



ARCHIMEDES

Monza

T19.1 – Demand Responsive Bus Service in Monza

City of Monza

January 2012



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1. Introduction

1.1 Background CIVITAS

CIVITAS - cleaner and better transport in cities - stands for CIty-VITAlity-Sustainability. With the CIVITAS Initiative, the EC aims to generate a decisive breakthrough by supporting and evaluating the implementation of ambitious, integrated sustainable urban transport strategies that should make a real difference for the welfare of European citizens.

CIVITAS I started in early 2002 (within the 5th Framework Research Programme); **CIVITAS II** started in early 2005 (within the 6th Framework Research Programme) and **CIVITAS PLUS** started in late 2008 (within the 7th Framework Research Programme).

The objective of CIVITAS-Plus is to test and increase the understanding of the frameworks, processes and packaging required to successfully introduce bold, integrated and innovative strategies for clean and sustainable urban transport that address concerns related to energy-efficiency, transport policy and road safety, alternative fuels and the environment.

Within CIVITAS I (2002-2006) there were 19 cities clustered in 4 demonstration projects, within CIVITAS II (2005-2009) there were 17 cities in 4 demonstration projects, whilst within CIVITAS PLUS (2008-2012) there are 25 cities in 5 demonstration projects. These demonstration cities all over Europe are funded by the European Commission.

Objectives:

- To promote and implement sustainable, clean and (energy) efficient urban transport measures
- To implement integrated packages of technology and policy measures in the field of energy and transport in 8 categories of measures
- To build up critical mass and markets for innovation.

Horizontal projects support the CIVITAS demonstration projects & cities by:

- Cross-site evaluation and Europe wide dissemination in co-operation with the demonstration projects
- The organisation of the annual meeting of CIVITAS Forum members
- Providing the Secretariat for the Political Advisory Committee (PAC)
- Development of policy recommendations for a long-term multiplier effect of CIVITAS.

Key elements of CIVITAS

- CIVITAS is co-ordinated by cities: it is a programme "of cities for cities"
- Cities are in the heart of local public private partnerships
- Political commitment is a basic requirement
- Cities are living 'Laboratories' for learning and evaluating.



1.2 Background ARCHIMEDES

ARCHIMEDES is an integrating project, bringing together 6 European cities to address problems and opportunities for creating environmentally sustainable, safe and energy efficient transport systems in medium sized urban areas.

The objective of ARCHIMEDES is to introduce innovative, integrated and ambitious strategies for clean, energy-efficient, sustainable urban transport to achieve significant impacts in the policy fields of energy, transport, and environmental sustainability. An ambitious blend of policy tools and measures will increase energy-efficiency in transport, provide safer and more convenient travel for all, using a higher share of clean engine technology and fuels, resulting in an enhanced urban environment (including reduced noise and air pollution). Visible and measurable impacts will result from significantly sized measures in specific innovation areas. Demonstrations of innovative transport technologies, policy measures and partnership working, combined with targeted research, will verify the best frameworks, processes and packaging required to successfully transfer the strategies to other cities.

1.3 Participant Cities

The ARCHIMEDES project focuses on activities in specific innovation areas of each city, known as the ARCHIMEDES corridor or zone (depending on shape and geography). These innovation areas extend to the peri-urban fringe and the administrative boundaries of regional authorities and neighbouring administrations.

The two Learning Cities, to which experience and best-practice will be transferred, are Monza (Italy) and Ústí nad Labem (Czech Republic). The strategy for the project is to ensure that the tools and measures developed have the widest application throughout Europe, tested via the Learning Cities' activities and interaction with the Lead City partners.

1.3.1 Leading City Innovation Areas

The four Leading Cities in the ARCHIMEDES project are:

- Aalborg (Denmark);
- Brighton & Hove (UK);
- Donostia-San Sebastián (Spain); and
- Iasi (Romania).

Together the Lead Cities in ARCHIMEDES cover different geographic parts of Europe. They have the full support of the relevant political representatives for the project, and are well able to implement the innovative range of demonstration activities.

The Lead Cities are joined in their local projects by a small number of key partners that show a high level of commitment to the project objectives of energy-efficient urban transportation. In all cases the public transport company features as a partner in the proposed project.

2. Monza

Monza is a city on the river Lambro, a tributary of the Po, in the Lombardy region of Italy, some 15km north-northeast of Milan. It is the third-largest city of Lombardy, with approximately 121,000 inhabitants. Monza is the most important economic, industrial and administrative centre



of the Brianza area, supporting textile industry and publishing trade. The number of companies is 58,500, i.e. a company for every 13 inhabitants. Monza is best known for its Grand Prix.

Monza is affected by a huge amount of traffic crossing the city to reach Milan, and the highways nodes located between Monza and Milan. It is also an important node in the railways network, crossed by routes connecting Milan with Como and Switzerland, Lecco and Sondrio, Bergamo and Brianza. "Regione Lombardia", which in the new devolution framework started in 1998, has full responsibility for establishing the Local Public Transportation System (trains, coaches and buses) and created a new approach for urban rail routes using an approach similar to the German S-Line or Paris RER.

Monza recently became the head of the new "Monza and Brianza" province, with approximately 750,000 inhabitants, so will gain the full range of administration functions by 2009. Plan-making responsibilities and an influence over peri-urban areas will require the city to develop new competencies.

In this context, the objective of the City of Monza in participating in CIVITAS as a Learning City is to set up an Urban Mobility System where the impact of private traffic can be reduced, creating a new mobility offer. Alternative modes will become increasingly significant, leading to improvements to the urban environment and a reduction in energy consumption (and associated pollution).

3. Background to the Deliverable

The Public Transport (PT) service in Monza is structured with different timetables according to different hours of the day (peak/off-peak hours) and to different types of days (working/school days, Saturday, Sundays, Holidays etc). There is also a night time service, operational since November 2007, which has high management costs and is scarcely used by citizens. This service is a development from the previous situation, when the night service was guaranteed using the same lines as the daytime service but with very low frequencies.

Measure no. 19 within the ARCHIMEDES project expects that Monza, with the co-operation of ATM/NET, the PT operator in the urban area of the city, assesses the feasibility of a demand responsive bus service, in order to demonstrate a Demand Responsive Transport Service (DRTS).

The introduction of a demand responsive connection service implies the creation of a more efficient service to citizens, with the aim of ensuring adequate responsiveness to mobility demand of citizens as well as to encourage modal shift. In addition, this kind of service makes Urban Public Transport more energy-efficient in periods of low demand.

PT in Monza was managed by the Company "Trasporti Pubblici Monzesi - TPM" (100% owned by Commune of Monza) until September 2009, after the City Council decided to merge the branch of TPM concerning PT with the Company "Nord-Est Trasporti -NET". This is a PT company already operating in Monza, almost totally owned by the Company "Azienda Trasporti Milanesi – ATM" Milan, the largest public PT Operator of the area of Milan.

After the merger, the Municipality of Monza decided that the research stage of Measure no. 19 would be developed by Municipality technicians, whilst NET would develop the demonstration stage of the DRTS, exploiting the experience of ATM Milan.



The measure covers 2 tasks.

RTD Task: Public Transport Demand Responsive Connecting Service Design:

The Commune of Monza will undertake a study to plan the DRTS in order to evaluate if it can be successfully activated in Monza. In order to offer a PT service in off-peak periods, and to make the service more efficient in periods of low demand, it is necessary to replace the nocturnal service, which is scarcely used and very expensive. The study will investigate timing, lines, cost-benefit analysis, investments, return on investment (ROI), and consultation with citizens about the service.

DEMO Task: <u>Demand Responsive Public Transport Connections</u>:

The Commune of Monza, with the co-operation of ATM/NET (which has already implemented DRTS in Milan) will start a DRTS within the city. Using smaller vehicles, this will be operated during off-peak periods (especially late evening) to make PT services more energy-efficient in periods of low demand and more responsive to citizens' needs. After this first demonstration stage, it will be possible to evaluate if such a scheme can be extended to from especially poorly served areas in order to connect these areas to main PT lines.

3.1 Summary Description of the Task

When ARCHIMEDES project proposal was first submitted in 2007, the idea was to replace the night service, which is very expensive and underused, with a DRTS. The PT service was then managed by TPM, a PT company 100% owned by Commune of Monza. In September 2009 TPM merged with NET, a PT company in which ATM (the company which runs the bus and the metro service in Milan) has a stake, so urban lines are now managed by NET.

Immediately after the merging procedure, NET could not devote resources to the ARCHIMEDES project measures due to pressing administrative requirements following the merger.

Moreover, in June 2009, Monza became capital of the new Province of Monza and Brianza: administrative offices of the new public body started to be operational, but the inheritance process for the PT contract was not completed for almost two years, so there was no administrative office to refer to for questions relating to PT. This meant the Commune of Monza could not amend the running contract for PT, in order to replace the night service with the DRTS.

Only on May 1st 2011 did the contract for PT bus service, previously managed by Province of Milan, pass into the administration of Province of Monza, which will manage it until its expiry date, scheduled in 2014. However, at the moment the Province is not willing to test the DRTS, since there is a need to acquire full knowledge of contract terms before any modification. Without the Province authorization, it is very hard for the Commune of Monza to implement a DRTS without incurring very high costs. For these reasons, it was decided to implement the measure in a reduced way, in order to test the interest of citizens in such a service.

Demand Responsive Transport Service

4.1 Description of the Work Done

ARCHIMEDES Deliverable R19.1 describes the study and review phase that was conducted to establish the model of DRTS to be applied in Monza. This deliverable, number T19.1, describes the implementation of the preferred DRTS model.



4.2 Summary of the Activities Undertaken

4.2.1 Attempt to Test a Traditional Demand Responsive Transport Service (DRTS)

An attempt to plan a traditional DRTS, with a call centre for bookings and a bus equipped with an on-board unit to receive journey plan was made, but operational costs were too high for the Commune of Monza: actually, NET had presented the following estimate:

- Software for DRTS management € 6.500
- Communication activities and bus stops preparation € 2.500
- Call centre activity 50 € a day
- Bookings management 500 €
- Bus service 400 € a day.

Such an estimate was too expensive for the Commune of Monza to be sustainable with its own funds, especially in this period of economical crisis, when cuts to funds coming from the central government have already led local entities to reduce PT services whilst raising fares.

4.2.2 Implementation of a Shuttle Bus Service

For these reasons, it was decided to implement a reduced DRTS, aimed at serving one particular district of the city of Monza and only in particular situations, like important events (concerts, sport events, summer shopping evenings, events for the Monza Patron Saint Fair and initiatives for the Grand Prix in September).

The chosen district is San Fruttuoso, an area of the city which was historically divided from the rest of the urban area by State Street (SS) no. 36, which in Monza is named SP5 and can be seen in the following figure.

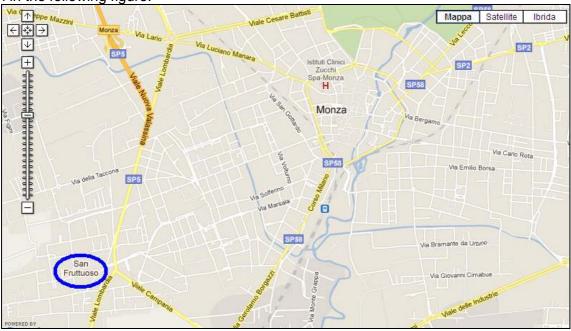


Figure 1: San Fruttuoso and SS36



During the past two years, important street works have been in progress in this area. A tunnel in the urban part of SS36 is being built to reduce through traffic which affects the San Fruttuoso district: this tunnel will not create an alternative route, but it will allow traffic directed northbound (towards Seregno, Lecco and Sondrio) to pass below the SS36 without affecting Monza.

These street works have resulted in significant inconvenience for the citizens of the district. It has been necessary to close several streets to traffic, to demolish an overpass and create an alternative viability while digging to build a tunnel. This will be the longest urban tunnel in Europe (1.6 km).



Figure 2: Aerial view of San Fruttuoso district with alternative route for San Fruttuoso residents

It was decided to implement a normal shuttle bus service to be booked by telephone or e-mail. No call centre was activated, but bookings were registered by the Mobility and Transportation Office of the Commune of Monza. In order to reduce costs, it was decided to use the kind of buses used daily for the PT service.

The bus runs from San Fruttuoso district to the venue of the event for which the service has been activated, along traditional PT routes, and stops at fixed bus stops where customers have asked to get on the bus when booking.

The service is free of charge during the demonstration period in order to attract the largest number of users. The shuttle bus is activated with a minimum of five bookings, in order to operate efficiently.

4.2.3 Identification of Events

Important events within Monza were identified, which could attract many people interested in reaching the venue from San Fruttuoso without using their car. More specifically, the chosen events were five live concerts by prominent artists and fireworks during Monza Patron Saint Fair (held in Villa Reale), other traditional events held during the Grand Prix week (live concert and charity football match at the Brianteo stadium), the European Female Volleyball Championship and the Cinema Festival.



4.2.4 Information Campaign

For each event, strong communication activity was undertaken in order to inform citizens of the service. A press release was sent to all local newspapers. NET placed notices on its vehicles and at bus stops served by shuttle buses and put information on its website. A page is dedicated to the service both on the Municipality and ARCHIMEDES websites, in order to reach the largest number of citizens. Information was put on Facebook page of the Municipality, where a memorandum is placed in the days before an event in order to remind people to book the shuttle bus in good time

Annex 1 contains several examples of relevant press releases and web pages.

4.2.5 Implementation of the Service

The bus starts from the traditional terminus in San Fruttuoso at 8.00 p.m. taking customers to the venue or the event and returning them after. Drivers are supplied with the list of bookings, to be able to check if every person is present for both journeys, so not to leave anyone behind, especially on the return journey.

The two routes run by the shuttle bus on demand are depicted in the following figure (in red the route from San Fruttuoso to Villa Reale and in blue the route to Brianteo stadium).



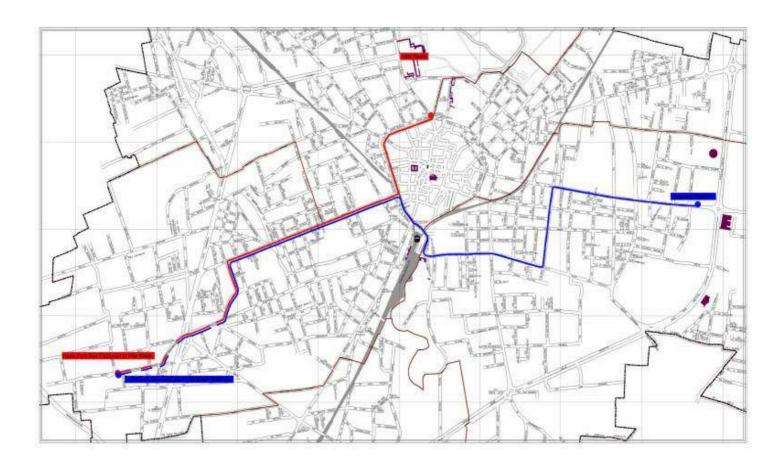


Figure 3: Map of shuttle bus routes on demand

4.3 Main Outcomes

The initiative was particularly welcomed for the fireworks in the Park of Monza, when 82 passengers were transported and two normal buses had to be activated.

No bookings were made for the live concerts, so the service was not activated.

It was intended to repeat the trial in September for bigger events taking place around the Grand Prix of Monza (e.g. concerts, shows). However, the whole bus fleet was needed for the Grand Prix itself, an event that always poses a challenge for Monza's mobility management. In fact, part of the city is usually closed to traffic and people from all over the world are encouraged to reach Monza by bus or by train, and special, free shuttle buses take people from the train station and Park and Ride locations directly to the circuit.



Another occasion for the activation of the service was the European Female Volleyball Championship, which was held in Monza sports hall, when it was activated for three days in order to reach the location of the matches from the railway station, since many people were coming to Monza from Milan.

For this event the initiative did not achieve the same success gained for the fireworks, and about thirty people were transported for the three matches...

Unfortunately, during the Cinema Festival, no bookings for the service were made.

4.4 Problems Identified

Apart from problems described in Section 3.1 due to the existing administrative framework. which made it impossible to test the traditional DRTS, no particular problems in planning the service were identified.

It must be emphasised that this kind of service, although not a traditional DRTS, is definitely less expensive than the normal night time service. (The Commune of Monza will only pay for the bus service, with an estimated cost of 300 € for each service). It can be considered a good starting point to test the interest of citizens in the service.

Nevertheless, except for the fireworks event, when the activation of the DRTS was welcomed by citizens, people are not used yet to this kind of service. So requests for some of the following events were not enough to activate the service, in spite of a wide information campaign.

Moreover, having no charge for the service is useful to stimulate people to test the novelty; on the other hand, this means people may not realize that the cost of the service falls on the community., At the end of one of the matches of the European Women's Volleyball Championship, just one person caught the bus (instead of the 8 people which had booked the service). This means the cost of 300 € was paid for only one person, which is not sustainable in terms of cost-benefit analysis.

4.5 Mitigating Activities

It was easy to manage bookings through the staff of Mobility and Transportation Office. Due to the novelty of the initiative, the number of phone calls and e-mails received could be dealt with during ordinary job activity. If the service was offered for every event in the city, it would be necessary to activate a call centre to manage bookings.

4.6 Future Plans

After the short demonstration of the DRTS, it would be premature to activate this kind of service for travel to/from subsequent events in the city.

Nevertheless, the night and holiday PT service is still underused, in spite of its high costs. Thus, in future it will be very important to plan surveys and passengers' counts to understand if the night and holiday service can be replaced with a DRTS. This approach could prove successful, especially considering that central Government funding for the PT service is being



further reduced due to the economic crisis: as a consequence, there is a strong need to optimize the service using alternative forms of delivery, especially in off-peak hours and nonworking periods, to offer PT users a service that provides all necessary connections, but does not represent a waste of resources.

Even though the implementation of a DRTS may be rather expensive at the beginning, if such a service is launched in the future, it could be included as part of next PT service tender. This will be held by the Commune of Monza in 2014 now that it is head of the new Province. In this way, costs can be more easily depreciated with a long term contract (the current contract runs for seven years).

It will also be important to explain to people that, once the service is activated, costs will be incurred. Even though in the future fare payments could be requested, these will never be enough to fund the service fully. So it is important that people who book the service do use it for better efficiency of the measure and to avoid facing high costs for an underused service.



Annex 1: Examples from information campaign



Il Tun Cortune





Figure 4: Press releases on "Il Giorno" (local newspaper)



INFORMAZIONI AL PUBBLICO

Navetta gratuita a chiamata nel quartiere di San Fruttuoso

Per agevolare i cittadini residenti nel quartiere San Fruttuoso, il Comune di Monza ha previsto l'attuazione di un servizio gratuito di bus navetta a chiamata per raggiungere la Villa Reale, in occasione degli eventi della Sagra di San Giovanni.

La navetta partirà alle ore 20 dal quartiere San Fruttuoso, dal capolinea di via Marelli, e raggiungerà piazza Citterio effettuando il seguente percorso:

• via Risorgimento - viale Romagna - via Meda - via Pitagora via Cavallotti - via Manzoni - via Appiani - piazza Citterio.

Al termine degli eventi (23,30-00,30) il bus efettuerà il percorso inverso.

Il servizio, gratuito, sarà attuato con un numero minimo di 5 prenotazioni.

Per le prenotazioni contattare il numero 039/2832838-39-40 dalle ore 8,30 alle ore 12,30 e dalle 14,00 alle 16,30 da lunedì a giovedì e dalle 8,30 alle 12,30 al venerdì, oppure inviare una email all'indirizzo mobilita@comune.monza.it, segnalando la fermata alla quale si intende salire sull'autobus.

Per ulteriori dettagli sul calendario degli eventi e sulle modalità di prenotazione vi rimandiamo al sito del Comune di Monza (www.comune.monza.it)

Esente da Bollo

Figure 5: NET notice on vehicles and on bus stops





Figure 6: Information on NET website

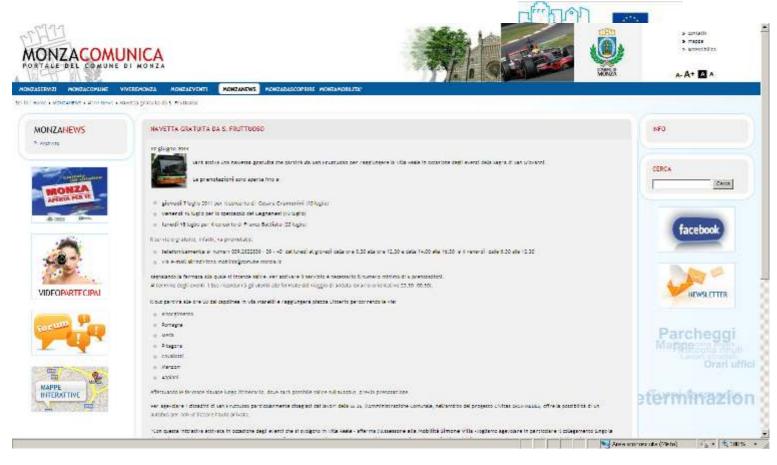


Figure 7: Municipality website



Figure 8: ARCHIMEDES website





Bacheca

Info

Attività degli amici

31 Eventi

Foto

⇔ Newsletter

Informacioni

Video

Blog

Comune di Monza Mi piace

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Album fotografici dei tuoi amici Mostra altri



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A Piace a Antonio Scotti.



Foto bacheca di Antonio Scotti





Caricamenti dal cellulare di Antonio Scotti

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Comune di Monza

Monzaestate 2011 continua...

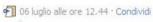
Avete comprato i biglietti per il concerto di Cesare Cremonini? Domenica 10 luglio è vicina!







www.monzaebrianzainrete.it





Comune di Monza Ricordatevi che potete pronotare una navetta gratuita da S. Fruttuoso per i Concerti di Monza Estate! http://bit.ly/iy2IgX

07 luglio alle ore 10.39

Comune di Monza

Spaziogioco: un'occasione per i bambini tra i 3 e i 5 anni per giocare insieme e

Vi aspettiamo tutti i mercoledì di luglio.



Spazio gioco

www.monzaebrianzainrete.it



● 06 luglio alle ore 9.35 · Condividi

Comune di Monza





Anziani a Monza 2011 Disponibile lo Studio Statistico "Anziani a Monza 2011" Info

www.comune.monza.it source: MonzaNews

link: Full Article...

S ore fa tramite NetworkedBlogs · Share





10 Chat (0)

Internet





Figure 9: Municipality Facebook pages