

Info Polis

----- MEMBER IN THE SPOTLIGHT 3 - SEPTEMBER 2007 -----

ROME – FLAGSHIP FOR MOBILITY IN EUROPE

The city of Rome, the capital of Italy, has a population of 2.5 million inhabitants, 1.9 million cars and more than 500,000 motorcycles and scooters circulating and 6.1 million trips are made daily by private vehicles. Rome is overall famous in the world for its unique historical and cultural heritage which attracts every year some 23 million tourists.

The structure of the main road network is still based on the radial system created by the Romans 2,000 years ago, and is made up of infrastructures of metropolitan scale (motorways, highways, main roads) with a total length of about 1,200 km and over 5,000 km of local roads.



Digging just beneath the surface of “Piazza Venezia”

The road network is also the backbone of the Public Transport services which are mainly based on “surface systems”: more than 350 bus lines over a 2.600 km of network length with an offer of 120 million vehicles/km year, 6 tram lines and one trolley line. Only two Metro lines are operating in Rome for a total network of 36.6 km.

A traffic master plan for Rome

The main challenge Rome has to face deals with the reduction of the impacts deriving from its peculiar mobility set up: **traffic congestion, environmental impact, uncertainty on mobility conditions.**

ATAC, Rome Mobility Agency, is supporting the City administration in implementing the **Kyoto Protocol** standards for what concerns the mobility policies. The mobility field has been identified as one of the main sources of CO2 emissions.

Inside Rome General Traffic Master Plan the guidelines to improve mobility decrease air and noise pollution, modify modal split in favour of public transport and sustainable modes, increase traffic safety, safeguard health, and preserve Rome's historical and architectural heritage are identified.

In general the Master Plan says that the more polluting cars and two wheels have restrictions to access the city. In fact the strategy is to restrict or limit private car use in the city centre and gradually relax these restrictions outside, as shown in Fig 1. Besides the vehicles have to pass an annual check of their emissions to enter the city.

The scheme is accompanied by complementary restrictive measures on traffic regulation and management, such as the implementation of the Limited Traffic Zones, accompanied by the articulation of parking fares, and the innovation of local Public Transport organization improvement of information for city dwellers, sensitive areas, they also have to be performing from the environmental point of view, imposing the yearly check up of emission to all the cars and scooters circulating in Rome (Bollino Blu).

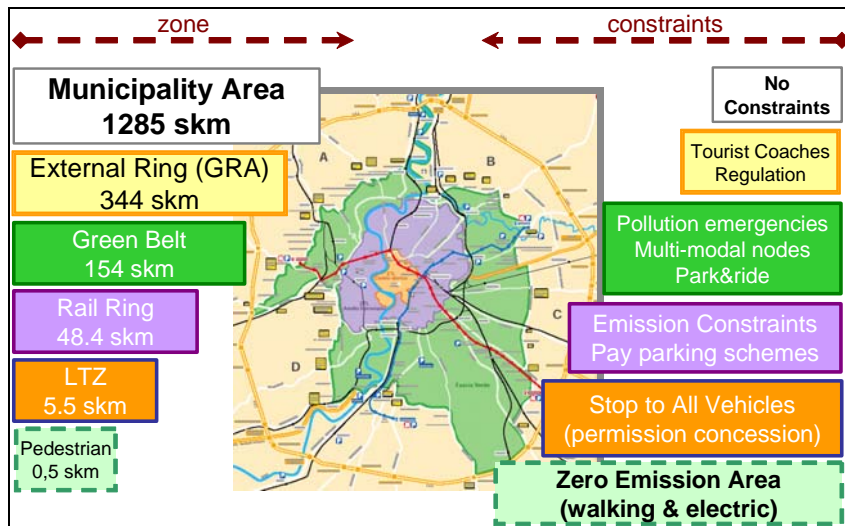


Fig. 1 Urban Planning and Traffic restriction Policies

With regards to this framework, we would like to focus on some innovations Rome has recently been pursuing in the field of mobility.

New infrastructures – two metro lines under construction

The most impressive work is currently going on the new third underground line “C”, indicated in green in the following picture. Works have started early this year, and of course many problems have been encountered as the track is fully inside the ancient Roman areas.

Specific solutions are being studied to integrate the new infrastructure with the ancient ones. It is the case of the “Colosseo” station crossing, where probably a new museum with the Roman findings in the dig area will be created.

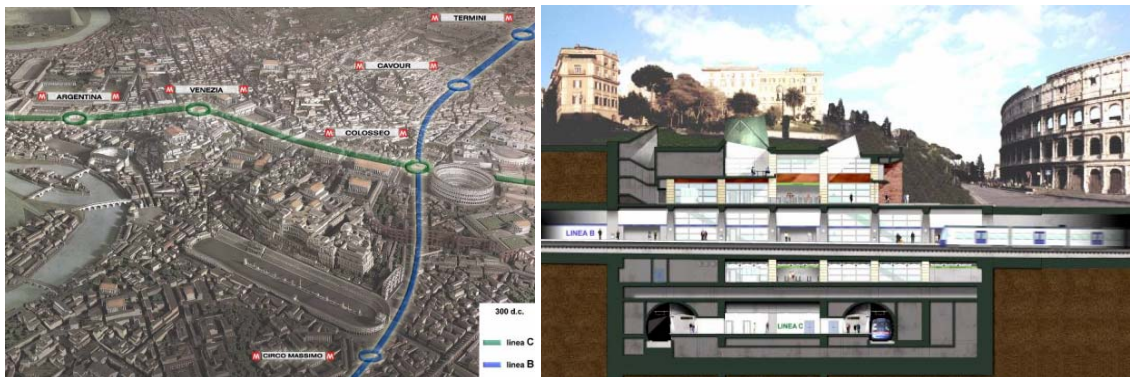


Fig 2 – 3 Planning the new metro lines – harmonising modernity and historic heritage

In 2012, and definitively in 2020 when the fourth underground line and other main interventions will be completed, Rome should achieve the degree of “Sustainable City” also in environmental terms: air pollution and CO2 emissions should respectively fit EU limitations and Kyoto Protocol updating at local level.

Innovative ITS solutions – “ATACMobile”

It is the mission of ATAC to provide Rome citizens and visitors with **up to date and real time information**.

ATAC is the owner and manager of Rome Mobility Control Centre, which integrates and supervises a number of services:

- the Access Gates to the Limited Traffic Zones and the sanctioning system;
- the distribution of information on traffic via internet, VMS and Mobile phones;
- the management of the AVM system and the distribution of information on PT service in real time both at the bus stop and via mobile phone, etc.

Based on the services described, ATAC has recently launched the “**AtacMobile**” solution, a new integrated Info-Mobility service, available on **mobile devices** (palmtop and smart phone) of common use, whose aim is to create a direct link between the Rome Mobility Centre and citizens that can catch **real-time information** just using their mobile phone, according to the following pictures.



Fig. 4-5 ATAC Mobile services and available example of use

The access restriction policies – new areas protected

Since 2001, car traffic limitation to access the **historical centre of the city of Rome** (4,8 km² LTZ) has been implemented and physically guaranteed by the Automated Access Control System, regulated by a flat flare Road Pricing scheme. Permits to access the LTZ are issued, upon payment of an annual fee (updated early in 2007), only to some specific categories of vehicles owners, including of course the residents of the area.

The original system is now made up of 23 electronic access gates, installed on the whole cordon of access roads to the historic city centre. The cameras, set on the poles, detect the plate of vehicles by APNR (Automatic Plate Number Recognition) technique, the central system verifies if the plate is on the “white list” to enter and, in case of violation, the sanction is automatically issued (68 €/not authorized access). The revenues coming from the payment of the annual fee and from the violations are used to recover the **environmental externalities and to fund new investments in Public Transport infrastructures for the city**.

To date, the main observed **results** show a 10% traffic decrease throughout the day, a 20% decrease during the restriction period, a 15% decrease in the morning peak hour (8.30-9.30) and a decrease also in not enforced period of the day.

This scheme has shown to be successful and has been extended to cover now an area of **10 km²**. The new LTZ schemes have been implemented according to a cost benefits analysis, in fact they run when the traffic congestion is higher in order to discourage people from using the private car; it has been identified that the most critical traffic conditions in the sensitive areas identified usually happen during the night hours.

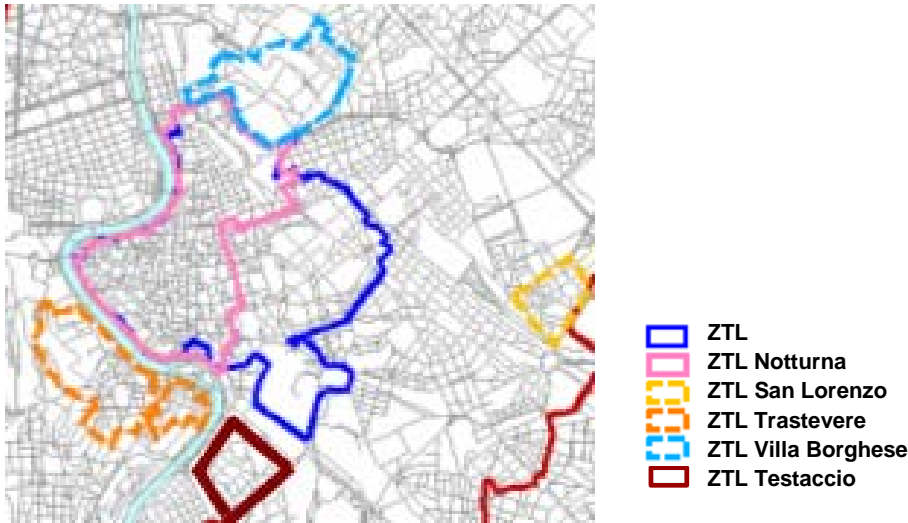


Fig. 6 The new LTZ schemes in Rome

These new LTZ schemes are further supported by fundamental “side measures”, and the Trastevere LTZ is an example of this: during the enforcement a dedicated **shuttle service**, operated by **electric** buses connects the area with the new **parking**; in the same way new technologies have been implemented, as shown in the figure the new access gates are equipped mini-VMS to provide real time information on the status of the gate (operating or not).



Fig 7-8 One of the first “access gates” to the city centre & the new information mini-VMS

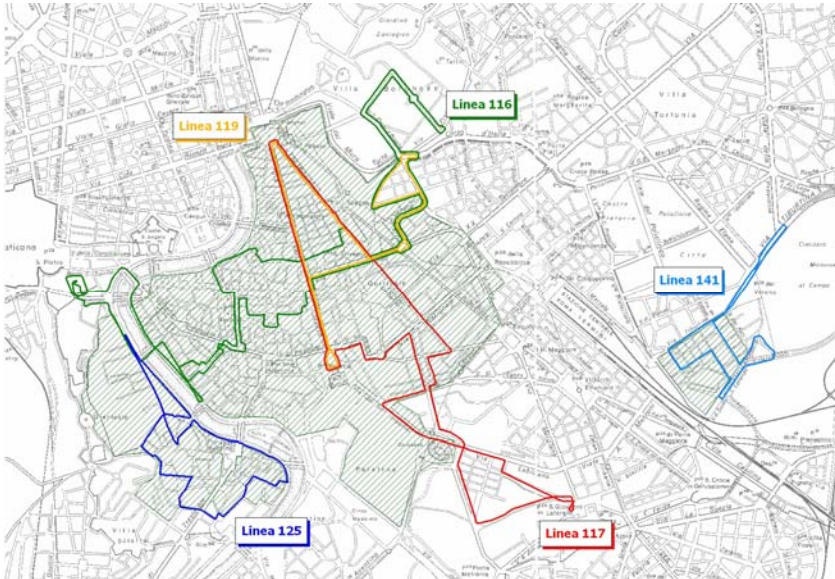
These success stories were seeing the concurring and complementary support of **MIRACLES (CIVITAS)**, concluded in May 2006, **CURACAO** and **CATALIST EU projects**, started respectively in 2006 and in 2007. Rome has further been recognized by the CIVITAS initiative for being **one of the flagships in Europe** for the implementation of Access Restrictions Zones.

Renewing fleets towards more environmental friendly standards

The bus fleet in Rome has a significant impact on the urban environment; ATAC manages 2.700 buses running every day in the city. With regards to PT, an important challenge has been the introduction on a large scale of **CNG buses**.

Today in Rome there are 300 running and by the end of 2007 the number will reach 400. Rome is thus an important test case and a source of information on this issue.

Electric buses have been circulating since 1989 and in 2005 a new **Trolley** line has been re-introduced.



The electric buses network

In general the policy concerning the Bus fleet follows two directions:

- 1) Lower the average age of the bus fleet (more performing from the energetic point of view);
- 2) Improve the environmental performances of buses (more electric, CNG and EURO IV; dismiss pollutant buses);

The fleet renewal plan is reported in the following picture, where the evidence of already carried out efforts is clear, considering that at the beginning of 2002 there were still 1.000 EURO 0 buses circulating!

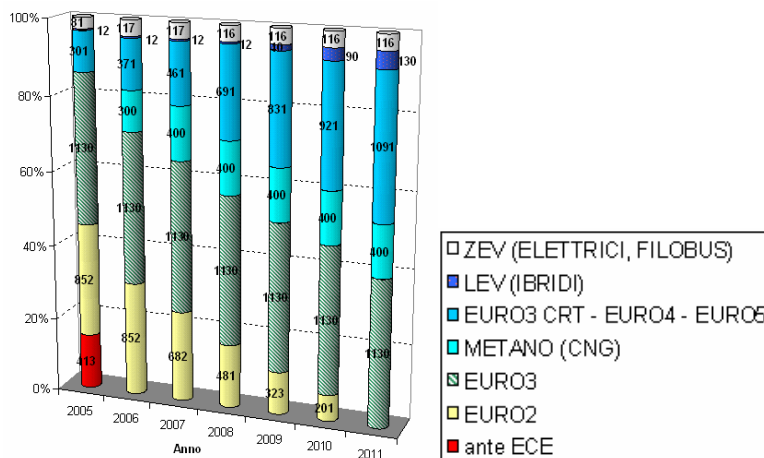


Fig 9. The plan for the fleet renewal

Future investments

The plan for investments in mobility infrastructures is shown in the table below. 2012 is the year to reach the **Kyoto Objective: -6,5% CO2 emissions** compared to 1990 values.

An investment Plan of 3.000 Million € is expected until 2012 and of 9,200 Million € until 2020.

	2006	2012	
• Urban railways (km)	112	123	(+10%)
• Underground (km)	36	47	(+30%)
• Bus Corridors (km)	13	130	(+900%)
• Rail Network (km)	206	395	(+190%)
• Stops (n.)	365	586	(+160%)
• Seats/km (ml)	5,8	8,2	(+140%)
• Parking places	80.000	100.000	

For more information on ATAC Rome Mobility Agency: <http://www.atac.roma.it/>

Contact: **Fabio.Nussio@atac.roma.it**

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