

CiViTAS
Cleaner and better transport in cities

ARCHIMEDES

AALBORG • BRIGHTON & HOVE • DONOSTIA-SAN SEBASTIÁN • IASI • MONZA • ÚSTÍ NAD LABEM

Monza

T62.1 – Cycle Transport Improvements in Monza

City of Monza

September 2012



THE CIVITAS INITIATIVE
IS CO-FINANCED BY THE
EUROPEAN UNION

Project no.	TREN/FP7TR/218940 ARCHIMEDES
Project Name	ARCHIMEDES (Achieving Real Change with Innovative Transport Measure Demonstrating Energy Savings)
Start date of the Project	15/09/2008
Duration:	48 months
Measure:	No. 62: Cycle Transport improvements in Monza
Task:	6.12: Cycle Transport improvements
Deliverable:	T62.1 - Cycle Transport improvements in Monza
Due date of Deliverable:	14 th May 2012
Actual submission date:	21 st September 2012
Dissemination Level	Public
Organisation Responsible	Monza
Author(s)	Simonetta Vittoria
Quality Control	Rachel Brooks
Version	1.0
Date last updated	21 st September 2012

Summary

Summary.....	3
1 Introduction	4
1.1 Background CIVITAS	4
1.2 Background ARCHIMEDES	5
1.3 Participant Cities	5
1.3.1 Leading City Innovation Areas.....	5
2 Monza.....	6
3 Background to the Deliverable.....	7
3.1 Summary Description of the Task	7
4 Cycle Transport Improvements in Monza	7
4.1 Key points of the Bike plan for the city of Monza.....	7
4.2 Description of the Work Done	10
4.2.1 New cycling connections	11
4.2.2 Video surveillance of the cycle parking in the railway station.....	16
4.2.3 Revamping of a cycling walkway in the city centre	18
4.2.4 Events to encourage the use of bicycle	20
4.3 Problems Identified	23
4.4 Mitigating Activities	24
4.5 Future Plans.....	25

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 the European citizen.

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) 17 cities in 4 demonstration projects, whilst within CIVITAS PLUS (2008-2012) 25 cities in 5 demonstration projects are taking part. 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 and the most important economic, industrial and administrative centre of the Brianza area, supporting a textile industry and a publishing trade. It is best known for its Grand Prix.

The City of Monza, with approximately 121,000 inhabitants, is located 15 km North of Milan, which is the centre of the Lombardia area. This area is one of the engines of the Italian economy; the number of companies is 58,500, i.e. a company for every 13 inhabitants.

Monza is affected by a huge amount of traffic that crosses 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 has created a new approach for urban rail routes using an approach similar to the German S-Line or Paris RER.

Monza has recently become the head of the new "Monza and Brianza" province, with approximately 750,000 inhabitants, and has gained the full range of administration functions since 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 new means of mobility on offer, where alternative modes become increasingly significant, leading to improvements to the urban environment and a reduction in energy consumption (and concurrent pollution).

3 Background to the Deliverable

Over the last five years Monza has invested in creating an important infrastructure for cyclists. This network is not yet fully interconnected, but the number of cyclists has been increasing for some time.

The implementation of this measure will allow a significant boost to develop smarter choice measures in the area, continuing to promote cycle use as a cost effective way to reach important Mobility nodes. In addition, cycling offers advantages of both improved health and as well as greater energy-efficiency Cycling is an ideal mode of transport for medium-sized areas, such as Monza.

The measure covers two tasks:

RTD Task 11.6.5: Planning of cycling strategy

Monza has undertaken a study to identify suitable measures to implement cycling mobility.

DEMO Task 6.2: Cycle Transport Improvements

The city of Monza has implemented improvements to cycle facilities based on the findings of the study developed during the research stage of the measure.

3.1 Summary Description of the Task

Starting from the suggestions that emerged in the study developed during the research stage of the measure, Monza has implemented some cycling facilities which are fully described in Section 4.

4 Cycle Transport Improvements in Monza

4.1 Key points of the Bike plan for the city of Monza

The measure research stage (described in greater detail in Deliverable R61.1) was identified as the starting point for the development of the bike plan and production of a document on constructing criteria for cycling routes in the City of Monza. The document, later approved by the City Government (February 2012), provides 'cycling guidelines for every intervention in Monza'.

A review of the study results identifies Monza as *perfectly suited for the development of cycling* due to the city being of mostly flat terrain and at the average altitude of 150 m above sea level. The urban area of Monza is based around the core old town with a series of districts developing out from the centre (see Figure 1); it is for these areas that cycling was considered ideal.

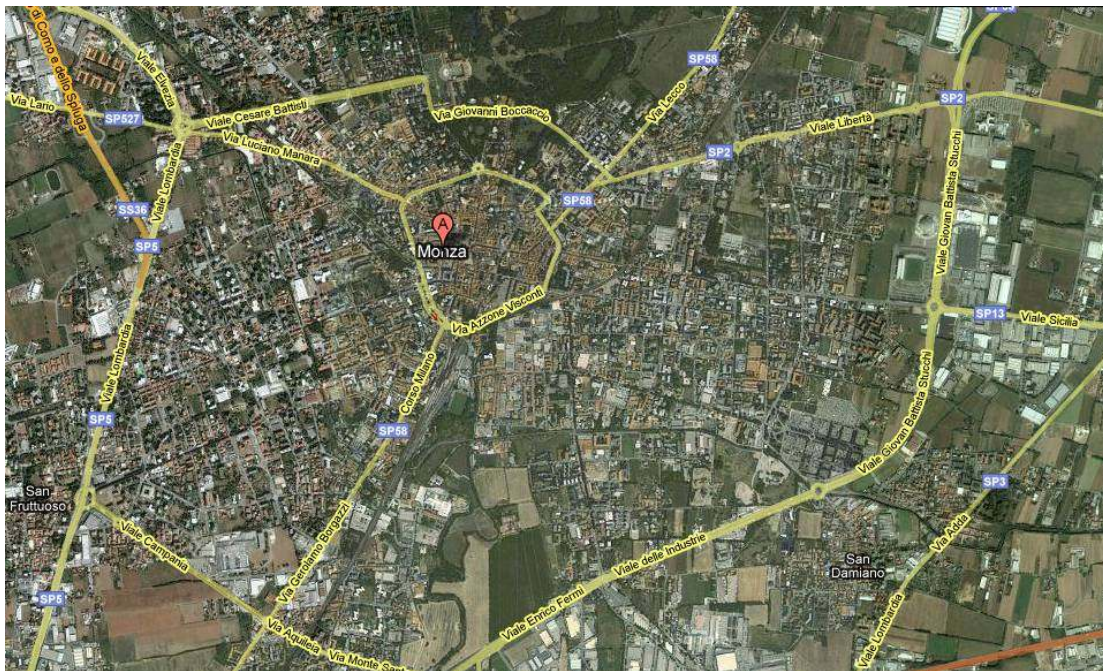


Figure 1 - Map of Monza

Excluding the most external districts located outside the primary ring road system (San Fruttuoso, San Rocco, Sant'Alessandro and Sant'Albino), the urban area could be described as a 5 km circle in diameter, within which the great majority of the population live (123.000 residents).

In the traditional planning of urban mobility it is usually assumed that distances up to 5 km can be covered with ease by cyclists. Travel up to this distance by cycle is generally perceived as acceptable by most travellers, assuming an average speed of 15km p.h. a journey of this distance would take less than 20 minutes in duration. Therefore, despite the current lack of cycling infrastructure in the area, there is evidence that bicycles could be considered a suitable mode of transport to be widely promoted.

Additional advantages for Monza to develop policies in favour of cycling are:

- A strong demand for cycling (high numbers of bicycles are used in the town particularly in the central districts (town centre and districts of the first ring) and at particular sites (e.g. the train station));
- A network of cycling routes which, although still incomplete, (1) serve several connections between attraction centres and (2) offer a number of quality routes (e.g. the path along Villoresi Channel, or the network of cycling routes of Via Foscolo and Via Tintoretto), which are essential elements in the development of an integrated cycling network;
- Identifiable residential districts within areas of the city, located away from the major traffic routes, which, if seen as “environmental precincts” (given specific use of road signs and/or physical dividers aimed at traffic calming), could encourage bicycle usage.

On this basis, the bike plan is aimed at:

- Assessing strengths and weaknesses for cycling in the city of Monza;
- developing a proposal for a cycling network and integrating the current offer with a series of possible paths;
- Identifying measures to enhance cycling in the city, thus reducing the use of private cars in favour of more sustainable mobility;
- Evaluating the opportunity to implement a bike-sharing scheme in the city;
- Providing constructing criteria of cycling routes.

At present the existing cycling routes within the borders of the municipality reaches about 23 km¹ this is depicted Figure 2. Figure 3 highlights the existing routes (depicted in green), and tracks proposed as part of this project are shown in pink. Tracks to be developed in order to complete the network are shown in red.

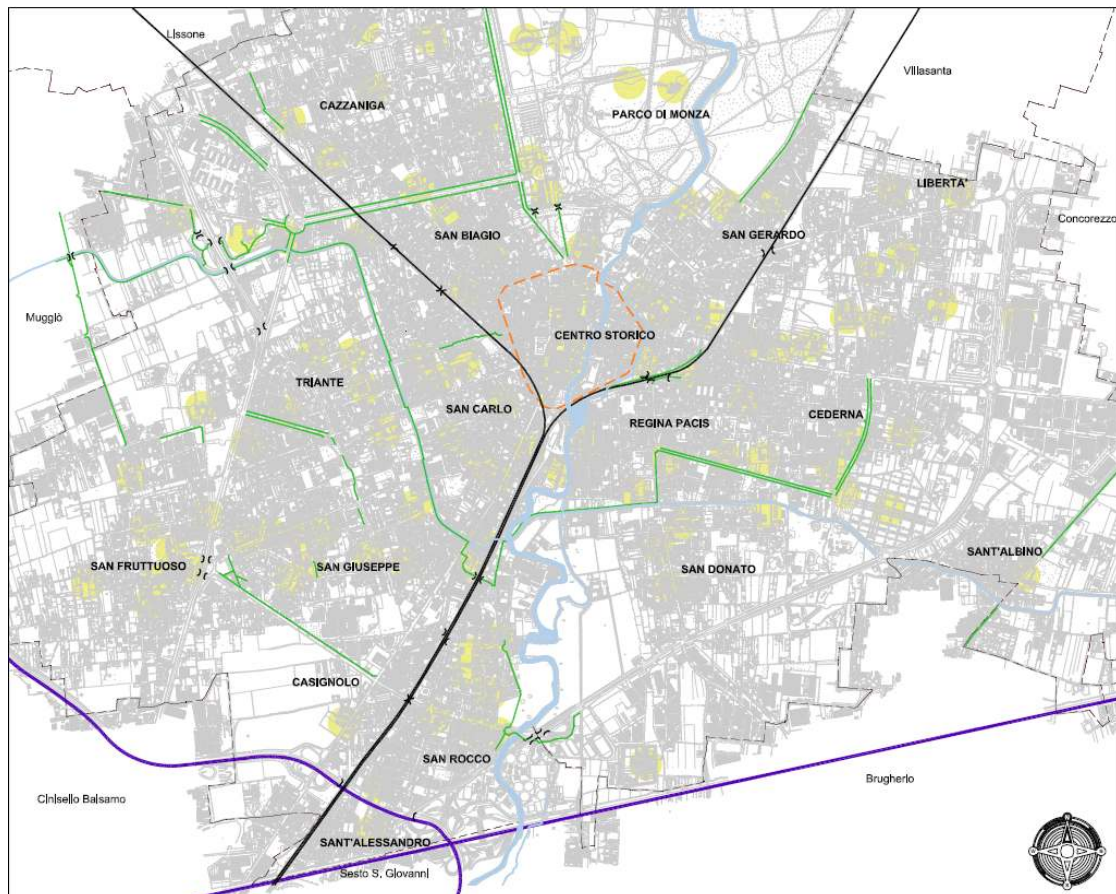


Figure 2 - Existing cycling routes

1 The sum has been made measuring the length of the paths that prove actually useful for the connections; paths on both sides of a road have not consequently been considered as two different cycling routes, but as parts of a single one.

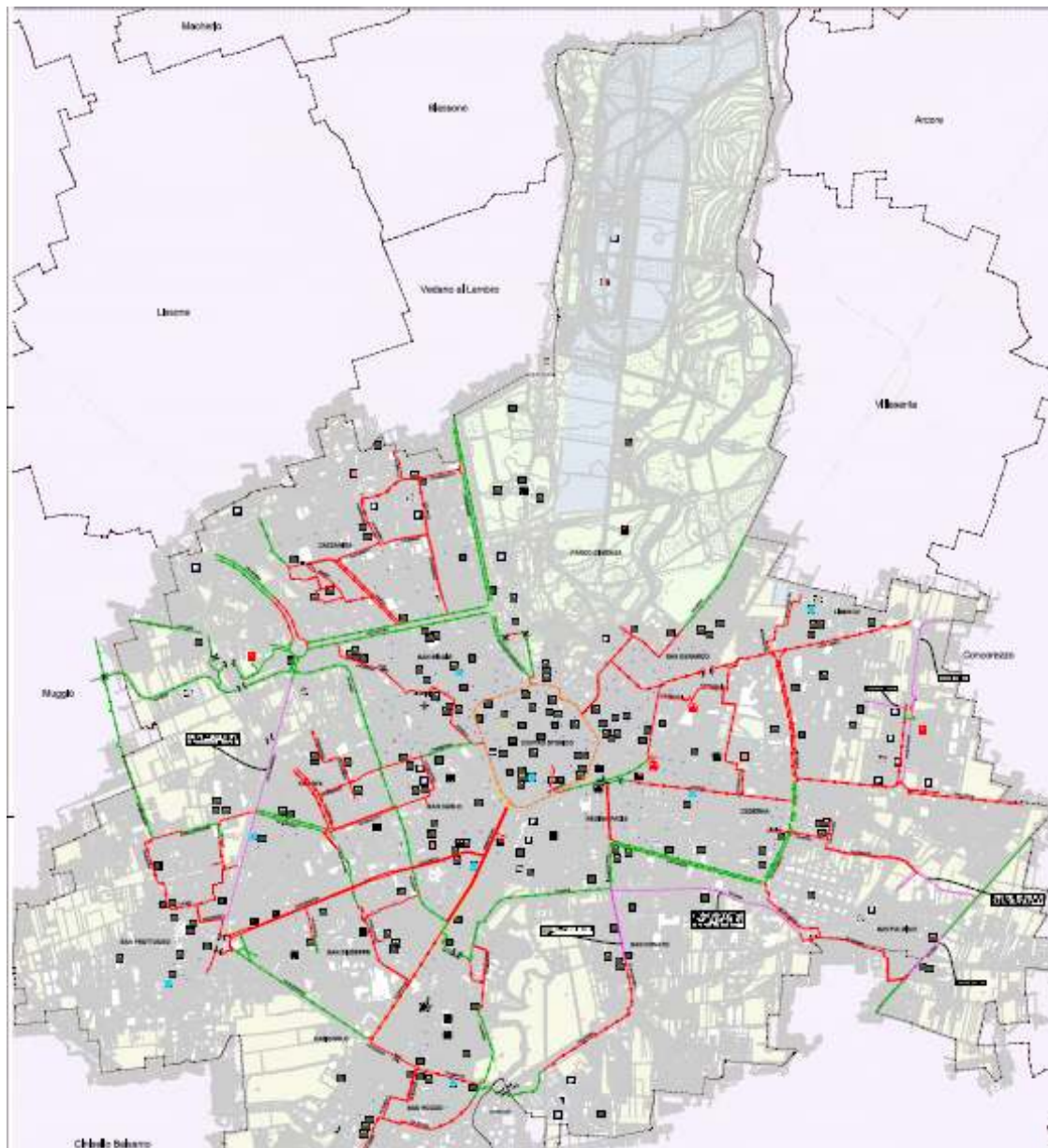


Figure 3 - Plan of existing and proposed cycling routes

4.2 Description of the Work Done

Within this demonstration task the following actions have been accomplished:

1. 800 metre extension to an existing cycling route;
2. Creation of two new cycling connections;

3. Installation of a camcorder for video surveillance of the cycle parking in the railway station;
4. Revamp of a cycling walkway in the city centre;
5. Organization of events with local stakeholders and cyclists' associations to encourage the use of a bicycle for travel.

Such activities are described in more detail in the following sections.

4.2.1 New cycling connections

The bike plan of the city of Monza, approved by the City Government in February 2012, has highlighted the following barriers to a full development of cycling in Monza:

- Although there are a number of cycle paths, some of them high quality, these are not always connected resulting in no define cycle network. The cycle paths available do not cover large areas of the urban site or link the radial connections between districts and the city centre;
- The circulation of traffic in the districts within the first ring is often difficult for a number of reasons: (1) the density of built-up sites, (2) one way roads and (3) the presence of narrow roads with further road space being reduced due to road side parking;
- Several natural barriers (Lambro River and Villoresi channel) and man made travel network obstacles (freeways and the railway) can make travel in the local area more complicated (can only cross at certain points, e.g. bridges, subways, flyovers) and increase the distance travelled. It is also noted that existing cycle routes are often twisted and go through a number of districts.

For this reason, infrastructural interventions have targeted developing a joined cycling network, starting from interconnections between several fragments of existing cycling routes. In this section these interventions will be shown through pictures and details taken from Figure 2 to identify how they expand on the existing network to enlarge or complete it where appropriate.

800 metre extension to an existing cycling route

The first intervention was an 800 metre extension of the cycling route in Via Buonarroti. To address this, the roadway was restricted and the pavement widened to free up additional space for the cycle route, the new section of the cycle route is depicted in pink in Figure 4. By making these changes (see Figure 5), people living in San Donato district can now travel by bike to the Regina Pacis district, beneficial for visiting the large supermarket or connecting to the railway station and to Porta Castello interchange. In addition to helping the residents of San Donato this cycle route expansion has joined up the cycle route along Villoresi Channel, representing a vital connection for residents of the east side of the city to the western area, where the park, the University and the Hospital are located.

Creation of two new cycling connections

The second intervention was divided into two:

1. The addition of 300 additional metres of cycle route in Via Adda to complete and join up the cycle route throughout Via Adda. The completion of this additional

section of cycle route is still in progress and is represented in pink in Figure 6. Figure 7 highlights the proposed intervention and Figure 8 the work in progress aimed at completing the cycling network to the nearby cities of Brugherio and Concorezzo.

2. The completion of the cycle route between Via Montesanto and Via Carnia to develop a cycling network in San Rocco District (see Figure 9). The proposed intervention and current development work can be seen in Figures 10 and 11.

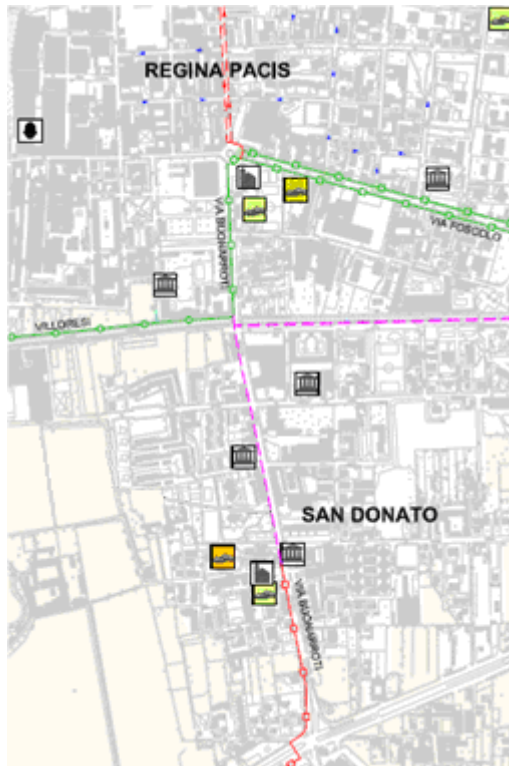


Figure 4

Extension of cycling route of Via Buonarroti



Figure 4 (Left & Above)

Via Buonarroti cycling route





Figure 5 (above)
Completion of cycling route of Via Adda



Figure 6 (left & above)
Rendering of Via Adda connection



Figure 7 (Above)
Works in progress for Via Adda cycling connection

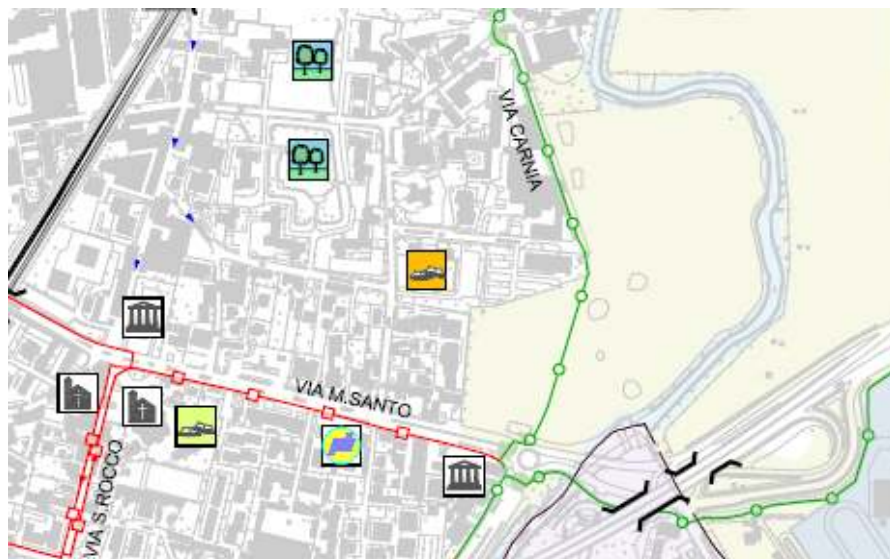


Figure 8 (above)
Via Montesanto cycling route



Figure 9 (Above)
– Rendering of Via Montesanto connection

Figure 10 (Right)
- Works in progress in Via Montesanto



4.2.2 Video surveillance of the cycle parking in the railway station

Results of the annual bicycle census survey indicated that numerous people in Monza had been a victim of bicycle theft and for this reason cycle parking on the eastern side of the railway station in Porta Castello was scarcely used (Figure 12). It was noted that only 50% of people losing a bike reported the matter to the Police. To help improve this situation a camcorder to control the outdoor cycle parking and monitor cycle theft was installed at Monza railway station.

The city of Monza already has a video surveillance system in place so it was agreed to extend this to install a fixed camera and corresponding wireless device at the railway station to transfer video streams to the Urban Center (via a wireless link "dot-dot"), where another camera is already installed. Once the video stream has reached the camera located on the Urban Center this information enters the "existing circuit" of the surveillance system of the Municipality of Monza. Figure 13 identifies the location of the cycle parking and distance from the Urban Center.



Figure 12- Cycle parking

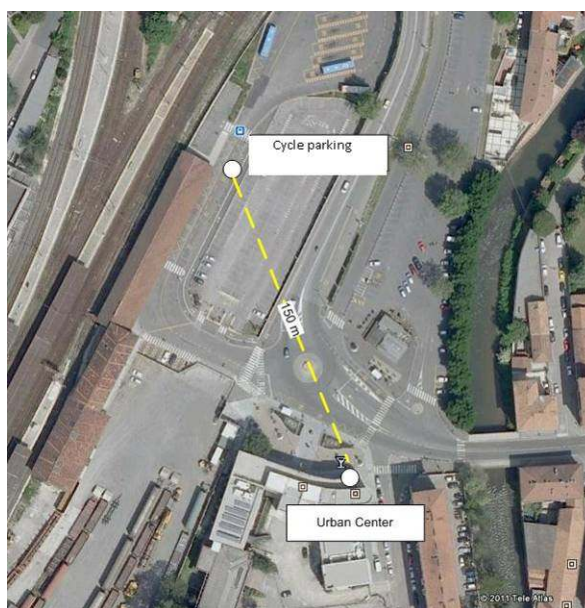


Figure 113 - Location of cycle parking and distance from Urban Center

In order to install the camcorder on the building it was necessary to ask for permission to Rete Ferroviaria Italiana (RFI – Italian Railways Network), the company of Italian Railways associated with railway infrastructure and real estate assets; the owner of the building. Considering that the camcorder can also pick up images of the rails, the initiative was warmly welcomed by RFI, allowing electricity to be taken from their own power supply, avoiding the request by the Municipality to the energy supplier for the installation of a new electricity counter. The camcorder, installed on the external architrave of the building located in front of the cycle parking, can be seen in Figure 14, 15 and 16.



Figure 12 - Location of the camcorder on the building



Figure 13 - Detail of the building



Figure 14 - Detail of the camcorder

4.2.3 Revamping of a cycling walkway in the city centre

In the city centre a cycle/walk way was built over a railway track to connect Triante district with the city center. A white arrow in Figure 17 highlights the location of the walkway in Via San Gottardo.

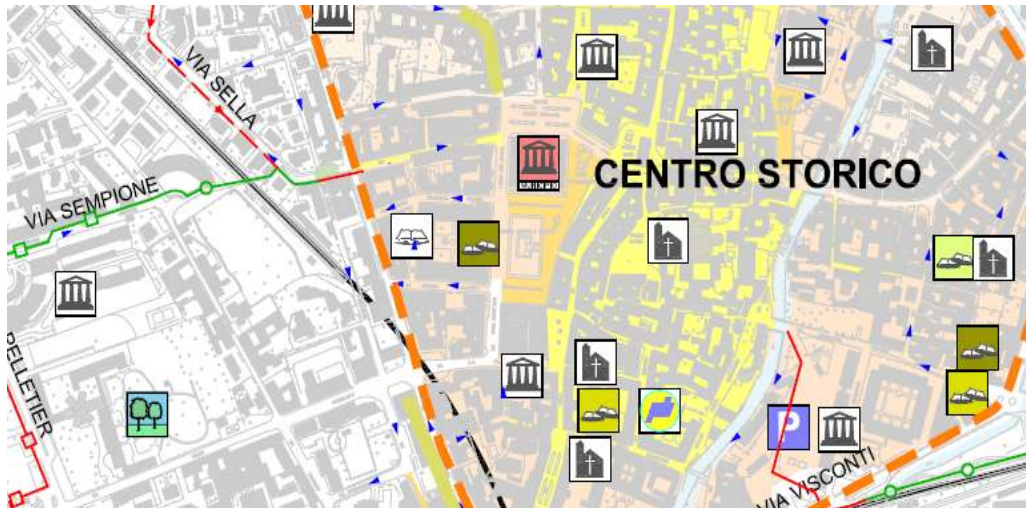


Figure 15 - Location of the cycling walkway in Via San Gottardo

The adaptation of the walkway has involved the following interventions depicted in Figures 18, 19 and 20.:

- Dismantling, renovation and paving of the floor;
- Cleaning of walls to remove graffiti and painting;
- Waterproofing of the roof;
- Welding of worn tubes supporting the roof;
- Modernisation of the existing lighting system.



Figure 16 - Dismantling, renovation and paving of the floor

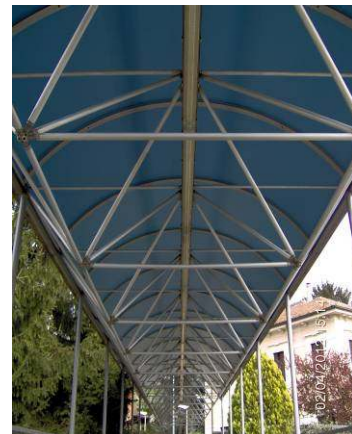


Figure 17 (above)
Cleaning of walls smeared with graffiti and painting

Figure 18 (above)
Waterproofing of the roof and welding of support tubes

4.2.4 Events to encourage the use of bicycle

To help encourage people to cycle, many events were planned as part of the ARCHIMEDES project.

Particular attention was given to workshops aimed at teaching people how to repair their bicycle. Such workshops were organized during events dedicated to sustainability and more specifically during UNESCO Sustainability Week in 2010 and during European Mobility Week in 2011 (Figure 21).



Figure 19 - Posters for events in 2010 and 2011

During 2010 European Mobility week all Monza libraries organised thematic shelves with a selection of books for children and adults dedicated to cycling and sustainability in general. Images from these events can be seen in Figure 22.

Press releases detailing the events can be seen in Figure 23.



Figure 20
Shots from Monza libraries and from workshops



Che successo la ciclofficina!

(gio) Il successo è stato senza dubbio strepitoso, tanto che ad alcune ore si è creata perfino la coda davanti all'Arengario.

L'iniziativa della «Ciclofficina» per la riparazione delle biciclette andata in scena sabato dalle 10 alle 18 per sensibilizzare sulla mobilità sostenibile (di cui ricorreva la settimana internazionale) è stata apprezzata dalla popolazione monzese. I tecnici di «Più bici» si sono resi disponibili ad aggiustare i mezzi delle persone che si sono rivolti loro per tutto il giorno. Piccole manutenzioni come la catena, i freni, il montaggio del cronometro si sono alternati sotto la supervisione di **Valentina Anzoise** che coordina per il Comune di Monza il progetto «Archimedes» sulla mobilità alternativa.



Ciclabilità Velostazione E arrivano 56 bici pubbliche

■ (Gdaf) Un piano per rilanciare la ciclabilità. Entro il 2011 il Comune potrebbe realizzare la "velostazione" e un sistema di bike sharing con 8 postazioni e 56 bici pubbliche. Un intervento da 700.000 euro approvato da Regione Lombardia, che lo finanzia con 400.000 euro. I tecnici comunali e la società NetMobility hanno redatto una "mappa" dello stato dell'arte a Monza, che può contare su 23 km di piste. Gli esperti di NetMobility puntano l'attenzione sulla scarsa omogeneità delle ciclabili (ad esempio in materia di segnaletica), e sulla mancanza di una "rete" che le connetta tra loro. "Dobbiamo superare la via monzese alla ciclabilità" - spiega l'assessore alla Mobilità Simone Villa - l'obiettivo è la riqualificazione del patrimonio esistente, implementandolo con nuove tratte". Nel futuro nuove piste in via Adda, via Montesanto e viale Lombardia, una volta chiuso il cantiere del tunnel. Ma anche la riqualificazione della pista lungo il Villoresi. Interventi che andranno realizzati secondo standard omogenei, e affiancati ad altre iniziative. In primis i due progetti per la velostazione (con nuovi servizi per favorire l'interscambio col treno, utilizzando l'attuale deposito biciclette) e la rete di bike sharing. Quest'ultima prevede la realizzazione di 8 postazioni (stazione, largo Mazzini, piazza Cambiaghi e Trento Trieste, le vie Carlo Alberto e Sempione, Ospedale nuovo e Parco di Monza-Cavigli), ognuna con 10 colonnine, 5 delle quali dedicate alle bici elettriche, ricaricabili grazie a pannelli fotovoltaici. Per utilizzare le bici occorrerà una card elettronica ricaricabile.



Figure 21 - Some press releases



INIZIATIVA
Una settimana dedicata alle biciclette

— MONZA —

ANCHE Monza da oggi partecipa alla Settimana europea per la mobilità sostenibile, con l'obiettivo di incoraggiare i cittadini all'utilizzo di mezzi alternativi all'auto per gli spostamenti quotidiani, a piedi, in bicicletta, con mezzi pubblici. Fino al 30 settembre è stata organizzata l'iniziativa «Libri sostenibili per tutti»: le biblioteche hanno selezionato libri e altro materiale multimediale, per grandi e piccoli, su energia, ambiente e mobilità sostenibile, per sensibilizzare - attraverso lettura, cinema e musica - a una cultura diversa del muoversi e a stili di vita più responsabili.

Domani, invece, dalle 10 alle 18 i meccanici dell'Associazione +bc porteranno in piazza Roma l'evento «Ripara la bici con la ciclomobile», offrendo aiuto e utili suggerimenti per imparare a riparare la propria bicicletta. Domenica, tutti «In bici alla scoperta di Monza»: l'associazione Monza in Bici organizza una pedalata nel Parco di Monza.

Accompagnati da Camillo Agostoni, si passerà anche dalla Villa Reale quindi una visita ai monumenti della città. La partenza è fissata per le 9 in piazza San Paolo (rientro per le 13).

M.Galv.

Figure 22 - Some press releases

4.3 Problems Identified

When ARCHIMEDES project was submitted, one objective was to subcontract a study about cycling in Monza focusing on the opportunity to implement a bike sharing scheme in the city. According to the study results, it was defined that the Municipality of Monza could promote a Bike Sharing system as a contribution to the strategy that aims to widen intermodal opportunities, developing the realisation of a multi-modal model, free from an excessive use of private motor vehicles.

For this reason, the Municipality presented a bike sharing project to Regione Lombardia and obtained a grant to implement the system within the lifetime of ARCHIMEDES. Unfortunately, a reduction of funds coming from the central government to local authorities due to the economical situation, has not allowed the investment of money originally allocated by the City as its share of project funding. By the end of 2011 extra revenue was identified through the sale of real estate owned by the municipality, however these revenues were included in Streets and Infrastructures Department section of the city budget. It was for this reason it was decided to postpone the introduction of the bike

sharing scheme and to proceed with the interventions concerning the new cycling connections which have been described in more detail in Section 4.2.1.

During ARCHIMEDES the Municipality also had the intention to introduce bicycle ramps for staircases to help cyclists cross the railway station subway (an example of a bicycle ramp can be seen in Figure 24). Disappointingly this intervention has not been possible due to problems gaining the necessary authorisations from Centostazioni, the company of Italian Railways managing the railway station building. The station is a protected building on a historical site and the high number of requirements imposed by Centostazioni have made the intervention, in itself simple and inexpensive, particularly difficult and costly. For this reason it has not been possible to complete address this within ARCHIMEDES lifetime.



Figure 23 - Sample of bicycle ramps

4.4 Mitigating Activities

To activate the bike sharing scheme in Monza and exploit experience gained in other ARCHIMEDES cities like Aalborg and San Sebastian, a decision was made to prepare tender documents and issue a tender for the above in the first months of 2013. The hope is to use a grant obtained by Regione Lombardia together with funds from Municipality budget for this purpose.

Monza Municipality remain in consultation with Centostazioni regarding the installation of ramps for bicycles at the railway station, with the hope of identifying the most suitable solution to allow for the implementation of this facility as soon as possible. It is felt with the installation of elevators the realisation of providing access to all platforms for disabled people might help support and provide a solution to overcome the problems so far unresolved regarding the installation of bicycle ramps.

4.5 Future Plans

The implementation of the measure in Monza has paved the way to consider cycling mobility in a systemic way.

The City Government approval of the Bike Plan and the constructing criteria for cycle routes will provide guidelines to plan and realise the need for a cycle network. It will also help address existing cycling routes, including bike lanes, shoulder cycling routes or cycling routes within an environmental precinct.

These guidelines will act as a useful and effective tool for both Municipality Technicians in charge of cycling mobility and private societies undertaking the development of cycling routes within the territory of Monza.

As cycling becomes more widespread it is recognised the more complex cycling facilities will become, i.e. the offering of clear road signs for the general identification of the “bike system” and opportunities for safe cycle parking. It is also noted with different levels of complexity different needs need to be considered by organisations locating near relevant attractions/ centres.