occasion he said that without the Civitas contribution, probably the Brescia Mobile Channel wouldn't have been developed. As a matter of fact, the participation to Civitas allowed to develop this initiative, that otherwise wouldn't have had priority respect to other initiatives concerning metrobus. As a consequence, the BaU scenario (time horizon 2012, before the metro start up) for all the indicators concerning the launch of the BMC application have 0 value.

Also the indicators n.5 and 6 (awareness and acceptance level) have 0 value because no promotional activity on BMC application would have been done and the potential interest (acceptance) toward the BMC app wouldn't have been investigated.

Indicators	BaU (2012)
1. N. of downloads of the BMC application	0 (no service)
4. Number of satisfied customers	0 (no service)
5. Awareness level	0 (no service)
6. Acceptance level	0 (no service)

Tab.3: BaU of indicators 1, 4, 5 and 6

## 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

Table C2.1.1: Results obtained for the Indicators corresponding to area “economy”

Indicator	Before	After	BaU	Difference: After – Before	Difference: After – B-a-U
1. N. of downloads of the BMC application	Not scheduled	<b>iOS Application:</b>		Not Assessable	Not Assessable
		November 2011: 656	November 2011: 0 (no service)		
		December 2011: 355	December 2011: 0 (no service)		
		January 2012: 435	January 2012: 0 (no service)		
		February 2012: 256	February 2012: 0 (no service)		
		March 2012: 232	March 2012: 0 (no service)		
		April 2012: 261	April 2012: 0 (no service)		
		May 2012: 225	May 2012: 0 (no service)		

		June 2012: 153	June 2012: 0 (no service)		
		July 2012: 192	July 2012: 0 (no service)		
		August 2012: 183	August 2012: 0 (no service)		
		September 2012: 435	September 2012: 0 (no service)		
		<b>Android Application:</b>			
		July 2012(from 27 <sup>th</sup> of July): 27	July 2012(from 27 <sup>th</sup> of July): 0 (no service)	Not Assessable	Not Assessable
		August 2012: 234	August 2012: 0 (no service)		
		September 2012: 401	September 2012: 0 (no service)		

From the first release published till September 2012 more than 3350 were downloaded by Apple store (the first app. was published in November 2011) and more than 650 (the first app. was published in July 2012) were downloaded by Google play.

In Italy more than 24 millions of smartphones were sold ("Il Sole 24 ore", 27<sup>th</sup> of July<sup>22</sup> 2012) and actually Android represents more than 64% among the operative systems available and iOS about 18,8%.

From this data is evident the potentiality of the measure that uses smartphones to spread out dynamic information related to city mobility and to Public transport services available.

## C2.4 Transport

**Table C2.4.1: Measure results for the indicators of the category "Transport"**

Indicator	Before	After	BaU (2012)	Difference: After – Before	Difference: After – B-a-U
4. Number of satisfied customers	Not scheduled	4/5 (average of the evaluation on app from 1 to 5)	0 (no service)	Not Assessable	Not Assessable

The value 4/5 highlighted the app. potentiality and the appreciation of the customers (The pop-up was implemented on iOS by Summer 2012 and on Android by the first release, also published in Summer 2012).

<sup>22</sup><http://www.ilsole24ore.com/art/impresa-e-territori/2012-07-27/solo-smartphone-salvano-spesa-064425.shtml?uid=AbkZgUEG&fromSearch>

[http://www.ilsole24ore.com/pdf2010/SoleOnline5/Oggetti\\_Correlati/Documenti/Tecnologie/2012/08/mercato-cellulari-sistema-operativo.pdf?uid=f26f4776-e607-11e1-8021-95f069af09c4](http://www.ilsole24ore.com/pdf2010/SoleOnline5/Oggetti_Correlati/Documenti/Tecnologie/2012/08/mercato-cellulari-sistema-operativo.pdf?uid=f26f4776-e607-11e1-8021-95f069af09c4)

For further information "Ict Market Report 2012/13" published by Eito (European information technology observatory) or Gartner (information technology research and advisory company) in the second four-month period of 2012 called "Worldwide Mobile Device Sales to End Users by Operating System in 2Q12"

This good result is mainly related to the number of upgrades done to improve the quality of the product.

Some consideration about the application can also be pointed out using the comments done by the BMC users and the time of connection of users sessions:

- the information updated in real time related to bike sharing and parking was highly regarded.
- by the publication of dynamic info, the time connection of BMC sessions substantially increased.

Android users seem to have less expectations than the iOS users and their comments are generally higher. This is important issue in relation to transferability.

## C2.5 Society

**Table C2.5.1: Measure results for the indicators of the category “Society”**

Indicator	Before (November 2010)	After (April 2012)	BaU (2012)	Difference: After –Before	Difference: After – B-a-U
5. Awareness level	1,8 %	25,6%	0 (no service)	23,8%	Not Assessable
6. Acceptance level	62,7 %	21,3%	0 (no service)	-41,4%	Not Assessable

The specific questions in the customer satisfaction survey about the BMC were:

- Have you been informed about the Brescia Mobile Channel initiative? (Awareness)
- Are you interested in having an app. providing information about mobility services on your mobile phone? (Awareness)
- Do you think that an infomobility service will be useful for you to move in the city?
- Would you be ready to connect (paying mobile connection) to download updates of dynamic information, as free parking spaces and information about bike sharing stations? (Acceptance)

In order to explain these results about awareness and acceptance level, it was considered important to highlight that customer satisfaction surveys were carried out with the same sample size at different moments, therefore the involved people were different. No specific information campaign was carried out just before the interviews. Even if the awareness level increased from 2010 to 2012, the acceptance level about BMC decreased from 62,7% (2010) to 21,3% (2012). It can be explained considering the kind of question used to measure the acceptance. As a matter of fact, at the beginning of the project, the application was considered static in relation to the mobility information. Therefore, it wasn't necessary to pay the mobile connection to download information. After the first BMC releases, it was possible to implement information updated in real time, therefore the question related to the acceptance was integrated, asking to the interviewees if they would pay the mobile connection to download this new kind of information. The positive answers to the question decreased as only the actual application users accepted to pay the mobile connection. However, it's important to highlight that the in real time updated information were considered very useful by the actual users. Therefore, it was decided to maintain the application free and also to maintain the dynamic information.

## C3 Achievement of quantifiable targets and objectives

No.	Target	Rating
1	Set up of a system providing information services based on context awareness and	**



	<p>urban community involvement</p> <p><i>This objective can be divided into two ones:</i></p> <p><i>1)Application for iOS: the community involvement was measured by ind. 1(N. of downloads of the BMC application).</i></p> <p><i>After (September 2012): 3383</i></p> <p><i>2) Application for Android OS: the community involvement was measured by ind. 1(N. of downloads of the BMC application).</i></p> <p><i>After (September 2012): 662</i></p>	
<p><b>2</b></p>	<p>Information on the city and news</p> <p><i>The implemented app. gives the information about the city and news about this one (Giornale di Brescia e Corriere-Brescia are two local newspapers available since the BMC through release 1.0.1). Therefore the objective was considered achieved in full</i></p>	<p><b>**</b></p>
<p><b>NA = Not Assessed    O = Not Achieved    * = Substantially achieved (at least 50%)</b>  <b>** = Achieved in full    *** = Exceeded</b></p>		

## C4 Up-scaling of results

The BMC application was developed for all the city and it available for all the potential users (not only Brescia citizens) since the release publication is free for iOS and for Android OS.

Therefore, it not seem significant to up-scale the measure.

## C5 Appraisal of evaluation approach

The evaluation approach was based on the project's objective as expressed explicitly in the Evaluation Plan. The approach adopted and used collects the most salient data for the indicators collection, that have to be conveniently chosen in order to monitor the achievement of the measure objectives, especially at a local level.

The indicators were selected at the beginning of Civitas project and the chosen ones belong to the following categories: Economy, Transport and Society.

The indicator 1 ("N. of downloads of the BMC application") was able to monitor the interest of users in the new communication channel, designed and developed during Civitas project.

According to the Annex A of this measure, elaborated for the III year of the Civitas project, namely under the Task 08.05.19 "Evaluation: data collection and monitoring", respect to the original project, the BMC application was published free for all users, therefore indicators 2 ("Total cost/Cost of estimated (or target) users") and 3 ("Total cost/Cost of real users") weren't collected.

The indicator 4 ("Number of satisfied/interested customers"), was related to the Transport category, was collected in order to monitor the level of satisfaction of the actual users. Using the app. after a certain time of the application actual use the following question was put the users: Could you express your satisfaction level about the app.? ( quality assessment is made trough stars)

Indicators 5 ("Awareness level") and 6 ("Acceptance level") were chosen in order to evaluate the interest among the citizens in Brescia (which can be actual users of the app or not, actual users of LPT or not, etc.) about the new mobile application. As already mentioned the following questions had been put during customer satisfaction surveys:

- Have you been informed about the Brescia Mobile Channel initiative? (Awareness)
- Are you interested in havig an app. providing information about mobility services on your mobile phone? (Awareness)
- Do you think that an infomobility service will be useful for you to move in the city?
- Would you be ready to connect (paying mobile connection) to download updates of dynamic information, as free parking spaces and information about bike sharing stations? (Acceptance)

These three specific questions allowed to collect the data; in particular both the ex ante and ex post answers were collected.

## C6 Summary of evaluation results

The key results are as follows:

- **Key result 1** – it was possible to design a “smart” mean of information, related with the view of a "smarter city", also in the occasion of the new metro start up by 2013.
- **Key result 2** – Brescia Mobile Channel was published and constantly improved, taking into consideration also the suggestions from mobile users. Actually, the application provided information about LPT (bus lines, timetable, etc.), bike sharing (free parking spaces, number of bicycle available for each station, etc.) in real time. The application provides also information with news about the city (for example, from local newspapers on line editions).

- **Key result 3** – dynamic information (real time) is more appreciated than the static one, the already submitted release is able to manage all mobility info in real time both for Android and for iOS.
- **Key result 4** – the application was developed both for iOS and Android OS. This choice allowed Brescia Mobilità to reach a larger amount of potential users, as the second operative system was more widespread than the first one, reaching more than the 75% of smartphone market.

### **C7 Future activities relating to the measure**

A constant upgrade of realises is foreseen until the start up of the metrobus. The most important upgrade will be done in relation to the metro start up by 2013, in which new bike sharing stations, and the update considering the new bike sharing stations, which will be installed next to every metrobus station.

Info updated after the final submission of the MERT in October 2012 and already reported in the Annex A of the measure (POINTER revision received on January 2013):

The last release for iOS was published on the Apple Store at the end of October 2012.

## **D. Process Evaluation Findings**

### **D.0 Focused measure**

This measure is not a focused one.

### **D1 Deviations from the original plan**

- **Delay of the application publication for iOS** - the publication of an application on Apple Store requires the evaluation by the service manager and it takes almost two working weeks. As the first releases were published on App store, their updates required time; in addition, before the publication of the first release, there were some problems related to the compatibility with the iPhone4 and iPhone 4S. These difficulties had an effect on Android device, the publication of which was delayed.

### **D2 Barriers and drivers**

Barriers, drivers and actions can be different according the various stages of the measure and linked to the actual conditions.

#### **D2.1 Barriers**

In the sequel main barriers, which have been picked out during the measure implementation, are pointed out:

##### **Preparation phase**

- **Planning barrier** - the choice to start from the application compatible with the iOS required more time, considering many updates of iOS occurred during the measure implementation. These ones caused delays and problems for the application design.

##### **Implementation phase**

- **Technological barrier** - after the iPhone 4 launch, the release of the BMC application for iPhone was delayed for incompatible development tools used for the new device. Therefore the supplier rewrote the application considering the new system environment features.

##### **Operational phase**

- **Planning barrier** - the necessity of Apple store to evaluate all the applications before their publication was considered a barrier. As a matter of fact, it has taken almost 2 weeks and the updating process was slackened. Whereas, the Android application store evaluation usually takes few working days.

#### **D2.2 Drivers**

In the sequel main drivers, which have been picked out during the measure implementation, are pointed out:

##### **Preparation phase**

- **Financial driver** - the availability of Civitas fund was important in order to develop an Infomobility application for mobile devices. This application was considered important for the spread information about the means of transport in Brescia, related to the position of the points of interest (for example, parking, bike sharing stations, etc.).
- **Political/strategic driver** - The BMC application was considered important also in the view of the new metro start, in order to promote an intermodal aptitude of citizens, which have to be informed of the possibility of intermodality among different means of transport. The means of transport information allowed users to chose the kind of journey, considering the time it could keep.
- **Political/strategic driver** - through the smartphone application, it was possible to improve the new image of Brescia as a "smart city". Actually, the new communication mean was considered a fundamental topic in a modest sized city as Brescia, also in the view of the metro start up (2013).

#### **Implementation phase**

- **Organizational driver** - in order to share data about the Infomobility Project, it was important to highlight the necessity to carry out a constructive partnership with the Municipality. Thanks to the information sharing, it was possible to implement a more complete service to users (actual end potential).

## **D2.2 Activities**

#### **Implementation phase**

- **Target group organization** - The activity consisted in the organization of the Target Group, involving the Measure Leaders, responsible for measures which are part of the Metro Package (M02.03 "Development and upgrade of the e-ticketing system in Brescia", M02.02 "Intermodality with public transport in Brescia", M03.03 "P&R facilities for underground and public transport systems in Brescia"), in order to share the expectations of the this specific communication channel and its management modes. as a matter of fact, the close examination of the intermodality potentialities as been considered fundamental.

#### **Operational phase**

- **Strict collaboration with application designers** - an important topic, which helped in the measure success was the strict collaboration among Brescia Mobilità and the designers of the application. It was necessary not only to get over problems related with the information to give (for example, bus lines and timetables updated), but also to satisfy as possible the users direct requests about new information to be added to the application.

## **D3 Participation**

### **D.3.1 Measure partners**

- **Brescia Trasporti s.p.a.** - the partnership was considered fundamental. As a matter of fact, in the application information about LPT has been implemented and it was necessary to create a database (not existing before Civitas project) to manage easily the data about bus lines and timetables (not using pdf format, as the existing web site do) also on mobile device.

- **Sintesi s.p.a.** - this society, which has managed parking and bike sharing services in Brescia, had an important role in the implementation of real time information about the free parking spaces and bicycles (of bike sharing) available in each station. The connection between the BMC application and the Sintesi database was direct and updated in real time.
- **Application designer for iOS and Android OS** - The strict collaboration among designers and Brescia Mobilità was considered necessary to develop the application, as suitable as possible to the users requirements. It was important to highlight also the necessity to update the published releases, considering the several updates of both the operative systems.

### D.3.2 Stakeholders

- **Brescia Municipality** - considering that the BMC implemented also information about the city (newspapers links and points of interest), it has been involved to share and define the kind of information, which have been considered important and useful for users.
- **Bike sharing, LPT and parking actual users** - the actual users were considered fundamental stakeholders, as the BMC made available through only one communication channel several information about means of transports, which can be potentially integrated. As a matter of fact, the information updated in real time were especially appreciated by actual users.

## D4 Recommendations

### D.4.1 Recommendations: measure replication

- **Easily replicable functions of the smartphone application** - This application can offer a set of functions that can be easily replicated in other cities, innovating and deploying a new personal navigation paradigm based on the evolving capabilities of smartphones. The image of smart intermodality can be implemented by the use of an app like the BMC. As a matter of fact thanks to the smartphones, it is possible to provide also information updated in real time, to actually implement the integration among different means of transport (such as, LPT, bike sharing, parking, car sharing, etc.).
- **Use of Google Transit** - It's important to highlight that the choice to publish the urban and suburban buses network on Google Transit allowed the developer not to update the application when the routes or timetables change, but it is sufficient to update the information on Google Transit. When users access the application, he automatically finds updated information

### D.4.2 Recommendations: process

- **Strict collaboration with designer to the success** - the strict collaboration with the designer and users (as a group of expertises) of the application is considered fundamental for the success of the measure, in order to solve the technical problems related to the smartphone operative systems. Furthermore, the application update has to be as constant as the mobile operative systems one, in order to ensure the compatibility with smartphone device.
- **Test the acceptance level of new mean of information** – it was considered important to study in-depth the acceptance and the interest of actual and potential users of a new mean of information, based on a smartphone application. It's possible to carry out this study, for example, through specific surveys. This step allows to design an application more suitable to the citizens needs and direct requests.

- **Start from the most widespread OS** – it's recommendable to start the develop of a new device, as BMC, considering the most widespread OS and also the less restricted one, as Android OS. As a matter of fact, it's easier to design the application, with less problem of compatibility. After this step, it has been considered useful to shift the design on more sectional operative systems, as iOS. Furthermore, it's important to highlight that Android store evaluation of application usually takes few working days, the Apple store evaluation almost 2 working weeks. This fact has to be considered to calibrate the time to be dedicated to the necessary updates of the application.
- **Chose the most interesting information** – it was highlighted that the quality of the information provided with the application influenced the actual use of this one, after the download on a smartphone. As a matter of fact, for example, the information updated in real time have been really appreciated by actual users.
- **Free download in the first application development and updates** – it is advisable, at the beginning, to publish the application with a free download. Only after an important improvement of the available information and a certain period of experimentation, it has been considered feasible to demand a payment for the application download to who doesn't have active season ticket of bike sharing, car sharing, LPT (urban and suburban), parking and other public means of transport.

## Annex 1: Ex ante and Ex Post data collection

- **Indicator 1** (*N. of downloads of the BMC application*) – No ex ante foreseen.

**First data collection** (17 January 2012, after a short period after the release of the BMC app on the Apple Store – November 2011). This indicator is collected tracking the number of users who downloaded BMC from the App store, in order to monitor the success of the initiative.

### AFTER DATA COLLECTION:

Year	Month	iOS application downloads per month
2011	November	656
	December	355
2012	January	435
	February	256
	March	232
	April	261
	May	225
	June	153
	July	192
	August	183
	September	435

*Tab.A1.1: iOS application downloads per month*

Year	Month	Android OS application downloads per month
2012	July	27
	August	234
	September	401

*Tab.A1.2: Android OS application downloads per month*

- **Indicator 2** (*Total cost/Cost of estimated (or target) users*) – **NO MORE COLLECTED**
- **Indicator 3** (*Total cost/Cost of real users*) - **NO MORE COLLECTED**
- **Indicator 4** (*Number of satisfied customers*) - In order to monitor this indicator, two kind of evaluation activities are foreseen: Specific questions to the BMC users will be made. A temporary “block” into the BMC app (that can be unlocked answering to a fast set of questions) has been implemented.  
  
4/5 (average of the evaluation on app from 1 to 5)
- **Indicator 5** (*Awareness level*) and **Indicator 6** (*Acceptance level*) – In order to monitor the selected indicators, before and after the release of the BMC application, specific questions are introduced in the “standard” customer satisfaction survey regularly carried out by Brescia Trasporti. This standard survey is made 3 times a year interviewing the users about general aspects of the LPT bus service. The interview amount is 1200. People are interviewed at the bus



stop and by phone. For the interviews at the bus stops, the bus stops are selected with a particular focus on terminals or on specific lines; for the phone interviews a casual extraction among the people registered in the lists of the holders of Omnibus Card is made according to the typology of trip loaded. 700 questionnaires are proposed face to face at the bus stops and/or on the busses of Brescia Trasporti and 500 are proposed by phone interview according to the references of Brescia Trasporti. The activity has been planned associating traditional surveys (structured questions, semi structured and open ones) and innovative methodologies tested by Summa (the company in charge of making the surveys) that allows to manage the information coming from indirect survey. According with the methodologies used, the interviewee is able to express its position or opinion about certain subject without preconceived answers and taking over all content delivered spontaneously. The obtained indications are introduced into a dynamic database and analyzed carefully, focusing on key concepts and on the additional ones, and it is possible to draw assessments and rigorous statistics, qualitative in-depth.

Table XXX **The evolved informative system**

100% total people involved  
 100% gave the personal information to characterize the sample

Variables pointed out

Questions subjects	Absolute number	Percentage (%)	Closer Analysis tables
Awareness about the Brescia Mobile Channel application	<b>XXXX</b>	<b>XXXX</b>	Tab.XXX
Interest to have mobility information on own smartphone	<b>XXXX</b>	<b>XXXX</b>	Tab.XXX
Acceptance towards the necessity to download information about city mobility through internet connection on own phone	<b>XXXX</b>	<b>XXXX</b>	Tab.XXX

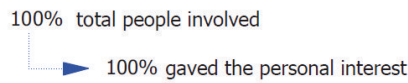
Table XXX **Awareness level about the Brescia Mobile Channel application**

100% total people involved  
 100% gave the personal information to characterize the sample

Have you been informed about the Brescia Mobile Channel initiative?

Answers	Absolute number	Percentage (%)	Medium opinion of the sample
Yes	<b>XXX</b>	<b>XXX</b>	<b>XXX</b>
No	<b>XXX</b>	<b>XXX</b>	<b>XXX</b>

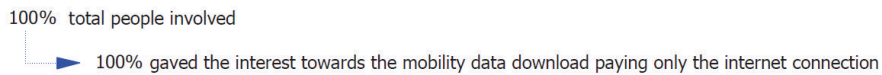
Table XXX **Interest to have mobility information on own smartphone**



Are you interested in having an app. providing information about mobility services on your mobile phone?

Answers	Absolute number	Percentage (%)	Medium opinion of the sample
Yes	XX	XX	XXX
No	XX	XX	XXX

Table XXX **Acceptance towards the necessity to download information about city mobility through internet connection on own phone**



Would you be ready to connect (paying mobile connection) to download updates of dynamic information, as free parking spaces and information about bike sharing stations?

Answers	Absolute number	Percentage (%)	Medium opinion of the sample
Yes	XXX	XXX	XXX
No	XXX	XXX	XXX

Fig.A1.1-A1.2-A1.3-A1.4: example of the form used during the data collection of Awareness and Acceptance

**EX ANTE DATA COLLECTION (November 2010):**

Specific questions has been introduced in the “standard” customer carried out in **November 2010**, namely:

1. Awareness level about the BMC application;
2. General use of Smart Phones for data exchange;
3. In case of positive answer to the previous question, the Acceptance level toward the BMC application.

*Results:*

	YES	NO	Totals
1. Awareness level about the BMC application	22 (1,8%)	1180	1202
2. General use of Smart Phones for data exchange	51 (4,4 %)	1151	1202

3. In case of positive answer to the previous question, Acceptance level toward the BMC application	32 (62,7 %)	19	51
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*Tab.A1.3: iOS application downloads per month*

ind. 5 Awareness level about the BMC application = 1,8 %

ind. 6 Acceptance level toward the BMC application = 62,7 %

**AFTER DATA COLLECTION (April 2012):**

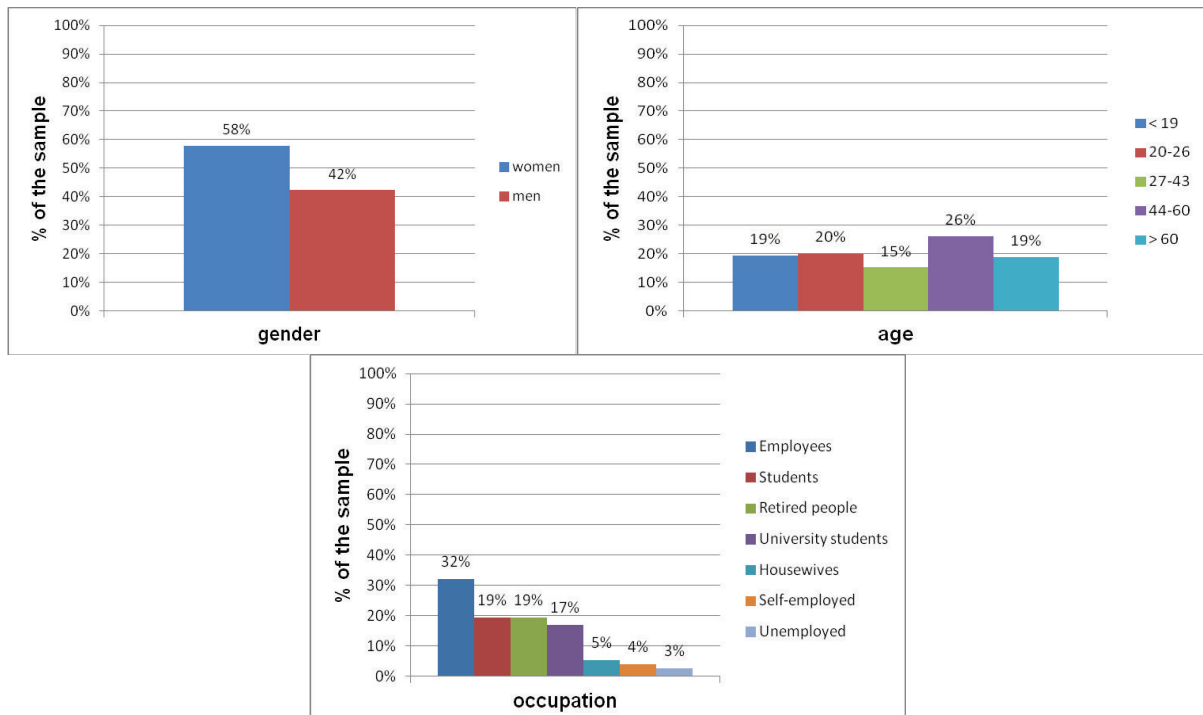
	YES	NO	Totals
1. Awareness level about the BMC application	307 (25,6%)	903	1230
2. General use of Smart Phones for data exchange	86 (7,2 %)	1144	1230
3. Acceptance level toward the BMC application	263 (21,3 %)	967	1230

*Tab.A1.4: iOS application downloads per month*

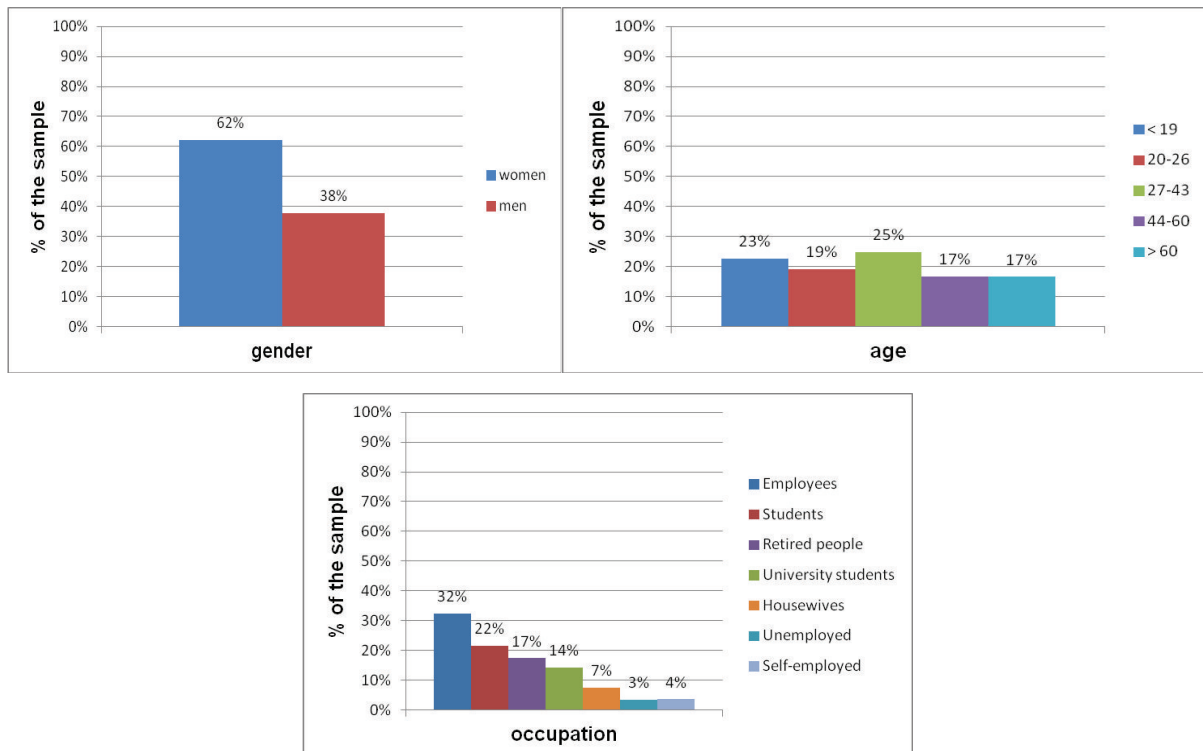
ind. 5 Awareness level about the BMC application = 25,6%

ind. 6 Acceptance level toward the BMC application = 21,3 %

As regards the sample composition customer satisfaction survey, in the figures below are reported the characteristics related to the questionnaire carried out in November 2010 and in April 2012.



*Fig. A1.5-A.6-A1.7: Information about gender, age and the occupation of the sample involved in the customer satisfaction survey in November 2010*



*Fig. A1.8-A1.9-A1.10: Information about gender, age and the occupation of the sample involved in the customer satisfaction survey in April 2012*

## Annex 2: Focus Group Activities


	Brescia University	<b>FOCUS GROUP ACTIVITIES</b>	<b>CIVITAS MODERN</b>
<b>Title</b>	<b>Impostazione dei Focus Group</b>		
<b>Metro Package measures</b>	M02.02 Intermodality with public transport M02.03 Development and upgrade of the e-ticketing system M03.03 P&R facilities for underground and public transport system M08.05 Brescia Mobile Channel		
<b>Other stakeholders</b>	- Brescia Municipality - Sutera - Verità		
<b>STEP 1</b>	<b>Accoglienza e riscaldamento (circa 10 minuti)</b>		
	1) Presentazione degli invitati al gruppo di discussione.		
	2) Presentazione dei ricercatori.		
<b>STEP 2</b>	<b>Introduzione al tema della discussione (circa 10 minuti)</b>		
	3) Motivazione e condizioni (fasi e tempi) dell'incontro di gruppo in data _____		
	- Metro Package (MP); - lighthouse measures; - indicatori.		
	4) Gli obiettivi dell'incontro sono:		
	- condivisione metodologia per lo svolgimento del Focus Group; - attuazione del Focus Group.		
<b>STEP 3</b>	<b>Fasi della ricerca: descrittiva, riflessiva e propositiva</b>		
	<b>TEMA</b>	<b>MISURA</b>	<b>METROPACKAGE</b>
	Azzeramento della conoscenza e condivisione degli input (ipotesi scenari)		
	Potere decisionale in relazione al tipo di scelta da attuare		
	Percezione di rischi/problematiche oltre Civitas (ad esempio, entrata in esercizio della metro)		
	Ruolo di ciascun intervento per il funzionamento del MP: - bike sharing; - parcheggi; - BMC; - intermodalità; - e-ticketing; - politiche di tariffazione; - gestione della mobilità.		
<b>STEP 4</b>	<b>Verifica di fattibilità e scelta finale</b>		
<b>STEP 5</b>	<b>Assegnazione dei ruoli</b>		
<b>STEP 6</b>	<b>Sintesi dei risultati:</b>		
	- per singola misura; - per Metro Package		

Fig.A2.1: General structure of the Focus Group activities


		Brescia University	<b>FOCUS GROUP ACTIVITIES</b>	<b>CIVITAS MODERN</b>
<b>Title</b>		<b>Impostazione dei Focus Group</b>		
<b>Metro Package measures</b>		M02.02 Intermodality with public transport M02.03 Development and upgrade of the e-ticketing system M03.03 P&R facilities for underground and public transport system M08.05 Brescia Mobile Channel		
<b>Other stakeholders</b>		- Brescia Municipality - Sutera - Verità		
<b>MEETINGS</b>		<b>Partner</b>	<b>PRESENCE</b>	
Date: <b>15 november 2011</b>		Brescia University	Bulferetti, Cadei, Ferrari	
		BSM	Sbardella, Gussago, Ragnoli, Pace	
		BST	Sutera	
		CBS	Bresciani	
		BICIMIA	Verità	
<b>Main topics</b>		1) Scambio ERT tra i vari Partner per condividere le attività previste nelle diverse misure; 2) Rivedere i contenuti insieme, in modo da avere COERENZA nella descrizione delle misure; 3) Prevedere un rimando corretto e concordato in tutte le misure collegate (es. 02.02 e 02.03); 4) Coinvolgimento Bicimia (geom. Verità) per testare l'efficacia della distribuzione delle tessere OMNIBUS e il loro funzionamento per gestione P&R (verificare tracciabilità dei dati) e scegliere un Parcheggio + BICIMIA (x es. in centro), dove si hanno dati e uso della OMNIBUS 5) considerare solo timbrature e uso delle OMNIBUS (no altre carte!!!) 6) necessità di ricevere (dal CBS???) una tavola con la localizzazione dei Parcheggi per la Metropolitana e il numero degli stalli (deve essere base condivisa!!!) 7) usare modello di BSM come previsto nella M02.02 8) concentrarsi anche solo su uno scenario, Parcheggio e analizzarlo benissimo!! 9) portare dati e info al prossimo incontro (15 dicembre) 10) rendicontare questa attività nel Process Evaluation Form (Focus, coordinamento e condivisione) 11) vedere indicatori delle misure, in particolare quelli legati alla simulazione metropolitana e collaborare per la raccolta (usare modello della M02.02)		
		Prossimo incontro fissato per il 19 Dicembre 2011 a Brescia Mobilità		

Fig.A2.2: Focus Group activities – Convocation of the 1<sup>st</sup> meeting (15 November 2011)


	Brescia University	<b>FOCUS GROUP ACTIVITIES</b>	<b>CIVITAS MODERN</b>
<b>Title</b>	<b>Impostazione dei Focus Group</b>		
<b>Metro Package measures</b>	M02.02 Intermodality with public transport M02.03 Development and upgrade of the e-ticketing system M03.03 P&R facilities for underground and public transport system M08.05 Brescia Mobile Channel		
<b>Other stakeholders</b>	- Brescia Municipality - Sutura - Verità		
<b>MEETINGS</b>	<b>Partner</b>	<b>PRESENCE</b>	
<b>Date: 19 dicembre 2011</b>	Brescia University	Bulferetti, Cadei, Ferrari	
	BSM	Sbardella, Gussago, Ragnoli, Pace	
	CBS	Bresciani	
<b>Main topics</b>	1) Verifica dello scambio dei dati di input per la coerenza degli scenari per i parcheggi; 2) inquadramento delle misure M02.03 e M08.05 (in qualità di possibili lighthouse measures) all'interno del Metro Package; 3) cronogramma della M02.03; 4) soluzioni trovate per la registrazione dell'utilizzo del servizio P&R per gli utenti occasionali (sistemi, fornitura, test); 5) determinazione e consapevolezza della capacità decisionale che il ML ha come responsabile della misura; 6) analisi della percezione di rischi/problematiche oltre Civitas; 7) definizione del ruolo del Mobility Manager all'interno del Focus Group 8) proposta dell'organizzazione di un Focus Group aperto al pubblico (individuando persone da coinvolgere) per avere opinioni e aspettative da parte dell'utenza in merito a bike sharing, parcheggi, BMC, ecc., da considerarsi come azione di dissemination		
	Prossimo incontro possibile: prima della riunione tecnica di febbraio		

Fig.A2.3: Focus Group activities – Convocation of the 2<sup>nd</sup> meeting (19 December 2011)