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SUMMARY OF THE URBAN TRAFFIC PLAN

PGTU 2006 ACTIONS

The present document is a summary of the new Master Plan of the Urban Traffic – PGTU (PIANO GENERALE DEL TRAFFICO URBANO) 2006, as finally approved by the Municipal Town Council on 25th June 2007 with Resolution O.d.g .128 P.G. no. 109827/2007.

For further details the reader is referred to the complete document, available on the Internet site of the Urban Mobility Department at http://urp.comune.bologna.it/Mobilita/Mobilita.nsf . In the case of discrepancies resulting from misprints or other errors, the approved document prevails.

Municipality of Bologna, August 2007 - English version translated December 2007

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SRM Tommaso Bonino The Municipality of Bologna has been involved over the last few years in a plan intended to limit the negative effects of traffic. These are, first and foremost, traffic congestion and air pollution, longstanding problems in many Italian cities and throughout the Po area in particular. A serious attempt to solve this problem has to work at two levels. Strategically and temporally, these are well separated. A new infrastructure framework has to be set up and effective action has to be taken to regulate mobility. I believe that today we have to take a qualitative leap and deal with these two aspects together. One the one hand we have to work to create that new infrastructure layout which our city can no longer evade. This is inevitably a long-term plan. At the same time, therefore, we have to introduce corrective elements immediately which will improve mobility in our city, as well as the air we breath and, in short, our overall quality of life.

It is useless to set our sights on what is to be done after the Metro-Tramway and the People Mover have been built and the SFM completed. These are works of which we will reap the benefit only after 4/5 years. We would be failing to deal promptly with the critical issues facing us now. Undoubtedly we have to make it our business to complete these works as soon as possible. Nevertheless, even while the infrastructure framework remains substantially unaltered, we need to take measures that are more than merely stopgaps. A more rational use of the different forms of transport currently in use can contribute permanently to a reduction in pollution, improved traffic circulation and increased road safety. It is in this field of action that the new traffic plan takes its place.

The Plan aims to ensure widespread and sustainable accessibility for everyone. This means that certain areas will be accessible only to certain means of transport, compatibly with the features of these areas and the overall need to safeguard health, air quality and the our historical heritage. At the same time traffic conditions and urban quality will be improved in the outskirts and other problematic areas.

Traffic plans are inclined to express their goals in qualitative terms. A notable feature of this PGTU is the quantitative aims it indicates. These may be checked by all who wish. Our undertaking is to achieve the results we have set ourselves within the life-span of the Plan. It is no easy matter to increase public transport passengers from 240,000 to 280,000 per day (+ 17%) with unchanged infrastructures, or to add another 20,000 cyclists to these already on view. It is no use just saying it, a lot of work has to be done to make it happen. If we were to reduce the use of motor vehicles this would be an Italian first of historical proportions. A courageous challenge which I believe we should take up. The European Union and the national road safety plan have already made it their aim to reduce deaths and injuries by 50%. Current trends are not encouraging. Nevertheless, I feel we should continue with this undertaking and indeed, pursue it all the more urgently.

In short, I believe that the difficulties and obstacles posed by the objectives of the Plan represent a tough challenge. But it is a challenge which has become fundamental for our city. Every effort will be made to overcome it. The necessary commitment and resources will not be lacking.

Encouragement to put into practice effectively the developments proposed in the Plan comes above all from economic and trade associations and from simple citizens themselves. All these have taken an active interest in the various stages leading from publication of the guidelines of 19th April 2005 to final approval of the Plan on 25th June 2007. But we are also encouraged by the results of the preview phase of the PGTU. These include 5 million fewer motor vehicles a year entering the Limited Traffic Zone after activation of SIRIO and the creation of 20 km of cycle lanes during the last two years.

Maurizio Zamboni

(Councillor for Mobility and Public Works)

INTRODUCTION

THE PURPOSE OF THE PGTU

The Master Plan of the Urban Traffic (PGTU) is a short-term planning instrument. In line with Ministerial directives, it aims at "improving traffic conditions and road safety, reducing noise and air pollution and achieving energy savings, in compliance with current urban planning instruments, with transport plans and having respect for environmental values" (Section 36 of the Highway Code).

The PGTU has a temporal horizon of 2-4 years. We therefore turn to other, longer-term plans (such as the Municipal Structural Plan) for an assessment of the benefits deriving from large-scale infrastructural works for collective transport (Metro-Tramway, new Railway Station, Trolley-bus TPGV, People Mover). Their effects on urban mobility will concern a longer temporal horizon. However, the PGTU will take into account the critical situations which the worksites for these large-scale undertakings will inevitably create.

In defining the Plan, account has been taken of the principal critical areas (pollution, accidents, congestion) which daily affect citizens' lives, reflecting negatively on health, safety and quality of living. After analyzing these critical areas we proceeded to quantify the goals to be achieved and to identify actions capable of providing effective solutions to the various problems. The actions of the new PGTU aim at an overall improvement of citizens' quality of life. The interlinked developments intend to ensure sustainable and widely-available accessibility to all parts of the city. The context for this will be an increase in public transport and cycle-lanes, while safeguarding the most valuable environmental and architectural zones.

GOALS



CONCRETE ACTIONS



Reinforcement of public bus routes, making them more competitive



Restoration and extension of the Cycle lane network, enhancing and developing complementary services



Employment of new technologies (traffic supervisor) for the provision of information on mobility



Revised road classification to match territorial needs and features



Increase in organized street parking and external "park and ride" facilities



Increase in roundabouts to enhance pedestrian and cyclist safety



Creation of new "environmental islands" and "30 km/h zones" throughout the city territory



Improved presence of public transport outside regular routes: taxi and rent-a-car-with-driver services



Creation of new pedestrian precincts in the centre: University Zone and Via del Pratello



Extension of remote surveillance by Sirio, Rita and Stars, to ensure observance of road regulations



Relaunch of car sharing, an economic alternative to private transport



Management of mobility requirements for travel from home to school and work



Completion and extension of the Limited Traffic Zone (LTZ), avoiding cross-traffic



Encouraging substitution of public and private vehicle stocks with eco-sustainable technology



Regulation of motorcycle and moped use in the LTZ and "T", on the basis of environmental impact



Reduction of deaths and injuries from road accidents. to improve safety for all citizens



Regulation of traffic lights to improve traffic flow and favour bus movement



Protection of pedestrian and cyclist accessibility

Reinforcement of public bus routes, making them more competitive

17 km/h

the average speed to be ensured for bus routes, an increase of 21% compared with the present average

70%

our goal for bus trips a day substantially on schedule

+ 30%

increased bus lanes compared with now, for a swifter public service

50

new junctions where traffic lights give priority to buses

13 e 14

principal lines where projects are already in progress to reinforce and restructure the service. Similar developments are also intended by the PGTU for other routes The levers we intend to use in pursuit of our goal of changing people's attitudes towards choosing a means of transport are those of improving and strengthening the provision of public transport and the cyclist-pedestrian network and habits and discouraging, where possible, the use of private means.

The actions envisaged by the PGTU will achieve the ambitious result of equality between internal mobility quotas satisfied by public transport and those by car (between 28%) and 30%) and an increase to 9% (currently 7%) in mobility by bicycle. This will match the sustainable standards of other principal European cities. An even more important result may be achieved in the future following completion of the large-scale public works in progress. suitably accompanied If bv reorganization of the public transport network, the guota carried by public means should further increase to approach 33%.



Improving quality: service levels and frequency

The PGTU aims to obtain compliance with service frequencies and an average commercial speed of 17 km/h (currently 14.6 km/h) throughout the LPT network. The strategies aimed at achievement of these goals concern especially the

principal routes:

1) extension of bus lanes from the present 40 km to 52 km (+30%), with an increase of 20/30% in bus lanes serving principal routes;

- 2) revised road layouts to reduce interference from private traffic, by means of:
- protection of reserved lanes from unauthorized traffic with the use of electronic remote surveillance (RITA);
 - surveillance of LPT routes to eliminate parking which is illegal or otherwise obstructive to public transport;



- reduction in obstructive movements such as left turns;
- further improvement of traffic conditions for routes in the LTZ and "T";
- repositioning of litter bins placed on reserved traffic lanes or in positions unfavourable to pedestrian movement.

3) restructuring and reordering bus stops, with stopping areas suitable for the size of the vehicles, their frequency and the number of lines using them, with a distance of at least 250 metres between stops where possible, arranged to favour transfers between the different lines; 4) extension of traffic light priority, linked to remote control of the entire bus fleet at all entrances to the city centre. At least 50 junctions will be equipped with such traffic lights;

5) reinforcement of the trolleybus service (starting with lines 13, 14 and 27);

6) reduction and reordering of automobile traffic in order to lower congestion levels, with developments for the improvement of certain junctions currently critical for the entire network.

Increasing quantitatively the public service on offer

The estimated user increase (up to +40,000 users a day by 2010) must be accompanied by an increased capacity of the system, given that many routes are already close to saturation levels. The basic feature of the reorganization of the LPT network must therefore consist in a reinforcement of the service provided. This means both increasing its intrinsic capacity, making it more competitive compared with other transport systems, and widening the territory covered so as to provide users with a broader service (for example, increasing frequency or increasing the zones covered).

Five development strategies have been identified to provide an increased service: 1) increase in vehicle capacity, serving principal and medium-frequency lines with 18-metre articulated buses;

2) broadening the zones served, providing public services in rapidly expanding urban areas;

3) reinforcing medium-frequency lines, aiming for increased frequency;

4) creation of alternative routes across the city compared with the principal lines, for direct links between especially important tertiary poles;

5) increase/rationalization of transfer points between principal and medium-frequency lines.

Enhancing the service in "weak" hours and zones

Reorganization and enhancement of the LPT network also foresees:

1) revision of medium- and low-frequency services, with rationalization of routes and extension of the service to areas currently not covered;

2) institution of flexible services for lowdemand areas (dial-a-bus or supplementary services), to be organized case by case with flexible-route services, using 8-seater buses on variable routes with pre-determined stops, or substituted by a taxi or NCC service at a subsidized price, providing a link with the nearest bus-stop;

3) restructuring of the night service: its extension and considerable reinforcement are foreseen.



6

Newly developed urban zones where the introduction or reinforcement of public transport services is required

Night service

Overall restructuring of the service on the basis of citizen's requirements

1 Million

the foreseen increase in kilometres per year covered by the urban bus fleet, up 11% compared with the present 18,000,000

+ 40.000

public transport users per day (+17%) by 2010

30%

the foreseen percentage of city movements by bus after complete realization of the PGTU

Restoration and extension of the cycle lane network, enhancing and developing complementary services

9%

the foreseen percentage of city movements by bicycle after completion of the PGTU

+20.000

foreseen daily movements by bicycle after completion of the PGTU



Cycle lanes and routes

Encouragement of the use of the bicycle as an alternative to motor vehicles is one of the most important steps towards sustainable development, leading to a reduction in the emission of gas pollutants into the atmosphere and relieving urban traffic congestion. If reduced use of cars is to come about, it is essential to create a cycle lane network which is continuous, safe, easily recognizable and

properly integrated with other forms of mobility. The principal short- and medium-term planning criteria to be pursued may be summed up as follows: a) completion and continuity of the routes, beginning from the old city centre and the first ring of outskirts, to correspond with stations of the Metropolitan Railway Service; b) alternative cycle lanes in the old city centre, following the model of widespread cycle access and using pedestrian precincts and/or zones favouring pedestrian traffic and "environmental islands"; c) new routes; d) links with the networks of adjacent municipalities; e) extraordinary maintenance of the network to ensure safety and greater user-friendliness.



The following developments have taken place in the Bologna cyclist network since 2004: the overall length of the cycle-lanes has increased from 61 km to 69.5 km; the overall length of nature trails has increased from 16 km to 22.5 km. The total length of the cyclist network at the end of 2006 was therefore 92 km compared with 77 km The previously. principal developments currently in progress will provide a further 12 km and should be finished around the end of 2007 and the beginning of 2008.

Measures in support of cycle users

As well as creating cyclist infrastructures, the Administration is undertaking a series of complementary initiatives to encourage the use of bicycles. The basic aim is to reduce the parking of bicycles in public spaces and increase security against theft, while at the same time ensuring the good quality of public areas.



The following developments are currently being realized: the free supply of cycle-racks to schools of all kinds and levels; free loan of cycle-racks to condominiums; mobility management policies intended to encourage bicycle use as a sustainable means of movement (parking in protected areas, changing-rooms, company bikes, benefits...); abandoned bicycle recovery service by licensed social cooperatives; signature of an agreement with major Stations to put into effect a plan for 2,500 cycle parking spaces in racks installed in areas belonging to the Station or in adjacent streets.

Utility services

The following have been activated:

- "C'entro in bici [I come in by bike]", free hire of public bicycles in Via IV Novembre and three interchange car-parks near the centre
- "Gli amici della bici [Friends of the Bike]", free availability of pumps for inflating tyres at bicycle sales and repair shops
- "P+bici", free parking for those who leave their bike and use it after parking their car
- "Deposito bici custodito [guarded cycle park] Via IV Novembre", area under video-surveillance, open daily
- tagging (engraving an alphanumerical code on the bicycle frame or installing an irremovable mini-transponder).

Following positive experimentation, the purchase is foreseen of bicycles with electrically assisted pedals for public hire.



Promotion

Current initiatives to be extended and new ones to be set in motion are: substitution of the "Bologna Voglia di Bici" volume with a map of city cycle lanes and services to be distributed free at all places of interest; updating of the contents of the Internet site, including the addition of an electronic version of "Bologna Voglia di Bici"; a plan for signposting cycle routes throughout the +80 km

total new routes programmed and planned in the short-medium term. The network is expected to extend to 120 km by 2010

network; periodical surveys of cycle lane traffic.

Road safety for cycle users

The principal development is the creation of **protected routes** which will permit us to link the numerous cycle lanes present in the territory to make a continuous network, as well as to create new routes. The principle adopted for the safety of this mode of movement therefore consists in **the separation between cycle and automobile systems**.



between 2004 and 2006

+20%

Extension of the

cycling network

92 km cycle routes extant in 2006



Increase in organized street parking and external "park and ride" facilities

blue lines

territorial extension **to road and railway axes**, to favour LPT, safeguard residents and encourage the use of public carparks

extension along the inward/outward **public transport axes** to increase parking supply and the turnover of available spaces

extension to not later than 21.30h in the LTZ of the old city centre, to improve the balance of supply and demand



The city of Bologna is characterized by a notable shortage of parking areas. This is due to the presence of many narrow streets and the conflicting uses made of them, as well as to the gradual increase in vehicle dimensions. We therefore witness a constant erosion of available parking space. This needs to be corrected with suitable organizational and tariff developments, giving consideration not only to automobile parking but also that of bicycles, mopeds, motorbikes and larger vehicles.

Extended territorial coverage of the Parking Plan (blue lines)

The foreseen extension of organized parking – to the railway belt in the eastern and northern zones, to the Reno in the Santa Viola zone – is intended to encourage correct use of public space while continuing to safeguard residents.

The present "fringe zones" (where 50% of parking spaces are reserved for residents and the remainder are free for everybody) will be absorbed into the organized areas. At the same time, in the interest of residents, "R/R" (short-term or "rapid rotation") parking will be prolonged to 09h, to permit evening and night use after 20h in the centre and 18h in the outskirts.

Extension of organized parking along LPT routes

This development will coincide with measures to increase public transport velocity and is intended to safeguard residents' parking and permit short-term parking by users of existing commercial enterprises. In an attempt to provide better balanced supply of car parking in side-streets close to the principal routes across the city, the surrounding areas will be reorganized as part of the Parking Plan. Furthermore, longterm parking on the principal inward/outward axes will be discouraged, or prevented where necessary, by the application of mounting tariff-scales and/or the creation of "R/R" short-term parking zones.

Evening extension of pay-and-display parking in the LTZ not beyond 21.30h

A special inquiry has shown that parking areas in the old city centre are practically in a state of total saturation, both on weekday evenings and those preceding holidays. In certain areas, furthermore, spaces occupied by outside visitors exceed those of residents and statistics show a low turnover. The evening extension of organized parking is therefore intended to increase parking possibilities both for residents and for casual users, as well as to safeguard the most sensitive areas in the old city centre. This measure will involve a total of some 2,500 ordinary and short-term parking spaces and will begin in the areas where supply and demand is better balanced as a result of the presence of qualified car-parks and in any case not before reinforcement of public transport night services.

Reduced exemptions from "pay-and-display" street parking

Exemption from "pay-and-display" will concern, except for special cases, the first car of each family unit in the old city centre, instead of the present two, and two cars for residents in the outskirts. The measure will be introduced gradually in those specific areas with particular problems and in any case not before reinforcement of public transport.

Creation of new public car-parks

	EXTANT		PROGRAMMED		PLANNED	
PUBLIC CAR-PARKS	EXIANI	N° P.S.	WITHIN SPAN OF PGTU	N° P.S.	WITHIN SPAN OF PSO	N° P.S.
	P.zza VIII Agosto	979	Ex-Manifattura Tabacchi	550		
	Piazzale Baldi	74	Piazza Martiri	-		
IN THE OLD CITY CENTRE			Piazza del Baraccano	-		
	TOTAL	1.053		550		0
	S.Orsola	500	Sede Unica	920	Fabbri/Triachini/Bondi	50
	Zaccherini Alvisi	500	Ospedale Maggiore	550	San Donato	200
	Prati di Caprara	180	Salesiani - AV	450	Garavaglia	300
IN THE SEMI	Ex-Staveco	180	Cassone - AV	150	Bolognina	200
	Tanari	450	Campo Savena	100	Nuovo Ex-Staveco	400
CENTRAL CIRCLE	Fioravanti	190				
	Ex-Minganti	321				
	Ex-Buton*	150				
	TOTAL	2.471		2.170		1.150
IN THE	Giuriolo	940				
SEMI-OUTSKIRTS	TOTAL	940		0		0
	Centro Borgo	300	Emilio Lepido Sottopasso	297	Battindarno	200
	Battindarno	163	Ex-Euraquarium	160	Savena	500
	Ghisello	115	Ex-FIAT	100	Lavino di mezzo	77
	Certosa	325	Ex-Sabiem	200	Via Ferrarese	500
	Antistadio	283	Ex-Veneta	134	Stendhal	200
OUTSIDE PARKING PLAN	P.zza della Pace	300	R3.28-Unipol	618	Ex-Asam	900
(EXCLUDING FAIR ZONE)	Marco Polo	184	Ex-Riva Calzoni	212	Caab - Aree Sud	500
	Stadio Falchi	120	Cimitero Polacchi - Inglese	500	Mulino Parisio	200
	Largo Lercaro	240			Via Rimesse	200
	Ex-Panigal*	45			Via Martelli	200
					Caab - Aree Nord	2.440
	TOTAL	2.075		2.221		5.917
	Dozza Parco Nord	750	Nuovo Michelino	5.500		
	Manifattura Tabacchi	253				
FAIR ZONE	Michelino	3.270				
	P.zza Costituzione	369				
	TOTAL	4.642		5.500		0
	* awaiting trials					
	TOTAL	11.181		10.441		7.067

Creation of new car-parks along public transport routes

This measure is intended to assist residents' parking as well as to encourage change from one type of transport to another for the same movement ("modal interchange") and change in the choice of vehicle to be used, in favour of public transport ("modal diversion"). In order to set this in motion it is necessary to obtain spaces and/or structures for conversion into residents' parking areas, in place of those removed by plans for new reserved traffic lanes and trolleybuses.

Encouraging the use of "park-and-ride" car-parks

Extension of new services including tariff incentives for those who park their cars and proceed to the centre in shuttles, taxis or bicycles (their own or for hire).

bus: free parking for users of buses and ATC shuttles

TAXI taxi: free parking for those using the taxi service

P+ **bicycle**: free parking for those who deposit their bicycles and use them after parking their cars

P₊ **bicycle**: parking with availability of free hire of a public bicycle with customized key

11.200

spaces in current public car-parks in the centre and outskirts

+93%

10.400 further spaces in new public car-parks to be created within the next four years (PGTU)

28.650

spaces foreseen in the long term in public car-parks with an increase of 150% compared with current supply

"parkand-ride"

creation of new public car-parks in the outskirts along the inward/outward axes, to encourage combined use of car and bus

Creation of new "environmental islands" and "30 km/h zones" in the city centre and the outskirts



The **safeguarding and enhancement of pedestrian mobility** are elements inseparable from improved city accessibility, road safety and social cohesion.

Following similar European experiences, the PGTU intends to set in motion an important programme for the restyling of prevalently residential areas involving the entire municipal territory, in order to give zones situated in the outskirts their just centrality.

13 new "environmental islands" will be set up for this purpose, in agreement with the various "Quartieri" (zones). A series of interlinked developments are expected to bring the following benefits:

protection of pedestrians and weak users in general;

13 environmental islands: new

person-sized city

less

zones

traffic pollution noise speed

more

living standards security public spaces pedestrians and cyclists neighbourhood meeting areas safeguarding of senior citizens and children

30 km/h

maximum speed for cars and motorbikes

- reduction of air, noise and visual pollution;
- lower congestion levels;
 - improved street image and functionality;
 - increased parking space for residents;
- increased security;
- commercial restyling;
- involvement of the citizen in his own street.



The measures to permit improved living style and traffic circulation conditions in the "environmental islands" consist essentially of **traffic moderating developments**, which may be divided into various typologies:

- speed limitation, partly through setting up dissuasive devices such as "sleeping policemen" and raised road levels at pedestrian crossings and crossroads;

- modification of roadway formation, through creation of central islands or lateral peninsulas along the roadways, gulfs at intersections, or by simple reorganization of car parking and interruption of long straight lines with deviations or "chicanes";

- special street décor and "access gateways" drawing attention to the street as a "slow" pedestrian area;

- adoption of traffic schemes making the use of such streets inconvenient for through traffic in preference to the main roads.



820 hectares urban territory to be transformed into "environmental islands"

100.000

citizens inhabiting the zones concerned

residential and

commercial streets





	Zona	Quartiere	Superficie (mq)	Residenti
1	Zona Cirenaica	S. Vitale	155.500	2.302
2	Zona Treno	Reno	112.900	1.503
3	Zona Giorgione	Reno	151.800	2.134
4	Zona Centro storico	Porto, S. Vitale, S. Stefano, Saragozza	4.052.000	51.959
5	Zona Bellaria	Savena	323.400	5.667
6	Zona A. Mario	Savena	501.200	7.006
7	Zona Villaggio INA	Borgo Panigale	619.600	7.331
8	Zona Timavo	Porto	168.800	1.571
9	Zona Malvasia	Porto	216.300	2.920
10	Zona Mattei Martelli	S. Vitale	240.300	1.558
11	Zona Pilastro	San Donato	852.700	6.063
12	Zona Garavaglia	San Donato	297.900	3.303
13	Zona Saliceto	Navile	511.100	6.532
		TOTALE	8.203.500	99.849

New pedestrian precincts in the old city centre: the University Zone and Via del Pratello

88 hectares

the current extension of pedestrian priority zones

70 hectares

old city centre territory affected by new pedestrian precinct measures

3 phases

the University Zone pedestrian precinct will be brought about gradually. The first phase has already been set in motion

more

user-friendliness cyclist-pedestrian facilities air quality public space art and culture

less

traffic conflict between disadvantaged users and vehicles smog noise



The setting in motion of the "Extraordinary Plan for Air Quality and Sustainable Mobility (PSQA)" has brought about a process of extended **pedestrian precincts to improve living conditions** in the old city centre with developments for restyling pedestrian pathways and linking cycle lines (e.g. the transformation of Piazza San Domenico and Via delle Belle Arti into pedestrian precincts).

The **aims** to be pursued by the PGTU concern reduction of traffic volumes (access guaranteed only to entitled persons), improvement of air quality (reduction of pollution and noise), increased pedestrian and cyclist facilities, reduction of conflict between



different traffic components (especially between cars and disadvantaged users), safeguarding and enhancement of the various artistic/monumental aspects and diversified use of spaces.

The new PGTU, together with the programme for urban and commercial restyling, intends to put into practice the following pedestrian precincts:

 cyclist-pedestrian precinct project in the University Zone, affecting an area of some 50 hectares (the North-Eastern bock of the centre, between the following streets: Via Irnerio, Via Indipendenza, Via Rizzoli - Via S. Vitale).



2) **Pratello** cyclist-pedestrian precinct project, affecting the whole of Via del Pratello from the ring roads to Piazza Malpighi, for a total of some 16 hectares.

The development should be completed in several stages, introducing traffic limitations on the basis of traffic discipline and vehicle loads;



Extension of remote surveillance by SIRIO, RITA and STARS, to ensure observance of road regulations

In **completion of the SIRIO and RITA systems**, further telecameras will be placed to provide total coverage of the access roads to the LTZ, improving public transport efficiency. It will also be possible to control access flexibly, according to time-bands and vehicle eco-compatibility, as foreseen by the Goods Plan and policies for rationalizing access of motor vehicles to the old city centre.

The PGTU intends to increase remote surveillance of restricted lanes: with the



extended to all principal axes of urban transport, with a linear approach at several points. Remote surveillance is also foreseen on all LPT routes in order to eliminate

help of RITA, control and automatic fining of unauthorized transit on lanes restricted to public transport will be



parking which is unauthorized, in double lines or otherwise obstructive to the transit of public transport.

As well as controlling access and respect of red traffic lights (**STARS** system), the Road Safety Plan will set in motion substantial **speed checks**, using fixed and mobile systems.





23

telecameras now actively controlling the LTZ, "T" zone and restricted traffic lanes in the city

+30

new SIRIO and RITA telecameras to be installed in the medium term

-70%

average reduction of non-authorized traffic in bus lanes after extension of the RITA system

-5 million

fewer vehicles per year in the LTZ after activation of SIRIO

-33%

average reduction in accidents at junctions after installation of the STARS system

Completion and extension of the Limited Traffic Zone (LTZ), avoiding cross-traffic in the centre

-30%

traffic reduction in the "T" zone following activation of the RITA system

-24% traffic reduction in the LTZ following activation of the SIRIO system After activating SIRIO at the access-points to the LTZ and RITA to protect the "T" zone and some restricted traffic lanes, new developments are planned to avoid inappropriate crossing of the city centre.

1) **Cyclist-pedestrian precincts** have been started in the University Zone and the Pratello area, with the introduction of control systems near access points. Specific circulation layout modifications prevent by-passing of the nearby SIRIO access points and close the Porto, San Vitale and S. Stefano zones to through traffic.

2) In order to increase public transport speed and prevent private traffic from using the route across the old city centre from Via S. Stefano to Piazza Malpighi, the restricted traffic lane has been reinstated along the semi-carriageway of **Via Farini**, protected by the RITA access point.

3) The traffic circulation layout of **Piazza Malpighi** is to be revised to prevent North-South crossings.



+4,4% increased territorial extension of the LTZ, with enlargement of the SIRIO-controlled area near the Palazzetto dello Sport

4) After a further phase of consultation with citizens the possibility will he assessed of creating an extension of the LTZ in the **Palazzetto** dello Sport area, dulv shifting the SIRIO access points to prevent evasion of access controls to the centre through Via Gardino and Largo Caduti del Lavoro, and to compensate residents for the diminished supply of parking spaces as a result of the TPGV project: with this modification the LTZ will gain a further 14 hectares, increasing from the present 320 to 334 (+4.4%).

Regulation of motorcycle and moped use in the LTZ and "T" zone, on the basis of environmental impact

The Municipal Administration will be setting in motion a number of developments concerning two-wheel motor vehicles in order to **reduce air pollution and lessen the impact of motor bicycles on pedestrians and cyclists** (also in terms of road safety), namely:

a) prohibiting circulation of the worst pollutants, totally or partially, in certain areas;

b) instituting a system of motor bicycle permits for single persons, making access ("T" and LTZ) conditional on the emission level of the vehicle;

c) encouraging a less polluting stock of motor bicycle (ZEV, electric, ECO, experimenting with LPG);

d) encouraging movement towards less polluting means of transport (buses and assisted-pedal bicycles).

The PGTU proposal is based on **division of motor bicycles into classes**, **according to the degree of environmental impact**: 1) high impact motor vehicles: pre-Euro mopeds and motorbikes (CONVENTIONAL); 2) medium impact motor vehicles: ECO mopeds and motorbikes (divided according to the compliance with EURO I, EURO II regulations, and in future those of EURO III); 3) low impact motor bicycles: electric (ZEV) or LPG-fuelled mopeds and motorbikes.

As part of the campaign to encourage use of more ecological vehicles, it is intended to regulate access to the "T" and LTZ following a two-stage access rationalization programme:

1st phase: Euro motor bicycles authorized to circulate in the "T"

After institution of motorbike tags (associated with the number plate and owner), which is possible immediately for motorbikes (>50cc) and will be so for mopeds (<50cc) with the coming into force of new moped number-plate laws, these will be forbidden access to the "T" (Via Ugo Bassi, Via Rizzoli and Via Indipendenza, all controlled by RITA access points), with the exception of ECO (Euro 1 and Euro 2) and SuperECO (electric and LPG) tags.

2nd phase: complete prohibition of motor bicycle circulation in the "T" and access to the "LTZ" limited to authorized Euro motor bicycles

After assessing the results of setting up the first phase, consideration may be given to a complete circulation ban in the "T" (except for residents), excluding only low or zero environmental impact motor bicycles; on completion of the second phase it is planned to prohibit LTZ access (SIRIO-controlled access) to all motor bicycles without a tag and in any case to all pre-Euro models.

It is anticipated that the new traffic rules within the LTZ, with the help of newly constituted RITA-controlled access points, will permit reduction of daily motorcycle movements by 10,000, a reduction of total internal movements by a percentage point (from 10.6% to 9.6%).



-10.000 daily movements by motorcycle as a result of the new rules

``Т″

gradual elimination of motorcycle transit

"LTZ"

gradual limitation of access to twowheel motor vehicles complying with Euro rules

encouraging

electric and LPG motorcycles and mopeds, which have zero environmental impact

reducing

pre-Euro and twostroke motors which are greater pollutants

Regulation of traffic lights to improve traffic flow and favour bus movement

60%

"intelligent" traffic lights already operating, with red/green phases adjusted in real time on the basis of traffic flows

+33

new traffic lights to be centrally operated, an increase of 70%

new

traffic lights with call-signals for visually challenged users traffic-flow sensors "diode led" traffic lights with better visibility

improved

bus speeds and competitiveness vehicle traffic flow and movement energy consumption savings

less

time wasted in traffic jams

Centralized system

The Municipality of Bologna currently operates 236 traffic-light systems governing 328 intersections. 135 of these, around 60%, are already connected to a centralized switchboard. These are the so-called "intelligent" traffic-lights, characterized by red/green times that vary in accordance with the traffic intensity registered by special pneumatic sensors embedded in the roadway. These plants communicate with through each other the centralized exchanging information on switchboard,



foreseen vehicle flow to and from the junctions. Thus the system decides traffic control strategies both on the basis of data arriving in real time from the sensors and by assessing past data and foreseen events, thereby improving journey times with consequent energy savings and reduced pollutant emission. The current aim is to add a further 33 traffic-light systems, at present locally operated, and increase the number of sensors registering traffic flow.

Priority for public transport

Traffic-light plans are already being continually updated through the ATC's centralized system of remote bus surveillance, which receives the spatial coordinates of the buses in real time. The system is able, with these data, to adjust light changes to give priority to public vehicles at road junctions.

Compliance with regulations and energy saving

March 2006 saw the beginning of the "project for the compliance with regulations, restructuring and improved management of traffic light systems". This foresees the upgrading of all Municipal traffic lights to meet current legislative requirements by substitution of traditional light bulbs with certified and approved diode led lights. This technology results in considerable cost reduction in terms of electrical energy and system maintenance. The greater luminosity of these traffic lights also eliminates the so-called "ghost effect", thereby improving security. The project has been entrusted by the Municipal Administration to the HeraLuce company and completion is expected by the end of 2007.

Centralized system for integrating and supervising urban information on mobility (CISIUM)

ITS (Intelligent Transport System) technologies permit a quality leap in urban mobility management, providing information on the state of the road network and public transport systematically and in real time.

A new **traffic supervision system (CISIUM)** is currently being set up which will be able to integrate information from the various currently active systems. This will provide:

a) a useful contribution to **mobility planning in the metropolitan area**, permitting action for better traffic distribution along the road network. e.g. by improving traffic light changes on the basis of data acquired in real time;

b) a **valuable aid to users** both before travelling, due to the provision of an overall picture of the various options available for in-city movement in terms of means of transport, estimated journey times and costs, and by helping those intending to use private transport to choose better-flowing routes, possibly opting for park-and-ride alternatives.



+366

extra traffic flow sensors for dynamic management of traffic light changes

21

new variablemessage panels with information on city mobility

1

new mobile laboratory for pollution monitoring

less

congestion traffic jams

more

fluidity information in real time air quality



Information provided by the CISIUM system will be made available through **a wide variety of communication channels** (variable-message panels, radio and vehicle satellite navigators via RDS-TMC technology, WEB, SMS), in order to inform citizens as quickly, universally, clearly and reliably as possible.



Revised road classification to match territorial needs and features

The road network layout is intended to **improve traffic access and fluidity and to safeguard the most vulnerable areas from traffic impact**.

equilibrium

between swift, flowing traffic and social and environmental safeguarding of the territory

better

security environment

less

congestion conflict

Classification of the road network on the basis of territorial and infrastructural functionality is the principal element for an overall improvement of its performance in terms of security and social-environmental safeguarding of the territory.

With regard to the city of Bologna the criterion for classification is based on overall and urban-plan assessment of the role played by the axes crossing the city and the distributive ring-roads.

The **primary network** consists of motorways and by-passes (arterial roads).

The **principal network** makes up the trunk roads, that is to say the ring-roads and the principal inward/outward axes converging on them (major collector roads, collector roads).

The **secondary network** distributes internal city movements, permitting movement from the principal network to local roads (local roads). The **local network** serves local mobility.



Increasing roundabouts for safer streets now and in the future for vehicles, pedestrians and cyclists

Roundabouts have a number of aims:

- to increase safety at junctions, compelling all vehicles to slow down or stop as they approach the roundabout, compelling them to take a nonrectilinear route;
- **to increase fluidity of vehicle traffic**, especially between roads of similar classification, permitting elimination of traffic lights.

No fewer than 26 of the 55 extant roundabouts were created only in the last 3 years. A further 66 should be completed in the near future.



After an initial phase, dating from the 1970s, of creating roundabouts as links between urban and extra-urban road systems, a second phase aimed to increase urban traffic fluidity. Many of these latter are still under construction. The present third phase is **more attentive towards weak users' safety and the surrounding urban context**.

This new trend has been assisted by recent regulations on the size of road junctions, as well as by the importance of road safety and the attention now paid to the urban-environmental context of infrastructural works.

The works currently being studied therefore attach much greater importance to the creation of **external pavements and cycle lanes around the roundabout as well as safe, well-marked pedestrian crossing points**, today considered integral and essential to the project.

Furthermore, with regard to the environmental context, greater weight is given to the choice of materials and illumination fixtures, and the layout of the central island. Research is also being made into ways of reducing overall roundabout dimensions, compatibly with its need to function properly as a junction.

+ 66

new roundabouts to be created within the next 5 years

safety

increased safety, including that of weaker users

new

protected pedestrian crossing points and external cycle lanes

improved

vehicle traffic movement and flow

less

speed pollution accidents at road junctions

funds

mainly from private parties' urban developments obligations or from state financing for the elimination of level crossings and work on High Speed Train routes

Improved presence of local public transport outside regular routes: taxi and rent-a-car-with-driver services



The **aims** of the PGTU, in line with recent years, are:

- upgrading of the service and supply to users' needs, including **challenged users** (all taxis have, since 2006, a special standardized access ramp, luggage space sufficient for a folding pushchair and handholds in front and behind on both sides);

- gradual conversion towards more **environmentally-friendly** fuelling of the taxi fleet (conversion of 66 vehicles to methane/LPG by 2010) and the NCC [rent-a-car-with-driver] "blue cars" (total conversion of the fleet to means with Diesel particulate filters by 2008);

- experimentation with **innovative forms of service** intended to integrate LPT in times and places where it is not economically or functionally viable to provide a service with vehicles larger than ten-

seaters.

Consequent actions to be set in motion:

1) **flexible use** of vehicles through work-shift reorganization;

2) constant assessment of results achieved in terms of **improved response to mobility requirements even** in critical conditions (trade fairs, events, night, evening and weekend services...);

3) issue of **new taxi licences, to a maximum of 13%** of the present 657, to be carried out in several phases, on the basis of assessment of the effectiveness of supplementary work-shifts or other measures aimed at improving the provision of taxi services. The licences shortly due for issue will be "dedicated" (e.g. with priority for challenged users) and/or subjected to special conditions (e.g. usable only with methane-fuelled vehicles);

4) improved **monitoring of taxi services** with the use of technological supports.



the foreseen increase in licences, with a quantitative improvement in the provision of taxi services

+13%

new services

to supplement regular-route public transport in areas and times of low demand

new work shifts

to increase the capacity of response of the service in critical areas and times

Relaunch of car sharing as an economic alternative to private transport

If we consider that 80% of vehicles circulating in European cities travel no more than 60 minutes a day, carrying on average 1.2 persons, the advantages of car sharing are obvious. **Each user can employ a shared public vehicle purely for the time necessary**, with the result that several people can use the same car.

Greater use of car sharing will reduce, to the benefit of the city, the cars in circulation and will increase the parking spaces available. The advantages for the citizen show how the service may be a valid alternative to purchasing one's own means of transport:

- the opportunity for choice ensured by the variety of the car fleet;
- the **possibility to move without hindrance and restrictions** (car-sharing vehicles may enter the centre without limits and their parking is free);
- car ownership has no fixed costs (the vehicle is paid for according to time and kilometres, while petrol, insurance, etc. are included in the subscription and are therefore free...).

The areas in which a set of provisions for car sharing **as a genuine alternative to car ownership** may be tested are:

- a) the old city centre (areas bordering the Cerchia del Mille at points with high TPL supply: Piazza Malpighi, Piazza Aldrovandi, Piazza Minghetti...);
- b) in one or more areas near the inward/outward axes, characterized by high parking demand (zones affected by changes to the roadway as a result of plans for line 14 – on the Massarenti and Andrea Costa side – and the TPGV -Via Mazzini).

In order to provide higher quality service, checks will be increased – including the use of **new technological systems** – on unauthorized use of the parking bays dedicated to collecting/returning the cars.

In order to increase the service – the aim is to achieve 2,000 new subscribers, in addition to the present 1,000, especially among residents of the areas confining on the new parking bays, in order to reduce potential demand for parking space – use of the fleet (in temporal terms) is expected to increase, together with an effective **increase in vehicles** and dedicated parking bays, in order to reach the following goals:



- usage from 25% to 30%;
- urban fleet from 30 to 60 cars, as well as the 7 of the Province. As well as methane/LPG, the possibility will be examined of including hybrid vehicles in the fleet;
 increase in parking bays from 16 to 30/40.

The increased number of vehicles in the fleet may also permit **overcoming of the rigidity of the system** whereby the car has to be collected from/returned to the same parking bay. Under these new operative conditions car sharing can also be developed at the principal poles of attraction (the Railway Station, the Trade Fair, the University, hospitals complexes...).



2.000 new users subscribing to the service, as a goal to be pursued compared with the present 1,000

+20

new parking bays dedicated to collection/return of the cars, reaching a total of 30/40 and so increasing territorial coverage of the service

+ 30

new cars in the urban fleet (including methane, LPG and hybrid), in order to extend the service

Extension of *mobility management* policies for movements from home to school and work



Mobility management (MM) regards **the management and rationalization of habitual mobility in order to reduce use of individual private means** – especially those of high environmental impact – with improved organization of transport demand.

Home-work movements

In terms of rebalancing public and private transport, the new PGTU takes its starting point from the results of the distribution of assisted-price ATC annual season tickets: the c.600 employees with an annual season ticket before the signing of mobility management

22%

the more than 46,000 employees in companies which have a Mobility Manager, compared with the total number of workers employed by local enterprises and institutions (206,000); the number increases to 86% if referred only to bodies obliged by law to have an MM

7.300

annual ATC season tickets (2006) to the LPT at assisted prices distributed in the context of MM, with costs shared between company and worker The following actions should therefore be pursued:

1) **increasing the range of workers involved**, encouraging employees to use both public transport and other forms of alternative transport rather than private cars and motor vehicles;

agreements increased to 7,300 in 2006, contributing significantly to bus service user-fidelity. Appreciable results were also obtained with train users (Trenitalia

2) continuing actions aimed at LPT user-fidelity (through annual season tickets), thereby also affecting modal choices of an occasional nature;

3) increasing awareness for a **more rational and environment-friendly use of the car**;

4) increasing bicycle use for home-work and work-work movements;

5) defining mobility management policies for single zones, in order to operate in catchment areas characterized by critical private transport problems, poor public transport supply and a high number of workers in small local units, also experimenting with **off-the-route public transport solutions**.

Home-school movements

Possible actions concern:

and FER).

1) integration with the **Scuolambiente (School-environment)** project, proposing initiatives to schools for the assessment of air quality and sound pollution deriving from traffic;

2) increasing awareness of sustainable mobility between elementary and middleschool children and their parents, especially promoting forms of alternative mobility (e.g. **"walk pooling"**) and the use of public transport and bicycles for home-school movements;

3) possible use of **flexitime for entry/exit schedules** in upper schools to limit superimposition with peak-hour home-work movements on public transport, particularly in schools in the old city centre;

4) promotion of initiatives **to reduce LPT season ticket costs** and the use of bicycles in all schools (including the University).

Encouraging eco-sustainable renewal of the public and private vehicle fleet



Private vehicles

In compliance with national and regional policies of incentives for conversion of petrol-fuelled vehicles into methane and LPG-fuelled ones, and the diffusion of these latter together with electric and hybrid vehicles, **incentive campaigns will continue for the transformation of private citizens' motor vehicles for use of methane and LPG**.

As well as incentives regarding the cost of installing/purchasing methane/LPG plant, reduced-

price season tickets for parking methane

and LPG vehicles will be extended together with further advantages for vehicles of low environmental impact or zero emission. Types of vehicle having low/very low environmental impact or zero emission are not subject to any traffic restrictions, in accordance with Regional air quality agreements.



Commercial vehicles

With regard to the system of economic incentives-disincentives intended to **encourage more eco-compatible means of transport**, the new Plan aims to discipline access to the LTZ (in progress) and "T" (already operative) according to time-bands. Paid permits are already being set in motion. The second phase of the Goods Plan will see activation of the Van Sharing project which aims at greater specialization among operators working in the old city centre, through promotion of more sustainable means of goods supply in the LTZ. Use will also be made of new technologies for defining routes and pre-booking loading/unloading spaces.

Public means of transport

The aim of the PGTU is gradually to upgrade the bus fleet to more ecocompatible means; these presently account for 40% of

those in urban service. The environmental strategy for



renewal of the bus fleet foresees: trolleybuses; battery-driven electric buses, with recharging equipment in the bus garages; use of hybrid vehicles; use of methanefuelled vehicles and adoption of a methane system with two refuelling stations inside the

ATC garages; use of less polluting fuel; use of emission-reducing devices.



10%

the percentage of the motor vehicle fleet which should be of low impact with a programme of 3,000/4,000 conversions a year

free

street parking (on blue lines) for electric cars

50% discount on parking season tickets for methane and LPG vehicles

-5.500

fewer operational permits in 2006 (-25%) with the introduction of the principle of payment for tags

40%

percentage of the ATC bus fleet presently of zero or low environmental impact

2-wheel vehicles

new incentives are foreseen for extending zeroimpact mobility

50% reduction in deaths and injuries by 2010 to increase road safety for all users



-50%

goal for reduction of deaths and injuries caused by street accidents by 2010 (compared with 2001)

426

accidents which took place in the most dangerous areas of the city in the 2002-2004 period

-33%

effective reduction in accidents in critical areas following safety developments

30

"black spots", in which a high number of accidents with high mortality and injury rates occur

The goal of reducing deaths and injuries

The Piano della Sicurezza Stradale Urbana [Urban Road Safety Plan] (PSSU) is an integral part of the PGTU. Following recent indications by the European Commission, it has adopted **the goal of a 50% reduction by 2010 of the number of deaths and injuries** registered in 2001. The hypothetical trend is as follows:

	accidents	injuries	deaths	reduced in- juries (%)	reduced deaths (%)
Annual average in reference period 1999-2001	2639	3373	27		
Goals for two-year period 2004-2005		3204	24	5%	10%
Goals for two-year period 2006-2007		2597	20	23%	26%
Goals for two-year period 2008-2009		1990	16	41%	42%
Goals for 2010		1686	14	50%	50%
2004 data	2505	3122	22	7%	19%

Infrastructural and/or traffic management developments, aimed at improving the "street environment" factor and identified through analysis of the most critical points of the road network, can reduce accidents considerably. These developments alone, however, will not guarantee achievement of the goal by 2010 and must therefore be coupled with regulatory and educational actions as well as greater surveillance.

Identification of 30 "black spots"

The data permit identification of a series of "black spots" where accident statistics (number of accidents, injuries, mortality, number of accidents involving pedestrians and cyclists, reiteration of fatal accidents) are particularly high. A link may therefore be supposed between geographical features and the highest accident levels; indeed, those "black spots" already the subject of infrastructural actions have seen a 33% reduction in accidents.

The developments proposed by the PSSU concern 30 areas with 426 accidents, 582 injuries and 8 deaths in 2002-2004, in addition to those already programmed in 23 areas with 555 accidents, 790 injuries and 4 deaths in 2002-2004.

Reduced exposure and increased compliance with rules (SIRIO, RITA, STARS)

	Class	Subclass	Development		
1		Controls on compliance	Telematic control of LTZ access (SIRIO)		
2	Control with rules		Telematic control of "T" access and transit in re- stricted lanes (RITA)		
3	Engineering: traffic and mo-	Reinforcement of collec- tive transport and check on demand	Increased quality and quantity of collective tra port services		
4	bility manage- ment Reorganization of traffic circulation		Creation of traffic islands in the old city centre		
5		Traffic moderation	Pedestrian priority traffic zones		
6	Engineering: infrastructures	Speed management	"30 km/h zones"		

Example of developments to reduce exposure of weaker users to motor traffic in the old city centre

Protecting pedestrian and cyclist access and security

In the principal road network dedicated to longer range movements in larger quantities (up to 1,800-2,000 vehicles per hour at peak times in each direction), vehicle crossing must certainly be foreseen and permitted; in this case the infrastructural upgrading consists separation in а between pedestrian and vehicle routes and suitable planning and management of points of conflict (pedestrian crossings).



The programme aims to encourage:

- "equipped" pedestrian crossings on principal and secondary roads
- continuity of longitudinal pedestrian routes
- completion of traffic-light controlled pedestrian crossings
- developments in compliance with the Highway Code and aimed at increasing awareness of it



With regard to **cycle users**, the principal development foresees the creation of protected routes which will link into a continuous network the numerous cycle lanes currently present in the territory, as well as the creation of new routes. The principle adopted for the security of this type of movement is that of segregation between cyclist and motor vehicle components.



middle schools for pedestrians and cyclists

- preparation for moped "mini-licence"
- awareness campaign for users of two-wheel motor vehicles

Not least, counter-action is planned to **promote correct behaviour** by road users (surveillance plan – education – awareness) concerning:

- speed control
- traffic control on the principal inward/outward axes in favour of public transport
- alcohol level controls
- road education in elementary and

continuity

of pedestrian routes with protected pavements and safe crossings

removal

of architectural barriers which limit autonomy of challenged persons, senior citizens and children

more

traffic lights with pedestrian call buttons protective traffic islands raised ramps and pedestrian crossings access to bus stops

less

vehicle speed accidents involving weak users For further information and details

Short glossary:

ATC S.p.A. - Azienda di trasporto a partecipazione comunale e provinciale [= the Municipal and Provincial Transport Company]

BLACK SPOTS – places in which a high number of accidents with high mortality and injury rates occur

PGTU - Piano Generale del Traffico Urbano [Master Plan of the Urban Traffic]

FAP - filtri anti particolato [Diesel particulate filters]

MODAL DIVERSION – strategy for shifting mobility demand from one means of transport to another

N.C.C. - Noleggio Con Conducente [Rent-a-car-with-driver]

PSQA - Piano Straordinario per la Qualità dell'Aria e la Mobilità Sostenibile a Bologna

[Extraordinary Plan for Air Quality and Sustainable Mobility in Bologna]

RDS-TMC - tecnologie di trasmissione dati [data transmission technologies]

PSSU - Piano della Sicurezza Stradale Urbana [Urban Road Safety Plan]

RITA - Rete Integrata di Telecontrollo degli Accessi [Integrated Remote Controlled Access

Network]. 0-24 system for remote surveillance of bus lanes and restricted areas

SHORT-TERM PARKING [SOSTA R/R - sosta a rapida rotazione]

SIRIO - Sistema Integrato Rilevamento Ottico [Integrated Optic Observation System]. Remote surveillance system of LTZ

SFM - Servizio Ferroviario Metropolitano [Metropolitan Railway Service]

STARS - Sanzionamento Transiti Abusivi Rosso Semaforico [Fining of Unauthorized Crossing of Red Traffic Lights]

T – axis consisting of Via Indipendenza – Via Rizzoli – Via Ugo Bassi, subject to special traffic restrictions

LPT - Trasporto Pubblico Locale [Local Public Transport]

TPGV - Trasporto Pubblico a Guida Vincolata [Fixed-Drive Public Transport, opertated by trolleybuses]

ZEV - Zero Emission Vehicles

LTZ - Zona a Traffico Limitato [Limited Traffic Zone]

The PGTU 2006 consists of the following documents:

I) General Report

II) Urban Road Safety Plan – General Plan

III) Planning actions varied compared with the PGTU 2000 – Updating on progress of PSQA and Goods Plan

IV) PGTU Forum

V) Map section

VI) Document showing comments on observations, opinions, reservations and proposals presented to the new PGTU 2006

Regulatory references:

 Policy-lines for new PGTU. Document approved by Town Council 19th April 2005
 Resolution, Agenda no. 228 P.G. n. 245502/2006, object NUOVO PIANO GENERALE DEL TRAFFICO URBANO AI SENSI DELL'ART.36 DEL NUOVO CODICE DELLA STRADA. ADOZIONE [New Master Plan of the Urban Traffic as of Section 36 of the new Highway Code. Adoption]
 Resolution, Agenda no. 128 P.G. n. 109827/2007, object: NUOVO PIANO GENERALE DEL TRAFFICO URBANO AI SENSI DELL'ART.36 DEL NUOVO CODICE DELLA STRADA.

APPROVAZIONE IN VIA DEFINITIVA [New Master Plan of the Urban Traffic as of Section 36 of the new Highway Code. Definitive approval]

4) Concerning Agenda no. 128 P.G. n.142230/2007, object: ORDINE DEL GIORNO SUL PROVVEDIMENTO CONTENUTO NEL PGTU, RELATIVO ALL'ESENZIONE DAL PAGAMENTO DELLA SOSTA PER LA SOLA PRIMA VETTURA PER FAMIGLIA, PRESENTATO DAL CONSIGLIERE NATALI DURANTE LA SEDUTA CONSILIARE DELL'11.6.2007 [Agenda on Provision included in the PGTU regarding exemption from parking payment for only one vehicle per family, presented by Councillor Natali during the Council Session of 11.6.2007]