

M05.03 – Executive summary

The Cycle Mobility Plan elaborated in 2000 (within the 1998 Urban Transport Plan) aimed at realizing almost exclusively new cycle lane kilometres in order to favour the implementation of long and safe cycle routes for citizens.

No attention was given to the renewal of the existing cycle routes and to their quality. This has led to a progressive worsening of the infrastructures and to a progressive lack of itineraries integration, with a consequent decreasing of the cyclists' comfort and of the perceived safety. Furthermore no systematic and targeted dissemination activities were carried out by the Municipality, except for publication of info on the Municipality web site.

In this framework the measure aimed at the renewal of existing itineraries to be in line with the administration policy focused on the promotion of cycling through the improvement of comfort, quality and safety.

Three main actions were then carried out: signing (either horizontal and vertical signs); publication and distribution of cycling maps; realization of dedicated bicycle parking equipping them with lockable racks.

About 95km of the existing cycle routes have been renewed during Civitas, with a slight contribution in reducing road accidents (indicators were selected to monitor cyclists safety in the city); moreover, about 1'100 parking slots were introduced. Specific indicators were also implemented to check the awareness levels on cycle routes renewal.

The results showed that 80% of the total bicycle network has been renewed and more than the scheduled 170 signs - both horizontal and vertical – have been installed.

Alongside this, thanks to the publication and distribution of 5'000 cycle maps the information of possible itineraries has been enhanced and, as a consequence, the awareness level about cycle itineraries renewal increased by 4.75% (from 16.25% in the ex-ante situation to 21% after the measure implementation).

Then, the cycle parking area has been enlarged and new cycle racks installed: with respect to the 120 planned racks 1'098 slots have been realized (considering that each rack is composed by a variable number of slots).

Observing both the partial data coming from the Municipal Police and the ISTAT ones the number of cyclists dead or injured on roads slightly decreased or registered a stable trend. It's important to highlight that in general Brescia registered in the period 2009-2010 an increasing number of accidents and injured people, but at the same time a decrease of the number of dead people and of the road accident severity.

A. Introduction

A1 Objectives

The measure objectives are:

(BB) High level / longer term:

- to promote cycling improving comfort and safety;
- to protect and enhance the “soft” mobility modes such as walking and cycling

(CC) Strategic level:

- to carry out the EU and National road safety policy (reduction of 50% cyclists victims in road accidents within 2020);

(DD) Measure level:

- (1) to improve the quality of cycling itineraries through direction signing (about 100 km of bicycle lanes), i.e. implementation of the new signing system (170 signs) along 13 itineraries;
- (2) to improve information of possible itineraries trough the publication and distribution of 5.000 cycle maps;
- (3) to improve bicycle services and prevent bicycle thefts increasing of bicycle parking areas (up to 35%) equipping them with 120 locking racks;
- (4) to improve cyclists’ safety, reducing accidents (20%) and victims.

A2 Description

The Municipality of Brescia aimed to promote cycling by improving comfort, quality and safety for users. This strategic objective was expressed into 3 main actions during the Civitas initiative improving:

- the quality of cycling itineraries (Fig. 1) through appropriate signing (either horizontal and vertical signs);
- information about possible itineraries trough the publication and distribution of cycling maps;
- bicycle services and preventing bicycle thefts through the realization of dedicated bicycle parking equipping them with racks.

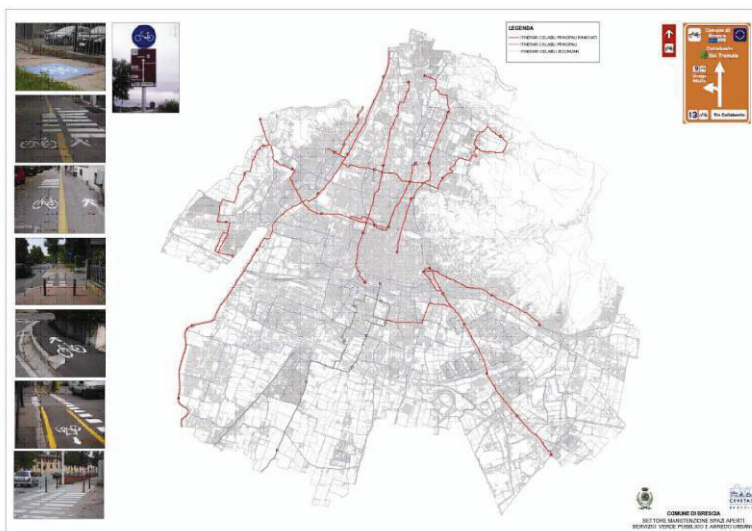


Fig. 1: Cycling itineraries in Brescia

The development of this measure led to a new Cycle Mobility Plan published in 2011. In fact in November 2009, the Mobility staff of the Municipality deliberated the updating of the Cycle Mobility Plan (approved in 2000). The contribution of the measure to the Plan (Fig. 2) was related to technical aspects such as the signals and equipment needed in the different itineraries. Civitas contributed to the drafting of the new maps of the cycle itineraries – that were planned scheduling a new classification of the cycle lanes and tracks with some changes in the direction of the same itineraries.



Fig.2 The new Cycle Mobility Plan (April, 2011): it deal with the cycle network extension, the technical characteristics of the cycle paths, the cycle racks implementation and the development of safety for cyclists.

During Civitas the existing cycle tracks and lanes (not only the main itineraries, but also the secondary one) were investigated in order to identify the dangerous points (intersections/interruptions/need of horizontal and vertical signing) that needed to be requalified (Fig. 3).



Fig. 3: One of the investigated itineraries

The measure allowed to handle the existing cycle itineraries and during the measure implementation several segments were requalified, obtaining about 100 kms of requalified cycle network.

Alongside this, the measure aimed at improving the user's safety through the planning of maintenance activities, through preliminary survey, listing of the itineraries, positioning of appropriate signing where missing, equipping parking with racks.

Owing to the implementation of this measure the cycle network was improved and made safer and thanks to the Cycle Mobility Plan the network will allow an integrated mobility with the new metro line (start up foreseen by 2013) which foresees the possibility of loading bicycles in its carriages.

B. Measure implementation

B1 Innovative aspects

- New conceptual approach
- Targeting specific user groups
- New policy instrument
- New physical infrastructure solutions

The innovative aspects of the measure are:

- **New conceptual approach** – It's the first time that in Brescia a dedicated signing for cyclists has been introduced in cycle itineraries. Direction signing for cyclists aim at users orientation, A clear orientation is important also to prevent cycle accidents (bad and poor signing can confuse the cyclists who can take the wrong direction) and to encourage road users to use the bicycle. To favor intermodality and users' comfort safe bicycle racks have been set up along the cycle itineraries,
- **Targeting specific user groups** – The specific target group was, of course, composed by cyclists and in particular, two main targets have been pursued: safety (prevention of road accident) and security (safer parking through the installation of cycle racks).
- **New policy instrument** – The activities developed in the measure itself were used by the Municipality as "demo activities" to find suitable solutions to be standardized and proposed in the Cycle Mobility Plan. The measure to be developed required an active coordination among different public administration departments.
- **New physical infrastructure solutions** – The measure was implemented through the physical installation of the new re-designed signs and of the new bicycle racks. The new cycle racks introduced give the possibility to link the bike chassis and the wheel with a padlock.

B2 Research and Technology Development

The Italian Highway Code doesn't give specific indications for cycle itineraries signing and, at present, there often is little signing in cycling routes.

The RTD activities consisted of an accurate investigation and urban analysis of the existing cycle routes to define location, size and function of the new signals, as well as to define the demand for cycle parking. Cycle paths and lanes were assessed by technicians and the cyclists' association, in order to identify dangerous points such as intersections, interruptions, need of horizontal and vertical signing. Not only the main routes, but also secondary paths were taken into account. The contributions of the local Bike Friends Association affiliated with FIAB (known as Associazione Amici della Bici "Corrado Ponzanelli") was useful and valuable. The association was directly involved in the existing cycle route inspections. After a first analysis of the general situation, some routes were more deeply

comfort and of the perceived safety. Furthermore no systematic and targeted dissemination activities had been carried out by the Municipality, except for publication of info on the Municipality web site.

B4 Actual implementation of the measure

The measure was implemented in the following stages:

Stage 1: Design of the signs for the cycle lanes (from October 2008 to October 2010) – This stage consisted of the necessary analysis of the general situation of signing for cycling in Italy and Europe, in order to define the best practices to be used. In particular the following cases were studied:

- ✓ the Danish signing system for cyclists in Europe;
- ✓ the FIAB (Italian Federation of Bicycle Friends) contribute on the theme of signing;
- ✓ the experience of Bolzano in Italy;



Fig. 6: CITY INVESTIGATION - need of horizontal and vertical signs

The activity consisted in cycle route inspection to define location, size and function of the new signals, and cycle parking demand. The cycle itineraries (tracks and lanes) were explored by the technicians and the cyclist's association in order to identify the dangerous points (intersections/interruptions/need of horizontal and vertical signing) (Fig. 6, Fig. 7).

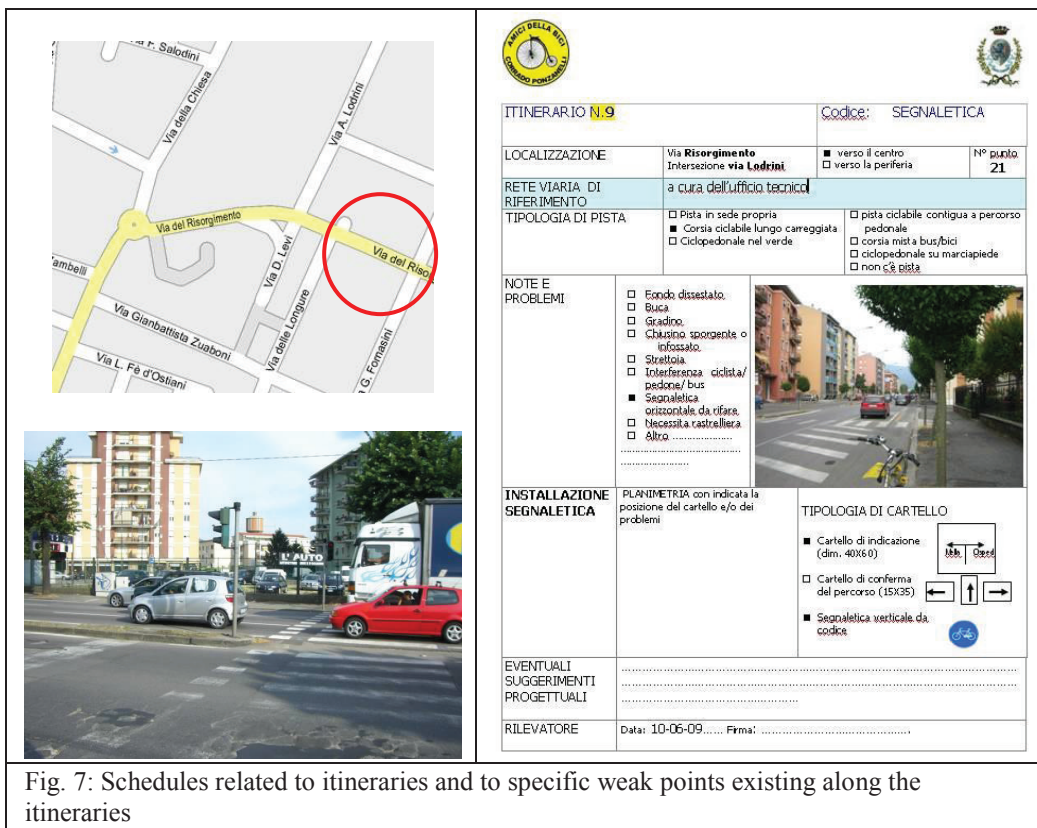


Fig. 7: Schedules related to itineraries and to specific weak points existing along the itineraries

At the end of the analytical phase (Fig. 8), a new directional signing proposal was designed, including:

- signs positioning;
- signs specific features (size and placing);
- signs function (direction signing or Road Code signing).

Finally, a Deliverable document was elaborated in order to define the adopted methodology and the technical features of the different installations foreseen in this measure implementation, that were useful for the tender made to implement the measure successfully.










ABACO ITINERARIO N° 9 (OSPEDALE CIVILE - URAGO MELLA)		SEGNALETICA VERTICALE DA CODICE						CARTELLO D'INDICAZIONE	CARTELLO DI CONFERMA DEL PERCORSO	SEGNALETICA ORIZZONTALE	NOTE	
												
		diam. 60 cm	diam. 60 cm	diam. 60 cm	diam. 60 cm	diam. 60 cm	diam. 60 cm	40 cm X 60 cm	15 cm X 35 cm			
ITINERARIO 9 (direz. Ospedale - Urago)	II LOCALIZZAZIONE											
	1	via Tosoni	1					1	CI1			
	2	p.le Corvi						1	CI2			
	3	via Zadei									corsia mista bent/bicilivell	
	5	via Zadei - via Trento							1	CC1	semoforo a chiamata per bici	
	6	via Zadei - via Altipiani d'Asiago									cartello di fermata obbligatoria "STOP"	
	7	via Zadei - Via Filizi							1	CC2		
	8	via Gamba - via San Donino						1	CI3			
	9	via San Donino									modifica tracciato per spartimento	
	10	via San Bartolomeo							1	CC3	attraversamento ciclabile	
	11	via Corridoni - via Carnia							1	CC4		
	12	via Reverberi							1	CC5	attraversamento ciclabile	
	13	via Oberdan						1	CI4	1	CC6	presenza di gradino
	14	via Risorgimento						1	CI5			
	15	via Risorgimento - via Don Vender						1	CI6	1	CC7	simbolo bici
	16	via Risorgimento		1								
ITINERARIO 9 (direz. Urago - Ospedale)	21	via Risorgimento - via Lodrini	1					1	CI7			
	22	via Risorgimento - via Fornasini	1									
	23	via Risorgimento - via Collebeato						1	CI8			
	24	via Risorgimento - via Oberdan						1	CI9			
	25	via Oberdan						1	CI10	1	CC8	
	26	via Oberdan								1	CC9	
	27	via Corridoni - via Reverberi								1	CC10	
	28	Via San Donino - via San Bartolomeo								1	CC11	
	29	via San Donino								1	CC12	
	30	via San Donino - via Gamba						1	CI11			
	31	via Zadei					1					
	32	p.le Corvi						1	CI12			

Fig. 8: The “abacus” of the signs: for each itinerary the abacus of road signs was set up

Stage 2: Tender (from October 2009 to October 2010) – The activities implemented in this task regarded:

- ✓ subscription of a contract with the company in charge of the whole project;
- ✓ approval of the executive projects for the realization of the works;
- ✓ support to the works execution;
- ✓ site inspection with the company in charge of the works in order to verify the new signs positioning;
- ✓ site inspection with the company in charge of the works in order to verify the rack positioning.

The document “Verbale di procedura negoziata” assigned the project to “EUROSTRADE” company (ref. Municipality of Brescia Determ. N. 923 - 12-04-2010 N. 20711 P.G.).

Stage 3: Installation of the new signs and racks and system running (from October 2009 to October 2012) – The works were divided into 2 “lots” of implementation. The updating of the Cycle Mobility Plan caused slight delay in the definition and execution of the interventions. During Civitas project, the following activities were implemented:

- ✓ 95 Km of renewed bicycle lanes/tracks
- ✓ n. 1238 installed cycle parking slots - “pentlock” + “verona” types - It’s important to underline that the number of installed cycle parking slots doesn’t equal the number of racks, as a rack is composed by several cycle slots.
- ✓ n.450 direction signs (horizontal and vertical signs) positioned
- ✓ n.5.000 cycle maps distributed in September 2010 to inform people about the renewed bicycle itineraries and the improvement of the bike-parking areas.

Furthermore in October 2012 “new information maps” were targeted to cycle users and contain practical information concerning existing services along the itineraries such as accommodation, restaurants, bicycle repairs, etc. including also the new metro line (start up foreseen by 2013) and bike sharing service locations.



Fig. 9: FINAL PROJECT Installation of the designed new signs



Fig. 10: FINAL PROJECT Series of signs installed along itinerary n. 9

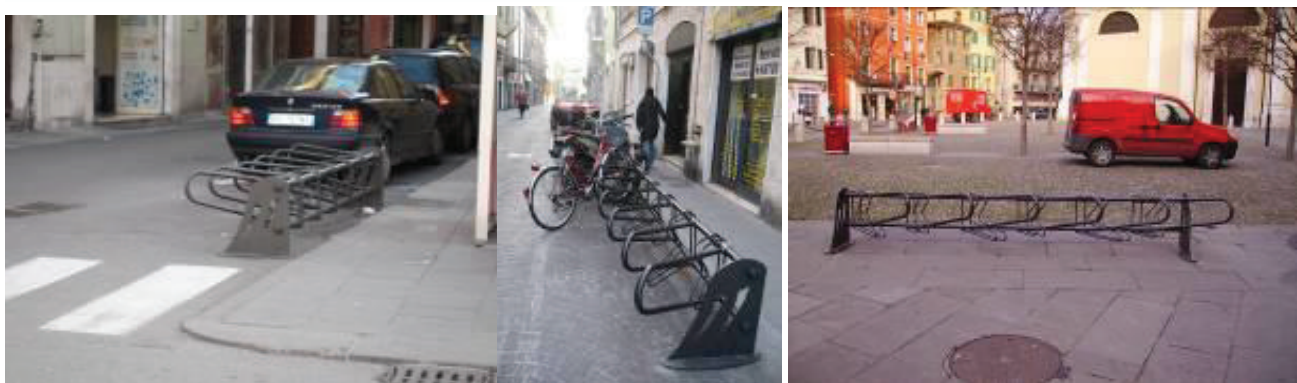
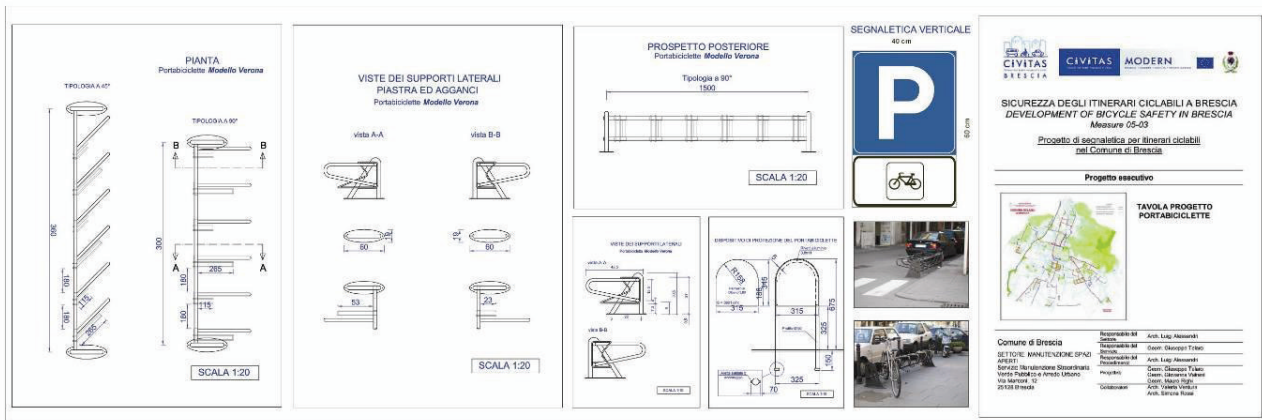


Fig. 11: FINAL PROJECT The project and some example of the cycle racks installed



Fig. 12: FINAL PROJECT The cycle racks for the city center (Pentalock model)

Stage 4: Training of the actors (from June 2009 to October 2011) – During this period Municipality technicians, working in the involved departments, were trained through the participation to the activities related to the Cycle Mobility Plan (meetings, elaboration of the Plan itself, etc...) and to periodic meetings about the cycle safety project.

B5 Inter-relationships with other measures

This measure was related to:

- M05.02 “Accident risk analysis and development of road safety” that foresaw the localization of road accidents (also bicycle one’s) within the territorial boundaries of Brescia Municipality. In this measure (M.5.03 “Development of bicycle safety in Brescia”) indicators related to safety along bicycle itineraries were based on the data collected in M. 5.02 “Accident risk analysis and development of road safety”
- M.04.06 “Mobility management actions in Brescia” that foresaw bike tagging actions in order to reduce thefts this measure (M.5.03 “Development of bicycle safety in Brescia”) indicator related to bicycle thefts was based on the data collected in M.04.06 “Mobility management actions in Brescia”

C. Evaluation – methodology and results

From the evaluation point of view the main objective of the measure consisted in improving the quality of cycling itineraries. Moreover, the measure aimed at improving bicycle services and preventing bicycle thefts increasing bicycle parking areas equipping them with lockable racks;

C1 Measurement methodology

The selected indicators are almost all main indicators, able to evaluate measure efficiency in terms of objectives achievement.

Among the selected indicators:

- n. 2 “Cyclist death/total VRUs involved in road accidents”
- n.3 “Cyclist injured/total VRUs involved in road accident”

were collected using data coming from database implemented in M05.02 “Accident risk analysis and development of a road safety”.

Indicator n. 1 “Injuries and deaths caused by transport accidents” can be considered a complementary indicator as it measures general information in relation to road safety.

Indicator n.7 “N of bicycle thefts of tag bicycles in a given period” can be considered a complementary indicator in order to support the evaluation of the “locking racks” effectiveness together with the general (estimated) data on bicycle thefts in Brescia (2007-2011).

C1.1 Impacts and Indicators

Table C1.1: Indicators.

No.	Impact	Indicator	Data used	Comments
1	Transport safety	Injuries and deaths caused by transport accidents	ISTAT road accident data; Local Police and Regional database	Complementary Indicator data coming from database implemented in M05.02 First data collection after the OP: 2010
2	Transport safety	Cyclist death/total VRUs involved in road accidents	ISTAT road accident data; Local Police and Regional database	Main Indicator data coming from database implemented in M05.02 First data collection after the OP: 2010
3	Transport safety	Cyclist injured/total VRUs involved in road accident	ISTAT road accident data; Local Police and Regional database	Main Indicator data coming from database implemented in M05.02 First data collection after the OP: 2010

4	Quality of service	% increase of cycle parking in a given period	Cycle parking count in the city center	Main Indicator First data collection after the OP: 2010
5	Quality of service	Bicycle km in renewed lanes tracks/ total bicycle kms	Cycle itineraries network length	Main Indicator First data collection after the OP: December 2011
6	Awareness	Awareness level	CBS Questionnaire	Main Indicator First data collection after the OP: April 2011
7	Society	N of bicycle thefts of tag bicycles in a given period	Data provided by the National tagged bikes register	Complementary Indicator First data collection after the OP: 2010
8	Awareness	Cycle maps distributed/ maps published	Map count	Main Indicator First data collection after the OP: September 2010

Detailed description of the indicator methodologies:

- **Indicator 1** (*INJURIES AND DEATHS CAUSED BY TRANSPORT ACCIDENTS*) - This indicator was calculated every year, when the new road accidents data arrive (data coming from ISTAT, Local Police and Regional database).
- **Indicator 2** (*RATIO BETWEEN THE NUMBER OF CYCLIST DEATHS AND THE TOTAL VRUS INVOLVED IN ROAD ACCIDENTS*) – Using data coming from ISTAT, Local Police and Regional database it was possible to extract data concerning only accidents involving dead cyclists and total involved VRUs. (VRUs = pedestrians + cyclists). This indicator was also scheduled for the M05.02 “*Accident risk analysis and development of a Road Safety Monitoring centre in Brescia*”.
- **Indicator 3** (*RATIO BETWEEN THE NUMBER OF CYCLIST INJURED AND THE TOTAL VRUS INVOLVED IN ROAD ACCIDENTS*) – Using data coming from ISTAT, Local Police and Regional database it was possible to extract data concerning only accidents involving injured cyclists and total involved VRUs. This indicator was also scheduled for the M05.02 “*Accident risk analysis and development of a Road Safety Monitoring centre in Brescia*”.
- **Indicator 4** (*% INCREASE OF CYCLE PARKING IN A GIVEN PERIOD*) – Starting from a bike parking census in the city center of Brescia, the ex ante situation of this indicator was up to December 2009. It’s important to highlight that Bicimia (Bike sharing) and “Bicistazione” bike parking were not counted because they were addressed to specific target users (subscribers).
- **Indicator 5** (*BICYCLE KM IN RENEWED LANES TRACKS/ TOTAL BICYCLE KMS*) – This indicator showed the bicycle network total length.
- **Indicator 6** (*AWARENESS LEVEL*) – This indicator was measured through the administration of a questionnaire. The questionnaire was the same used for the acquisition of indicators belonging to other Brescia Municipality measures (M05.02, M06.05 and M04.06).

The questions included in the questionnaire, able to express the indicator “Awareness level” were the following:

“Do you know that, within CIVITAS project, Municipality of Brescia wants to requalify all the cycle itineraries installing new clear directional, horizontal and vertical signs and increasing the number of cycle racks? YES/NO”

“Do you know that it’s possible to tag your bike (registering it into a National Register) in order to increase, in case of theft, the possibilities to find it?” The possible answers were: 1. Yes, but my bike hasn’t been tagged yet; 2. Yes and my bike has already been tagged; 3. Yes but I’m not interested/Don’t think it would be useful; 4. No but I’m interested; 5. No and I’m not interested.

- **Indicator 7 (N OF BICYCLE THEFTS OF TAG BICYCLES IN A GIVEN PERIOD)** – The required information about tagged bike thefts was collected by the National tagged by register, managed by FIAB (Italian Association of Bicycle Friends).
- **Indicator 8 (CYCLE MAPS DISTRIBUTED/MAPS PUBLISHED)** - This indicator was measured using data referred to the cycle maps printed and distributed.

C1.2 Establishing a Baseline

Year 2009 was taken as reference for the establishing of the baseline for the indicators concerning the cycle itineraries requalification and the road safety statistics, as the results of the cycle lanes extension (up to the beginning of Civitas) were tangible in 2009. In Brescia the first Cycle Mobility Plan was elaborated in 2000 and it scheduled, almost exclusively, the realization of new cycle itineraries. Before 2009 no requalification activity was carried out, except the ordinary maintenance.

Indicators concerning the cycle itineraries requalification	BASELINE (2009)
4. Cycle parking in a given time period	downtown 498
5. Bicycle kms in renewed lanes tracks/ total bicycle kms	0 renewed km/119 km
6. Awareness level about cycle itineraries requalification: (questionnaire April 2010)	Awareness level 16,25 %
Table 1: Indicators concerning the cycle itineraries requalification	

The same baseline was set for the indicators concerning road safety.

Indicators concerning road safety statistics	BASELINE (2009)
1. Injuries and deaths caused by transport accidents	Injuries = 1267 Deaths = 14
2. Cyclist death/total VRUs involved in road accidents	0,004
3. Cyclist injured/total VRUs involved in road accident	0,47
Table 2: Indicators concerning road safety statistics	

Also for the last two indicators the same baseline can be assumed.

Other indicators	BASELINE (2009)
8) Cycle maps distributed/ maps published	0 maps distributed/ 5000 maps published = 0%
7) Tagged bicycle thefts in a given period	10
Table 3: Other indicators	

C1.3 Building the Business-as-Usual scenario

Since 2000 the city of Brescia has developed cycle itineraries, and it has reached one of the top positions for what concerns km of cycle routes.

The graph below shows the realization of the cycle lanes in Brescia before the beginning of the Civitas project.

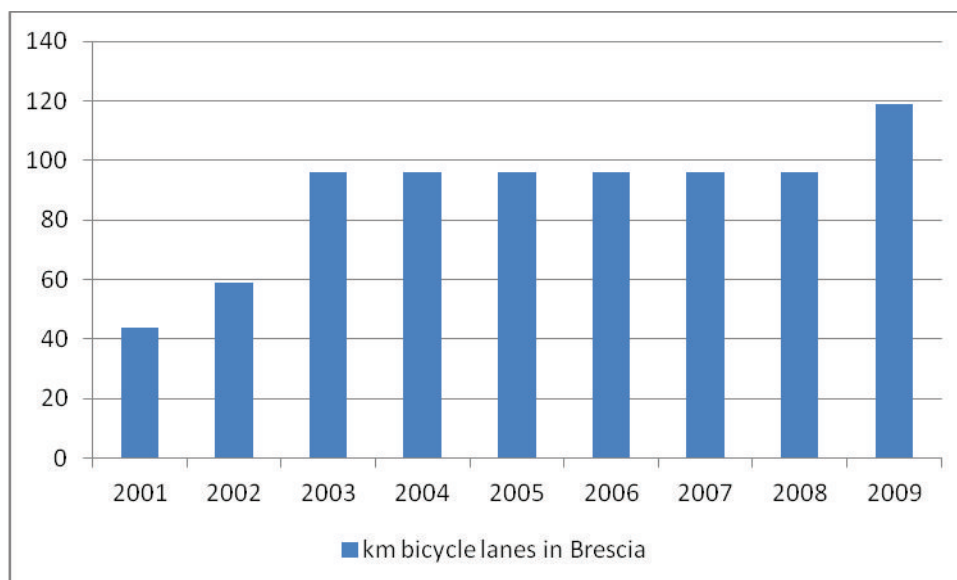


Fig. 13: Extension of the bicycle paths in Brescia before Civitas

The Cycle Mobility Plan elaborated in 2000 (within the 1998 Urban Transport Plan) aimed at realizing almost exclusively new cycle lane kms.

As already mentioned before Civitas project and before the New Cycle Mobility Plan (approved in 2011 together with the new General Master Plan of Brescia adoption – PGT) no attention had been given to the renewal of the existing cycle routes and to their quality.

The Civitas effects consisted in developing integrated activities on cycling such as renewal of cycle paths, equipment and providing information of cycle network to citizens. Integrated managing was needed to achieve these goals. Such cooperation led to a New Cycle Mobility Plan.

Starting from the baseline illustrated in the previous paragraph, the BaU scenario was built both in qualitative/quantitative terms.

In order to build the BAU for several indicators specific methodological assumptions were made and only for indicators concerning road safety statistics projection of historical data series was done.

As regard ind. 4 “Cycle parking downtown in a given time period” it was probable that no new parking would have been realized, therefore the BaU value equaled the baseline one.

As regard ind. 5 “Bicycle kms in renewed lanes tracks/ total bicycle kms”, without the Civitas contribution, the extension would have been carried out but without any requalification of the existing ones (see graph 14)..Therefore, the BaU value for this indicator was 0.

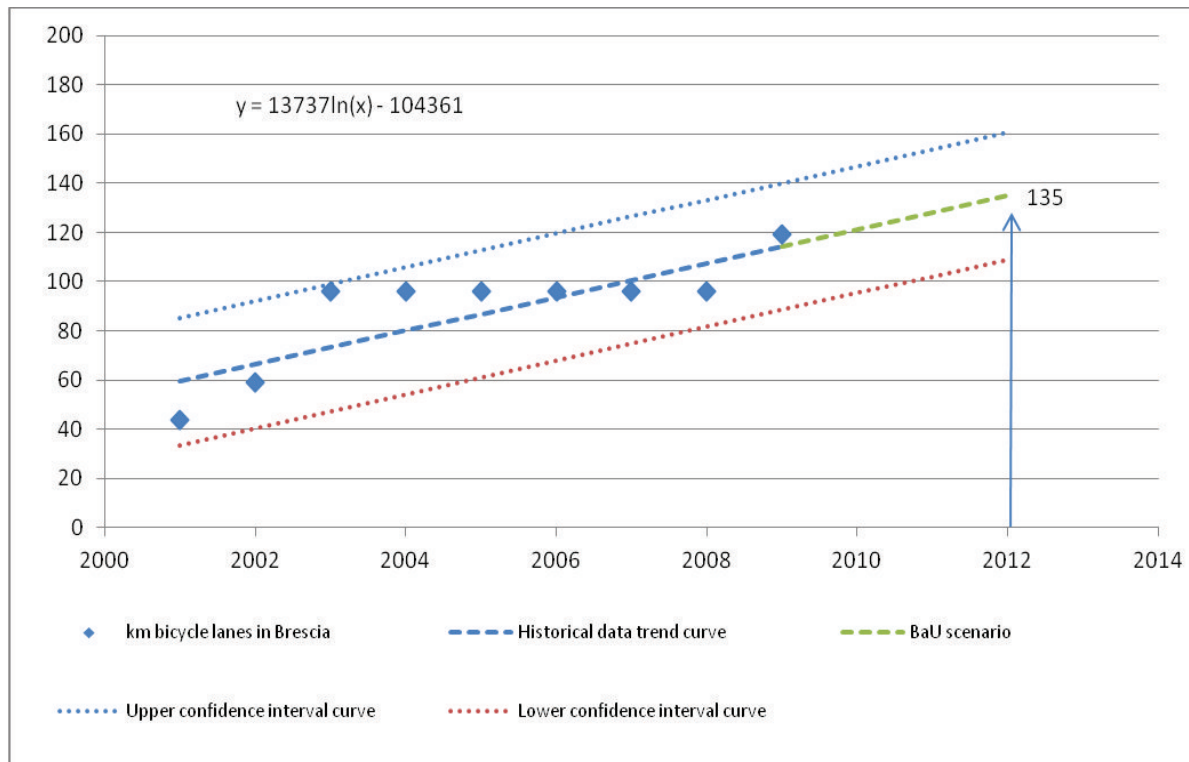


Fig. 14: Extension (without requalification) of the cycle network

The indicator n. 6 “Awareness level about the requalification of the cycle itineraries” had no historical data series and the BaU value equaled the baseline situation.

Indicators concerning the cycle itineraries requalification	BaU (2012)
4) Cycle parking in a given time period	downtown = 498
5) Bicycle kms in renewed lanes tracks/ total bicycle kms	Renewed kms = 0
6) Awareness level (about the requalification of the cycle itineraries)	16,25%
Table 4: Indicators concerning the cycle itineraries requalification	

As regard indicator 8 “Cycle maps distributed/maps published”, the distribution of cycle maps had never been a regular activity, except some extraordinary events. Therefore the BaU value for this indicator equaled 0, as likely no new cycle map would have been printed.

For the indicator n.7 “Tagged bicycle thefts in a given period” the historical data series available (3 years) was not sufficient for the projection of a reliable trend curve.

Therefore the BaU value equaled the average value of the available ex ante data, This assumption is coherent with the general consideration that the bike tagging is able to have a deterrent effect against the bike theft.

Other indicators	BaU (2012)
8. Cycle maps distributed/ maps published	0
7. Tagged bicycle thefts in a given period	15
Table 6: Other indicators	

For the indicators concerning road safety statistics, the BaU scenario was obtained keeping the baseline values or projecting the historical data series.

ind. 1. “Injuries and deaths caused by transport accidents”

This indicator was set as complementary, because it represented the overall road traffic accidents trend in the city of Brescia. The measure wasn’t able to affect it significantly, as it consisted in actions addressed to cyclists and as everybody knows in Italy the main transport mode in urban area is represented by cars. Therefore the BaU values equal the baseline ones (injuries 1267; deaths 14).

Year	Injuries in road accidents	Deaths in road accident
2005	3606	22
2006	3302	20
2007	3320	30
2008	1455	13
2009	1267	14
Tab. 7: Injuries and deaths caused by transport accidents		

Indicator 2 “Cyclist death/total VRUs involved in road accidents” and Indicator 3 “Cyclist injured/total VRUs involved in road accident” were the result of the historical data series projections and underline a slight increasing trend in cycle death in relation to other VRUs in general and a slight decreasing trend in injured cyclists.

Ind. 2. “Cyclist death/total VRUs involved in road accidents”

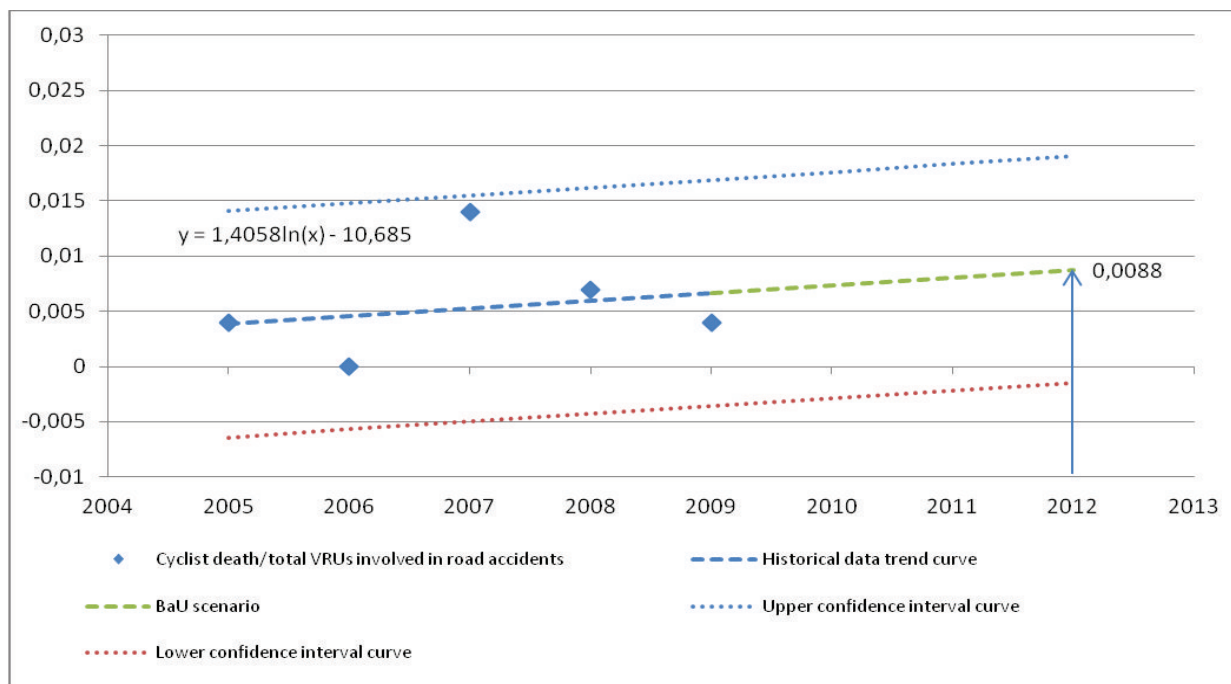


Fig. 15: Cyclist death/total VRUs involved in road accidents

Ind. 3. “Cyclist injured/total VRUs involved in road accident”

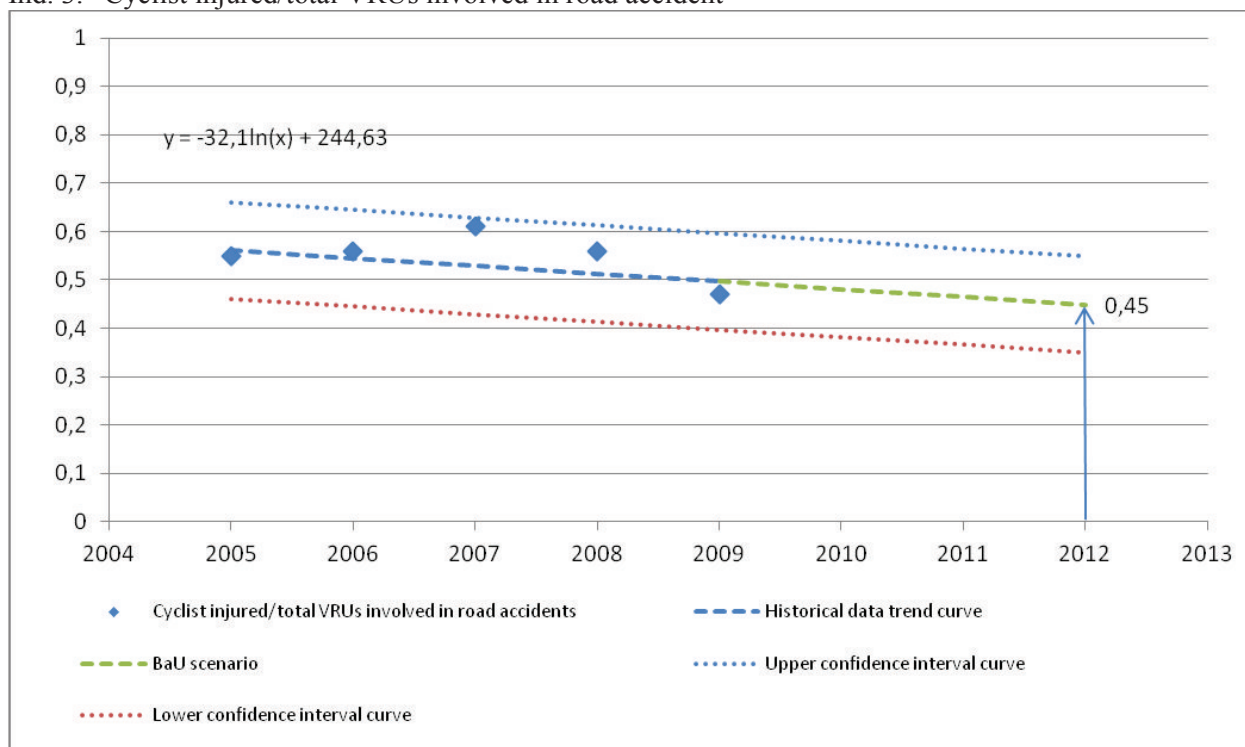


Fig. 16: Cyclist injured/total VRUs involved in road accident

Indicators concerning road safety statistics	BaU (2012)
1. Injuries and deaths caused by transport accidents	Injuries = 1267

	Deaths = 14
2. Cyclist death/total VRUs involved in road accidents	0,0088
3. Cyclist injured/total VRUs involved in road accident	0,45

Table 8: Indicators concerning road safety statistics

C2 Measure results

The results were presented under sub headings corresponding to the areas used for indicators – Transport and Society.

C2.1 Transport

Table C2.1.1: Measure results for the indicators of the category “Transport”

Indicator	Before (Year 2009)	After (variable)	B-a-U (Year 2010)	Difference: After –Before	Difference: After – B-a-U
1) Injuries and deaths caused by transport accidents	Year 2009: deaths=14 injuries=1267	Year 2010: deaths=6 injuries=1421	Year 2010: Deaths = 14 Injuries = 1267	Deaths = -8 Injuries = +154	Deaths = -8 Injuries = +154
2) Cyclist death/total VRUs involved in road accidents	0,004 (From ISTAT)	Year 2010: 0,00	Year 2010: 0,0074	-0,004	-0,0074
		Year 2011: (not available)	Year 2011: 0,0081	Not Assessable	Not Assessable
	0,00 (Local Police)	Year 2010: 0,00	Year 2010: 0,00	0,00	0,00
		Year 2011: 0,008	Year 2011: 0,00	0,008	0,008
3) Cyclist injured/total VRUs involved in road accidents Proportion=I/LP = 0,94	0,47 (From ISTAT)	Year 2010: 0,47	Year 2010: 0,48	0,00	-0,01
		Year 2011: (not available)	Year 2011: 0,46	Not Assessable	Not Assessable
	0,50 (Local Police)	Year 2010: 0,50	Year 2010: 0,45	0,00	0,05
		Year 2011: (not available)	Year 2011: 0,43	Not Assessable	Not Assessable
4) cycle parking	In 2009, 968 bike	In 2010, 990 bike	498	+22	+492

Indicator	Before (Year 2009)	After (variable)	B-a-U (Year 2010)	Difference: After –Before	Difference: After – B-a-U
slots in a given period	parking slots of which 498 in downtown (of which 130 “Verona” model) and others various models.	parking (of which 22 are new pentaloaks and others various models)			
		In 2011 , 1098 bike parking (of which 258 are new Verona model and others various models)	498	+132	+600
5) Bicycle km in renewed lanes tracks/ total bicycle kms	existing cycle network up to December 2009 is 0/119 km=0	(December 2011) 65/119 km=0,55	0%	+55%	+55%
		(June 2012) 95/119 km=0,80	0%	+80%	+80%

It’s important to underline that in Brescia the number of accidents and injured people (complementary indicator 1 “Injuries and deaths caused by transport accidents”) increased from 2009 to 2010, while at national level in the same period the opposite trend was observed.

At the same time in Brescia the crash severity decreased (the number of deaths goes from 14 in 2009 to 6 in 2010 (as expressed by the same indicator 1), which means that more accidents occurred but they were less serious.

Another important consideration regards data availability. The more complete and official road accidents data comes from the Italian National Institute of Statistics (ISTAT), but their late delivery to the city of Brescia makes the most recent year data collection not possible. For this reason, the partial data came from the Municipal Police (which was one of the police force, together with Carabinieri, Road Police and Province Police, that intervene when a road accident occur to write up the minutes). Municipal Police collected the most part of the road accidents occurring in urban areas, where vulnerable road users were most involved.

Observing both the partial data coming from the Municipal Police and the ISTAT ones (even if the scarce availability of data referred to 2-3 years doesn’t allow to make any significant statistical considerations) the number of cyclists dead or injured on roads decreased or registered a stable trend, as it’s possible to see for indicators n. 2 “Cyclist death/total VRUs involved in road accidents” and 3 “Cyclist injured/total VRUs involved in road accidents”

The results obtained for indicators n.4 “Cycle parking in a given period” and n.5 “Bicycle kms in renewed lanes tracks/total bicycle kms”, highlighted the effectiveness of the actions concerning the improvement of cycling equipment, which was one of the measure objectives. Within the end of the Civitas Project, not all the existing cycling network were likely renewed, because some slight delays were experienced mainly in relation to the metro line building sites.

C2.2 Society

Table C2.2.1: Measure results for the indicators of the category “Society”

Indicator	Before	After	B-a-U	Difference: After –Before	Difference: After –BaU
6) Awareness level	March 2010 - Awareness level about cycle itineraries requalification: 16,25 % - Awareness level about bike tag initiative: 20,00 %	April 2011 - Awareness level about cycle itineraries requalification: 19,00 % - Awareness level about bike tag initiative: 35,00 %	April 2011 Awareness level about cycle itineraries requalification: 16,25%	+2,75%	+2,75%
		April 2012 - Awareness level about cycle itineraries requalification: 21,00 % - Awareness level about bike tag initiative: 39,00 %	April 2012 Awareness level about cycle itineraries requalification: 16,25%	+3,75%	+19,0%
7) N of bicycle thefts of tagged bicycles in a given period	Year 2009: 10	Year 2010: 9	Year 2010: 15	- 1	- 6
8) Cycle maps distributed/ maps published	0/5000 = 0% (The ex ante period is up to December 2009 . The total amount of published maps are 5000. No maps are distributed)	September 2010: 5000/5000 = 100%	0%	+100%	+100%

The complementary indicator 7 “N of bicycle thefts of tag bicycles in a given period” together with the general data on the estimated number of circulating bicycles in Brescia - about 15.000 – and relative thefts (2007-2011) gives an idea of the importance of installing locking racks in Brescia as it’s evident in the table reported below (see tab 9 - Bicycle thefts in Brescia).

Furthermore, it’s evident that thefts are a security issue that cannot be faced without a strong security policy for the city and that such issue cannot be managed only from a technical point of view (for example installing lockable cycle racks).

YEARS	2007	2008	2009	2010	2011
Number of bicycle thefts in Brescia	1.800	1.800	1.800	1.800	2.250
% of bicycle thefts in Brescia on the estimated number of circulating bicycles (about 15.000)	12%	12%	12%	12%	15%

tab 9 - Bicycle thefts in Brescia
 Souce: BiciSicura – Easy tag division of Easy trust srl (27/01/2012)

Indicator 6 “Awareness level” attested an increasing awareness among citizens either about the possibility of the bike tagging (+19,0%) and about the cycle itineraries renewal (from 16,25% in 2010 to 21,00% in 2012, with an increase of 4,75%).

As regards indicator n.8 “Cycle maps distributed/maps published”, it’s important to underline that, when the materials were printed or published, the distribution was widespread.

Indicators 6 and 8 made evidence of the positive effect of the cycle routes renewal and the well acceptance of this intervention. The growing of awareness level underlined also that the “demo activities” carried out during the measure contributed to the Cycle Mobility Plan success.

C3 Achievement of quantifiable targets and objectives

No.	Target	Rating
1	<p>To improve the quality of cycling itineraries (100 km of bicycle lanes) through signing (better cyclists' understanding of direction). i.e. implementation of the new signing system (170 signs) along 13 itineraries</p> <p><i>The results obtained for indicator n.5 “Bicycle kms in renewed lanes tracks/total bicycle kms”, highlighted the achievement of the measure objective. Not all the existing cycling routes were renewed, because some slight delays were experienced mainly in relation to the metro line building sites, and more than the scheduled 170 signs - both horizontal and vertical - were installed.</i></p> <p><i>Ind. 5 “bicycle Km in renewed lanes tracks/total bicycle Km”:</i> Before (year 2009) = 0/119 = 0% After (year 2012) = 95/119 = 80%</p> <p><i>Alongside this, the success of the activity promoted by the measure was underlined by people who answered the questionnaires concerning the awareness level about cycle itineraries renewal (ind. 6 “Awareness level”) registering an increase of 4,75%.</i></p> <p><i>Ind. 6 “Awareness level”:</i> March 2010 (before)= 16,25% April 2012 (after)= 21,00%</p>	<p>**</p>
2	<p>To improve information of possible itineraries trough the publication and distribution of 5.000 cycle maps</p> <p><i>This objective can be considered exceeded, as a matter of fact, the distribution was completed.</i></p> <p><i>The indicator able to express this achievement is the following:</i> ind. 8 (Cycle maps distributed/ maps published) Before (2009) = 0 After (2010) = 5000/5000 = 100%</p>	<p>***</p>
3	<p>To improve bicycles services (mainly through the installation of locking racks and/or parking slots) increasing the bicycle parking areas (up to 35%), with the installation and location of 120 lockable racks</p>	<p>**</p>

	<p><i>This objective can be considered achieved in full, as the cycle parking area was increased and new cycle racks were installed: respect to the 120 planned racks 1098 slots were realized (considering that each rack is composed by a variable number of slots)</i></p> <p><i>The improvement of the services to cyclists was made through the installation of cycle racks along the cycle itineraries and downtown.</i></p> <p><i>Indicator n. 4 “% increase of cycle parking in a given period”:</i> <i>Before (year 2009) = 968 bike slots</i> <i>After (year 2012) = 1098 bike slots</i></p>													
<p>4</p>	<p>Improvement of cyclists’ safety through cycle routes renewal and accidents/victims reduction (20%)</p> <p><i>Bicyclists’ safety was expressed by the indicators n.2 “Cyclist death/total VRUs involved in road accidents” and n.3 “Cyclist injured/total VRUs involved in road accidents”.</i></p> <p><i>Indicator n. 2 “Cyclist death/total VRUs involved in road accidents”:</i></p> <table border="0"> <tr> <td><i>Istat data</i></td> <td><i>Local Police data</i></td> </tr> <tr> <td><i>Before (year 2009) = 0,004</i></td> <td><i>Before (year 2009) = 0,00</i></td> </tr> <tr> <td><i>After (year 2010) = 0,00</i></td> <td><i>After (year 2011) = 0,008</i></td> </tr> </table> <p><i>Indicator n. 3 “Cyclist injured/total VRUs involved in road accidents”:</i></p> <table border="0"> <tr> <td><i>Istat data</i></td> <td><i>Local Police data</i></td> </tr> <tr> <td><i>Before (year 2009) = 0,47</i></td> <td><i>Before (year 2009) = 0,50</i></td> </tr> <tr> <td><i>After (year 2010) =0,47</i></td> <td><i>After (year 2010) = 0,50</i></td> </tr> </table> <p><i>Observing both the partial data coming from the Municipal Police and the ISTAT ones the number of cyclists dead or injured on roads slightly decreased or registered a stable trend. It’s important to highlight that in general Brescia registered in the period 2009-2010 an increasing number of accidents and injured people, but at the same time a decrease of the number of dead people and of the road accident severity (indicator n. 1 “Injuries and deaths caused by transport accidents”).</i></p> <p><i>Indicator n. 1 “Injuries and deaths caused by transport accidents”</i> <i>Before (year 2009): deaths=14; injuries=1267;</i> <i>After (year 2010): deaths=6; injuries=1421.</i></p>	<i>Istat data</i>	<i>Local Police data</i>	<i>Before (year 2009) = 0,004</i>	<i>Before (year 2009) = 0,00</i>	<i>After (year 2010) = 0,00</i>	<i>After (year 2011) = 0,008</i>	<i>Istat data</i>	<i>Local Police data</i>	<i>Before (year 2009) = 0,47</i>	<i>Before (year 2009) = 0,50</i>	<i>After (year 2010) =0,47</i>	<i>After (year 2010) = 0,50</i>	<p>*</p>
<i>Istat data</i>	<i>Local Police data</i>													
<i>Before (year 2009) = 0,004</i>	<i>Before (year 2009) = 0,00</i>													
<i>After (year 2010) = 0,00</i>	<i>After (year 2011) = 0,008</i>													
<i>Istat data</i>	<i>Local Police data</i>													
<i>Before (year 2009) = 0,47</i>	<i>Before (year 2009) = 0,50</i>													
<i>After (year 2010) =0,47</i>	<i>After (year 2010) = 0,50</i>													
<p>5</p>	<p>Bicycles thefts prevention increasing the bicycle parking slots</p> <p><i>The objective of reducing cycles thefts through technical solution such as the lockable racks is not so easily assessable, as security topics are usually faced with transversal and specific policies developed at city level.</i></p> <p><i>Therefore, even if a specific indicator was selected to monitor the number of tagged bicycles theft (indicator n.7 “N of bicycle thefts of tag bicycle in a given period”), and even if anti-theft parking slots systems were installed (see target achievement number 3), and results are available from a quantitative point of view, this objective cannot be considered assessable.</i></p> <p><i>Ind. 7 (N of bicycle thefts of tag bicycle in a given period).</i></p>	<p>NA</p>												

<i>Before (year 2009) = 10</i>	
<i>After (year 2010) = 9</i>	
NA = Not Assessed O = Not Achieved * = Substantially achieved (at least 50%) ** = Achieved in full *** = Exceeded	

C4 Up-scaling of results

For this Measure is not possible to forecast an up scaling of the results, as it was already dedicated to the whole city. The elaboration of a Cycle Mobility Plan for the city is an up-scaling of the measure implementation. The analysis of the cycle network quality and the renewal of some specific cycle routes, undertaken during Civitas, were a fundamental starting point for the elaboration of the Cycle Mobility Plan, which extended the renewal planning activities to the whole cycle network.

C5 Appraisal of evaluation approach

The evaluation approach firstly considered project’s objectives as expressed explicitly in the original evaluation plan. The data collection methodology and the data quality were sufficient for the needs of technical evaluation of the measure.

The indicators selected at the beginning of Civitas project and the chosen ones belonged to the following categories: Transport and Society. In the first part, indicators were able to monitor the accidents recorded in the urban area, divided by the different mobility components, the extension of cycle lane and the number of bike parking.

One indicator (n 8 "Awareness level") belonged to the category Society, and aimed to provide the degree of population knowledge about cycle line requalification and about bike tag initiative. The bicycle thefts and maps distribution were also investigated.

C6 Summary of evaluation results

The key results were as follows:

- **Key result 1** – renewal and upgrading of existing routes. Before the Civitas project and before the elaboration of the new General Master Plan of Brescia (PGT), the Cycle Mobility Plan (dated back to 2000) had never been updated and this brought to the progressive worsening of the infrastructures and of the itineraries continuity, the decreasing of the cyclists’ comfort and the perceived safety. Without the Civitas contribution, the extension of the cycle network would have likely done anyway, but the renewal of the deteriorated routes wouldn’t have been done, except the ordinary interventions (such as horizontal signs, cycle lanes delimitations, etc.);
- **Key result 2** – The main objective of the measure (the renewal of cycle routes mainly through the installation of a new signs system) was fully achieved, as more signs (both horizontal and vertical) than the planned ones were installed;
- **Key result 3** –in May 2011, in order to coordinate, at technical level, all the cycling activities, the Cycle Mobility Office was instituted. This office coordinates the works about cycling among different Municipal Office Departments (Traffic and Mobility, Urban Planning, Public Spaces, Signing etc.) and represents a point of reference for the local cyclists’ association. This office can be considered the result of a new sensibility of the Municipality to cycling, moreover as a consequence of the participation on Civitas Project.

C7 Future activities relating to the measure

Cycle Mobility Plan implementation.

Focus on secondary (East – West) cycle routs development creating a friendly environment for cyclists in residential districts (such as S. Bartolomeo, Casazza, S.Polo).

D. Lessons learned

D.0 Focused measure

This measure is not a focused one.

D1 Deviations from the original plan

The deviations from the original plan comprised:

Deviation 1 Organizational – steps of implementation. Both the design phases and the procurement and installation phases were sub-divided into three different steps. ML decided to split the tasks into two lots of implementation, in order to recover some delays occurred in the areas of the metro line road works.

D2 Barriers and drivers

D2.1 Barriers

The following main barrier were experienced:

Preparation phase:

- **Involvement barrier: management of different municipality sectors** – Several Brescia Municipality departments were involved in cycle mobility topics. A great effort was necessary to co-ordinate actions to be carried out by the different sectors (Roads, Sign, Urban planning, Urban equipment), in order to install the proper road signs after infrastructural operations on cycle tracks and lanes.

Implementation phase

- **Operation barrier** – Some difficulties were experienced during the renewal of some of the planned routes, because of the metrobus road works. For this reason not all the planned cycle routes were renewed.

D2.2 Drivers

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

Implementation/operation phase

- **Political/strategic drivers: a new plan and a dedicated office** – The realization of the new Cycle Mobility Office and the approval of the Cycle Mobility Plan were fundamental drivers for the cycle routes renewal activities during the operation phase of the measure. The inclusion of the Cycle Mobility Plan in the General City Master Plan gave strength to the cycle mobility policies.

Preparation phase

- **Financial driver** – CIVITAS funding. From a strategic point of view, the availability of extra funding can be considered an important driver for infrastructure projects for cycling (new cycle routes and lanes and road works for safety improvement of the existing cycle network).

D2.3 Activities

Implementation/operation phase

During the implementation/operation phase of the measure the following main activities were undertaken:

- the Cycle Mobility Office was instituted in order to coordinate the works on cycling among different Municipal Office Departments (Traffic and Mobility, Urban Planning, Public Spaces, Signing etc.);
- the knowledge of the expertise of involved technicians allowed a better distribution of the tasks among the people;
- the local association of cyclists (FIAB) was involved in the city investigation, supporting the technicians of the Municipality;
- frequent meetings with the involved technicians were organized to assess the status of the measure;
- activities were carried out in lots dividing the measure into two different implementation steps.

D3 Participation

D.3.1 Measure partners

The partners related to this measure were the following:

- the Departments of the Brescia Municipality involved in the cycle mobility planning and renewal (namely, Roads, Signs and Urban Equipment Dept, Urban Planning Dept and the Mobility and Traffic Dept);
- a local cyclists association (FIAB – Federazione Italiana Amici della Bici “Corrado Ponzanelli”) which was involved in the cycle routes investigation and in the detection of the most critic sites; and
- the company EUROSTRADE in charge of installing the new sign system along the renewed routes.

D3.2 Participation of stakeholders

Alongside the citizens of Brescia, the main stakeholder category involved in the measure implementation is represented by the local cyclists association (FIAB – Federazione Italiana Amici della Bici “Corrado Ponzanelli”) which was involved in the cycle routes investigation. Their contribution in deepening the analysis carried out was fundamental for the cycle network renewal.

D4 Recommendations

D4.1 Recommendations: measure replication

- **Recommendation 1 Collaboration** – The extremely positive experience of collaboration in cycle inspections and in draft designing and positioning the signals with the Italian Association of Cyclists (FIAB) can be easily transferred in other contexts.
- **Recommendation 2 Coordinate actions** – A dedicated Cycle Mobility Office was useful to coordinate actions among the several involved Departments and to improve the success of the measure. The experience of Brescia taught that the planning actions on the whole city can be driven by the experimental demo activities made on single sites: as a matter of fact, in Brescia the renewal activities were initially planned only for some cycle routes, then, extended to the whole city, including them into a Cycle Mobility Plan.

D4.2 Recommendations: process

- **Recommendation 1 Evaluation Real needs** – an in-depth investigation of the existing cycle network is fundamental to increase its quality. The involvement of the stakeholder, such as cyclists association, is crucial to understand users real needs.

Annex 1: Historical data series for the BaU calculation

Indicator 1 (INJURIES AND DEATHS CAUSED BY TRANSPORT ACCIDENTS).

	Year				
	2005	2006	2007	2008	2009
Total deaths	22	20	30	13	14
Total injuries	3606	3302	3320	1455	1267

Indicator 2 (RATIO BETWEEN THE NUMBER OF CYCLIST DEATHS AND THE TOTAL VRUS INVOLVED IN ROAD ACCIDENTS)

	Year				
	2005	2006	2007	2008	2009
Cyclist dead	1	0	4	2	1
Total VRUs involved	245	252	283	280	269
ratio	0,004	0,000	0,014	0,007	0,004
Pedestrian involved	124	117	115	124	142
Cyclists involved	121	135	168	156	127

Indicator 3 (RATIO BETWEEN THE NUMBER OF CYCLIST INJURED AND THE TOTAL VRUS INVOLVED IN ROAD ACCIDENTS)

	Year				
	2005	2006	2007	2008	2009
Cyclist injured	134	140	172	157	126
Total VRUs involved	245	252	283	280	269
ratio	0,55	0,56	0,61	0,56	0,47
Pedestrian involved	124	117	115	124	142
Cyclists involved	121	135	168	156	127

Indicator 5 (BICYCLE KM IN RENEWED LANES TRACKS/ TOTAL BICYCLE KMS)

	2001	2002	2003	2004	2005	2006	2007	2008	2009
km bicycle lanes in Brescia	44	59	96	96	96	96	96	96	119
km requalified bicycle lanes	0	0	0	0	0	0	0	0	0

Indicator 7 (N OF BICYCLE THEFTS OF TAG BICYCLES IN A GIVEN PERIOD)

	Year		
	2007	2008	2009
N. of tagged bikes theft	18	17	10

Annex 2: Ex ante and Ex Post data collection

- **Indicator 1** (INJURIES AND DEATHS CAUSED BY TRANSPORT ACCIDENTS).

EX ANTE SITUATION (year 2009):

Total deaths=14

Total injuries=1267

- **Indicator 2** (RATIO BETWEEN THE NUMBER OF CYCLIST DEATHS AND THE TOTAL VRUS INVOLVED IN ROAD ACCIDENTS) – Using data coming from ISTAT, it’s possible to extract data concerning the only accidents involving dead cyclists and total involved VRUs. (VRUs = pedestrians + cyclists).

EX ANTE SITUATION: The ex ante situation of this indicator is referred to year 2009:

	2009
Cyclist dead	1
Total VRUs involved	269
Indicator n.2	0,004
Pedestrian involved	142
Cyclists involved	127

- **Indicator 3** (RATIO BETWEEN THE NUMBER OF CYCLIST INJURED AND THE TOTAL VRUS INVOLVED IN ROAD ACCIDENTS) – Using data coming from ISTAT, it’s possible to extract data concerning the only accidents involving injured cyclists and total involved VRUs.

EX ANTE SITUATION: The ex ante situation of this indicator is referred to year 2009:

	2009
Cyclist injured	126
Total VRUs involved	269
Indicator n.3	0,47
Pedestrian involved	142
Cyclists involved	127

- **Indicator 4** (% INCREASE OF CYCLE PARKING IN A GIVEN PERIOD) - It is considered the bike parking census in the city of Brescia. It’s important to highlight that Bicimia (*Bike sharing*) and “Bicistazione” bike parkings haven’t been counted.

EX ANTE SITUATION:

In 2009, **968 bike parking** were present, of which 130 “Verona” model, 18 and other various models (498 are located in downtown).

AFTER SITUATION:

In 2010, **990 bike parkings** were present, of which 22 are new pentaloaks and others are various models pre-existent.

In 2011, **1.230 bike parkings** are present, of which 240 are new “Verona” model and others are various models pre-existent.

- **Indicator 5 (BICYCLE KM IN RENEWED LANES TRACKS/ TOTAL BICYCLE KMS) –**

EX ANTE SITUATION: The ex ante situation of this indicator is up to December 2009 and shows the bicycle network total length.

The *existing cycle network up to December 2009 is 119 km*. At that date any requalification were made yet, except some cycle itineraries experimentally renewed, before the beginning of CIVITAS project, improving their accessibility and placing some vertical signs (via Flero and via Cadizzoni).

AFTER SITUATION: (year 2010)

Indicator 5= 50/119

AFTER SITUATION: (year 2011)

Indicator 5= 65/119

- **Indicator 6 (AWARENESS LEVEL) –** This indicator is measured through the administration of a questionnaire. The questionnaire is the same used for the acquisition of indicators belonging to other CBS measures (M05.02, M06.05 and M04.06). As explained in the M05.02 Evaluation Results Template, a survey based on face to face interviews would have required more time than the scheduled, to collect a significant ex-ante before the implementation of the measure, a faster procedure (that slightly differs from the initial one) has been chosen: the questionnaires have been administered by phone by a charged company. The representative sample has been chosen among the resident population (this choice is based on operative considerations: extending the survey also to the gravitating population would have introduced too many complications and would have increased the costs). The sample size, of 600 filled in questionnaires, can be selected among the personal data of the Municipality (this allows a statistical significancy of more than the 90%). To reach the goal of 600 filled in questionnaires, the company in charge of the survey contacted 787 families. Only 220 of them answered to the phone calls but thanks to the fact that families are generally composed by more than one members, are collected totally **601 filled in questionnaires**. The questionnaires have been administered **from 5th February to 3rd March 2010**. This period can be considered as a valid ex ante for this measure.

The question included in the questionnaire, able to express the indicator “Awareness level” is the following:

“Do you know that, within CIVITAS project, Municipality of Brescia wants to requalify all the cycle itineraries installing new clear directional, horizontal and vertical signs and increasing the number of cycle racks? YES/NO”

EX ANTE SITUATION: (Questionnaire of March 2010)

The calculated indicator is expressed by the percentage of people who has knowledge of a specific aspect respect to the total number of people who answered the questionnaire.

- Awareness level about cycle itineraries requalification: **16,25 %**

AFTER SITUATION: (Questionnaire of April 2011)

- Awareness level about cycle itineraries requalification: **19,00 %**

- **Indicator 7** (N OF BICYCLE THEFTS OF TAG BICYCLES IN A GIVEN PERIOD) –

EX ANTE SITUATION: In order to collect the ex ante situation (referred to the year 2009) a FIAB representative have been contacted and provided the following value:

Indicator n.7=10

AFTER SITUATION: (Year 2010)

Indicator n.7=9

- **Indicator 8** (CYCLE MAPS DISTRIBUTED/ MAPS PUBLISHED) - This indicator can be measured using data referred to the printing and distribution of cycle maps.

EX ANTE SITUATION: The ex ante period is up to December 2009.

The total amount of published maps are 5000: in particular, 2000 maps were printed in 2008 in occasion of the “Brescia una città sempre più verde” leaflet distribution; in September 2009 other 3000 maps (including cycle itineraries and municipal parks) were published.

No maps are distributed.

Indicators 8 = $0/5000 = 0\%$

AFTER SITUATION:

Within September 2010 all the maps were distributed by means of the following dissemination channels: town Tourism Office, the Directorate of Civic Museums and the Open Spaces maintenance Department of Brescia Municipality.

Indicators 8 = $5000/5000 = 100\%$