

Roma servizi per la mobilità

Mobility Center Of Rome

Meeting with FIM FEMA Delegation– 22/02/2018

THE CITY OF ROME AND ITS MOBILITY



Metropolitan City of Rome

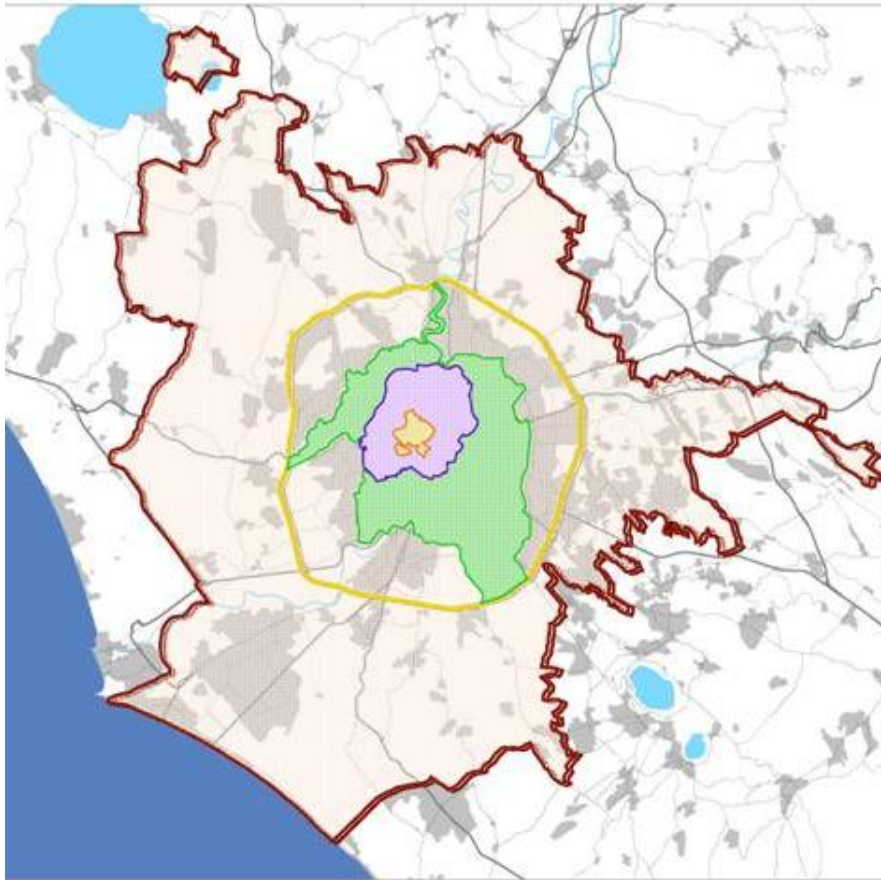
Municipal Area	1.285 skm
Population	
Metr. Area	4.400.000
City residents	2.900.000
Road Network	km 5.000
Main road network	km. 800
Vehicles	2.650.000
cars	1.890.000
2 wheels	600.000
goods delivery	160.000
Daily Trips	5.500.000
Peak-hour Trips	670.000



Main City characteristics

- Historic and cultural heritage
- Narrow roads
- Inner presence of the Vatican City
- Attitude for private vehicles
- Tourism (>23 millions per year)
- High air pollution levels

The starting point: bands of increasing restriction zones



Municipality Area – 1285 km²
“Blue Label” Emission Check
(all vehicles and PTWs)

External Ring (GRA) – 344 km²
Tourist Coaches Regulation

Green Belt – 154 km²
Pollution emergencies,
Multi-modal interchanges, Park&ride

Rail Ring – 48.4 km²
Emission restrictions, Pay parking schemes

LTZ – 5.5 km²
Stop to all vehicles (except permit holders)

Pedestrian – 1/2 km²
Zero Emission Area (walking & electric)

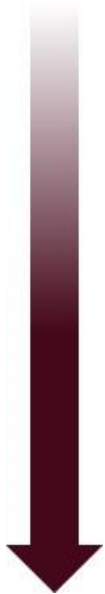


Mobility Center

Technological Systems

The Mobility Center - evolution

Traffic
Center



Mobility
Center

2000 STA spa

Holy Jubilee

§ Private mobility

2005 ATAC spa

Merging ATAC - STA

§ Private mobility

§ Public Transport

2010 Roma Servizi per la mobilità Srl

Reorganisation TPL 2010

§ Part of private mobility

§ Public transport

§ Infomobility services

2012 Roma Servizi per la mobilità Srl

Integration of road mngmt in RSM
(new location Archivi)

§ Private mobility

§ Public transport

§ Integrated infomobility services

The Mobility Center – main activities

The Mobility Center, located in Roma Servizi della Mobilità is the heart of an integrated system, which has the main functions of monitoring, controlling management of the urban traffic, together with process and fining management as well as diffusing traffic information.

The Center then puts together a series of subsystems, each dedicated to the performance of specific functions of monitoring and / or regulation of traffic flows.



The Mobility Center today – facts & figures



Infomobility

Variable message signs (VMS)	66
UTT (Urban Travel Times)	51
Electronic poles of bus stop	300
muoversiaroma.it - mobile	



Enforcement & fining

E-gates for Limited Traffic Zones & Pre-signalling signs	77
E-gates for PT bus lanes	20
Fotored	1
Vistared	10
Safety Tutor	2



Monitoring, Controlling Management

Video surveillance cameras	75
Traffic Measurement Stations	130
Traffic lights	1385

Variable message signs

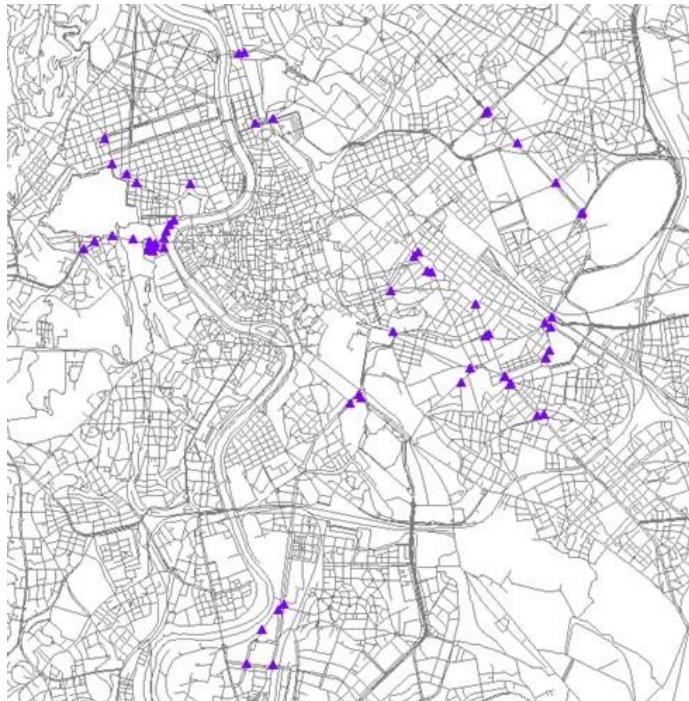


Light structures installed on main urban roads dedicated to the transmission of traffic information during the trip.

Information on:

- **Special events** (manual operation)
- **Congestion state** of some routes based on traffic data generated by the sensors and made available by a local decision algorithm that automatically processes the data traffic
- **Travel times** (UTT) on main roads

Current status	
66	36 on Tangenziale Est Olimpica & Muro Torto 13 main access roads to Roma (internal to the highway ring - GRA) 4 on Principe Amedeo di Savoia Aosta Tunnel 2 on Viale Libia 11 new installations (via del Foro Italico, Portuense, Newton, Magliana, ecc.)



Videosurveillance cameras

CCTV system for the protection of road safety: the video and data signals are transmitted to the Mobility Center through a proprietary fiber optic network, whose major backbones are installed in underground tunnels.

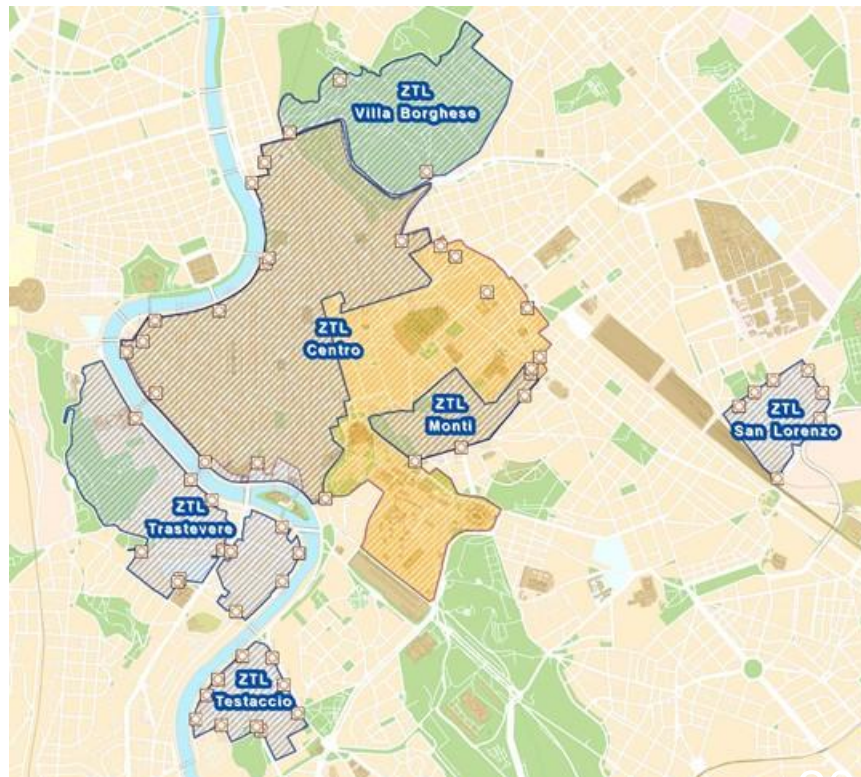
To date, **75** cameras can be controlled remotely (pan and zoom), located near large church (Basilica) and in highly critical intersections.

2013



29 new cameras
§ Muro Torto
§ Tangenziale est
§ Togliatti

Access Control at ZTL: electronic gates



San Lorenzo: 7 varchi



Centro Storico: 22 varchi



Trastevere: 12 varchi



Testaccio: 10 varchi

ZTL Centro storico

From mon. to fri. 6.30 - 18.00

Saturday 14.00 – 18.00

Fri. & Sat. 23.00 – 3.00

ZTL Trastevere

Weekday 6.30 – 10.00

Fri. & Sat. 21.30 – 3.00

LTZ Villa Borghese

Mon. to Sun. 0 – 24

ZTL San Lorenzo

From Wed. to Sat. 21.30 – 3.00
(May-July & September-October)

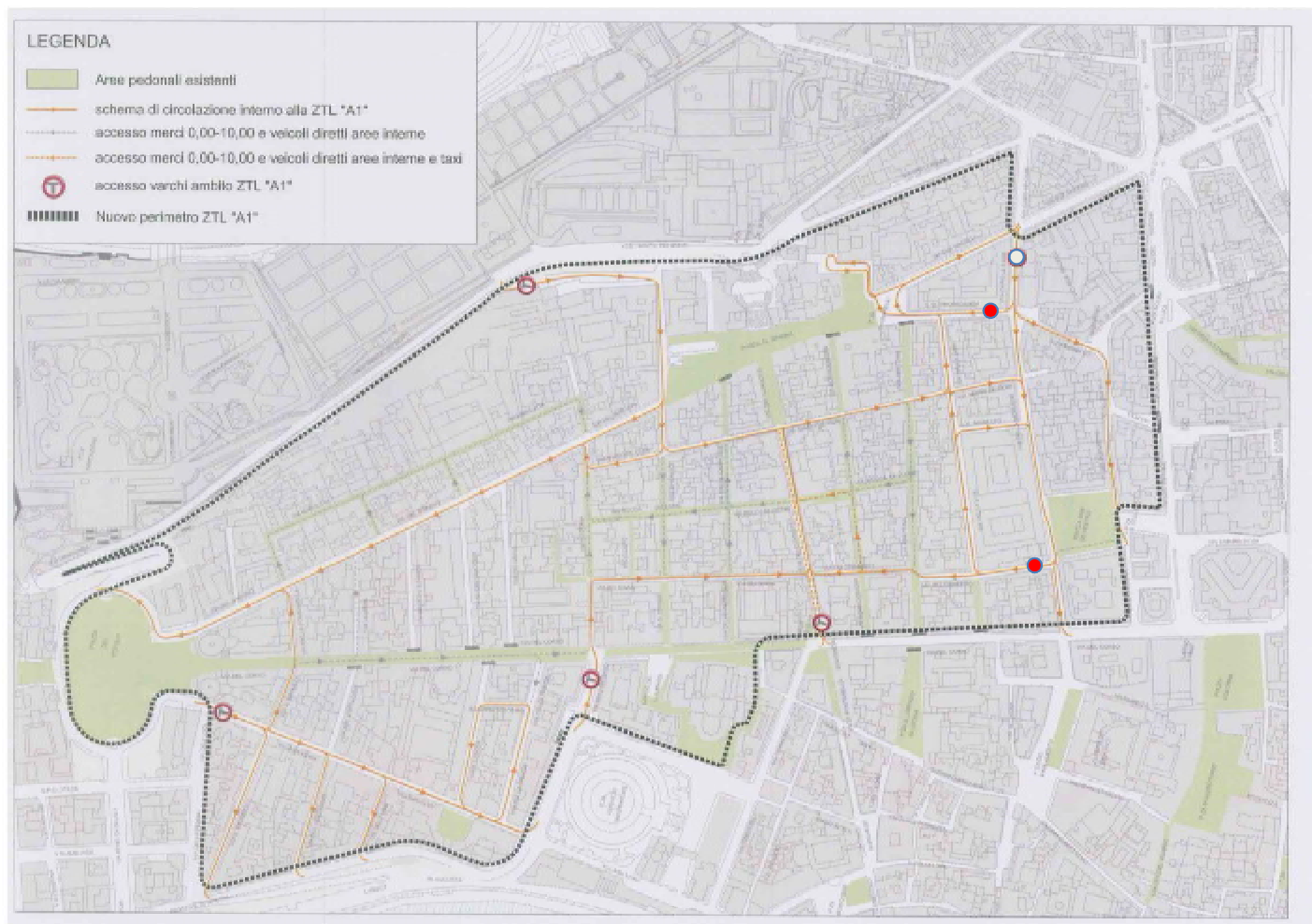
Fri. & Sat. 21.30 – 3.00

(November – April)

ZTL Testaccio

Fri. e Sat. 23.00 – 3.00

Access Control at ZTL: Tridente



2015

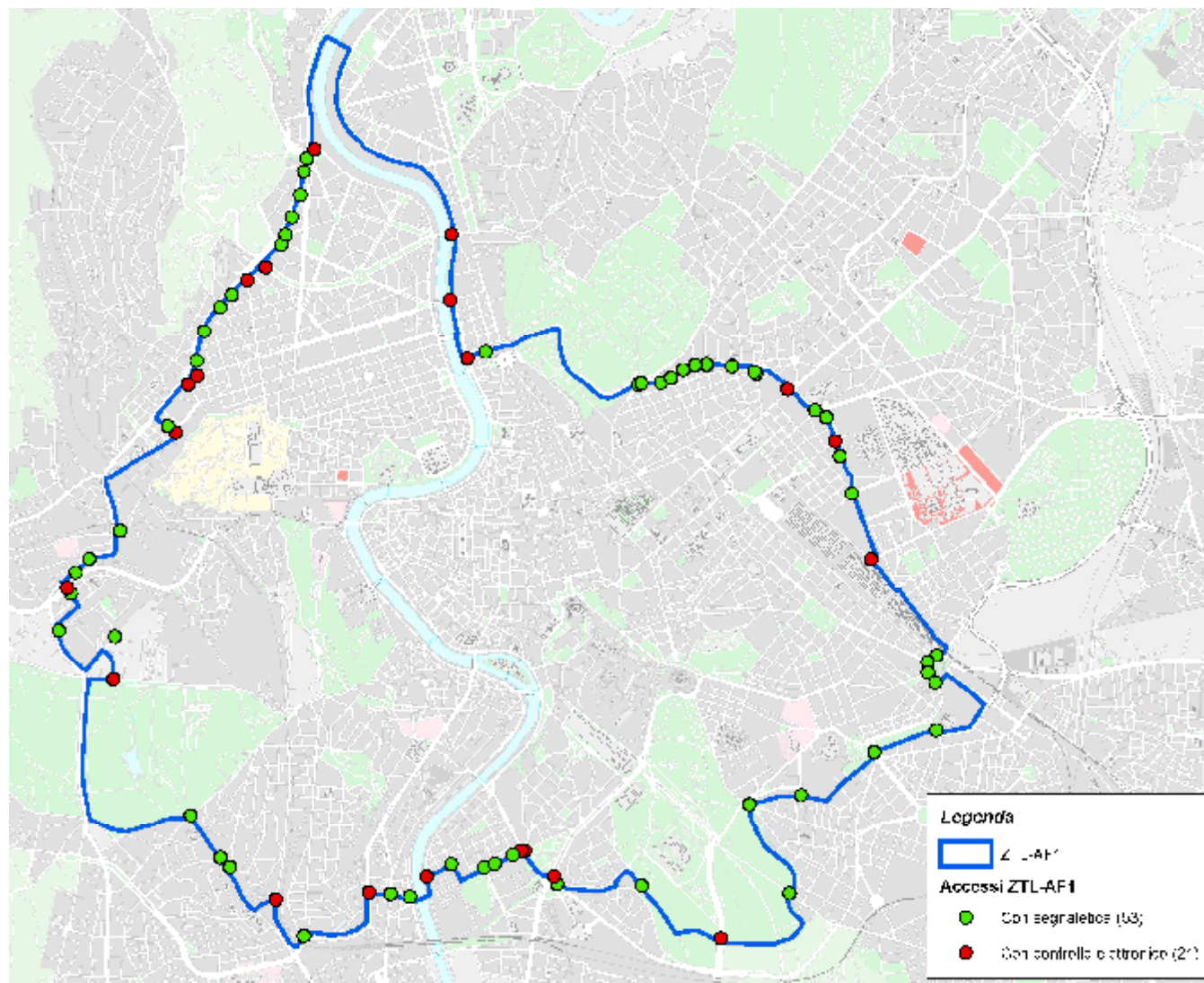
Tridente: 6 gates

ZTL Tridente A1

From Mon. to Fri. 6.30 -
19.00

Sat. 10.00 – 19.00

Access Control: ZTL VAM-AF1



2017
10
gennaio

VAM-AF1: 21 gates

ZTL VAM-AF1

All days 05.00 – 24.00

Total gates: 74

Ban on driving in all motor vehicles of more than 7.5 meters long, except authorized

21 working electronic gates (red dots)

53 gates with manual control by urban police (green dots)

LTZ – e gates Municipal Police interface

The screenshot displays the 'Iride2 Trastevere' web interface, a 'Sistema di Controllo Accessi'. The main area is titled 'Riconoscimento Segnalazioni' and shows a search result for '3/787' with an 'Identificatore Segnalazione (ID): 198922'. A central image shows a car with license plate 'CR 853V'. To the right, a form contains fields for 'Data' (2006/04/04 00:48:06), 'Varco' (Via Lungara alt. S.F. di Sales), and 'Elaborazione' (data dal varco). Below this, a 'Tipo Veicolo' dropdown is set to 'Autoveicolo', and a 'Nazione' dropdown is set to 'Italia'. A 'Report' button is at the bottom right. At the bottom of the interface, a 'Controllo Sintetico' section shows the license plate 'CR 853' being read by the system, with a red circle highlighting the characters. To the right of this, a 'Targa Letta' field shows 'CR 853' and a 'Targa Istituzionale' field shows 'CR 853'. Buttons for 'Conferma', 'Annulla', 'Istituzionale', and 'Motoveicoli' are also present.

Automatic plate number recognition process (Municipal Police user interface)

UNI certified processes (organization of standard):

- Management (communication, classification,...)
- Images authentication
- Filing system

Characters reliability: support to operators

Access Control on Bus reserved lanes



RSM has fielded the use of ITS technologies for the detection and sanctioning of unauthorized vehicles on bus transit lanes in order to improve the performance of surface public transport.

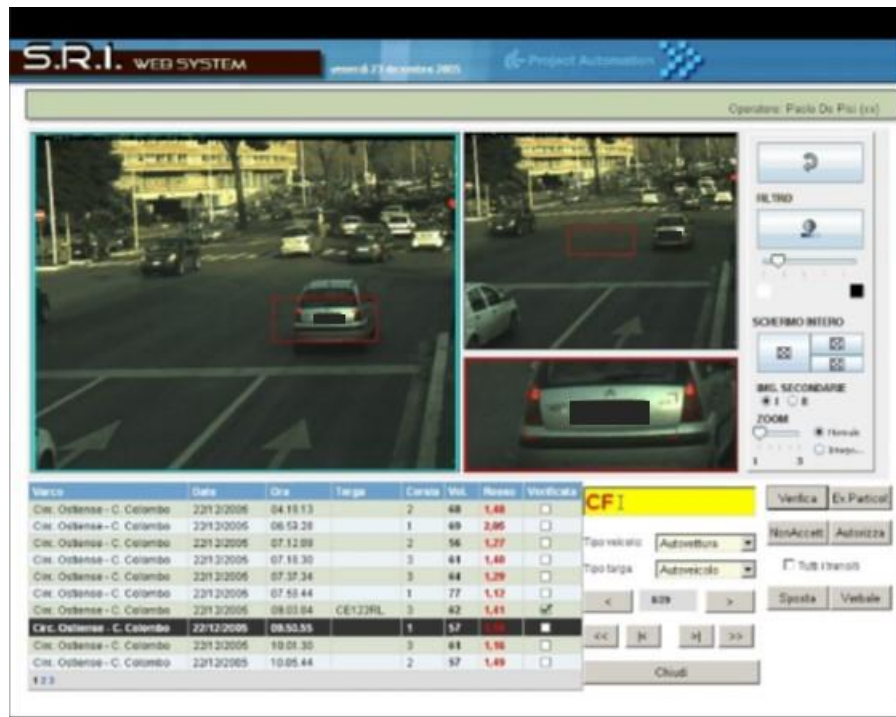
Since 2006 are in operation in the first three experimental systems, applying the system already in use for the automatic control of access to limited traffic zones.

The evolution of the system has allowed to extend the control also towards mopeds and motorcycles.

To date, 17 installations are in operation. These infrared cameras produce pictures of the vehicles in violation, with sanctioning process similar to e-Gates systems

Passage of red traffic light- Fotored

The system consists of a digital camera and sensors under the road surface. When the light is red, the device takes two pictures in sequence to the media that go beyond the stop line. The double picture is necessary to verify that the vehicle has actually crossed the intersection.



The system is approved and also allows the detection of speed.

At present a **first system** was installed experimentally in the middle lane of one of the most important roads with high sliding of the city, Via Cristoforo Colombo, at the intersection with the ring road Ostiense: the number of traffic accidents at this point it records a average of about 40 per year).

Passage of red traffic light - VistaRed

Decompattazione completa di
un filmato in una serie di fotogrammi



Evolution of FotoRed, the new system allows the acquisition of the entire operation of the passage through a red light in order to minimize possible disputes and appeals.

To date is installed on **10 main intersections** of Rome (Colombo - Pindaro, Prenestina - Tuscolana, etc..) for a total of **31 lanes**.



Dome camera,
tracking the vehicle
in crossing the
intersection with
red traffic light





UTT – Urban Travel Times

Monitoring system measuring travel times of private traffic in the urban context. It assess the level of service offered by the transportation network, identify problems due to the occurrence of abnormal situations (accidents, events). Information on the state of the traffic on the routes monitored is transferred in real time (through different dissemination channels), allowing users to change their routes as a function of the current level of network congestion.

Current status

- § Over **130 Km** monitored
- § Travel time of more than 40 sectors
- § **15 routes** monitored
- § Data update every **5 minutes**
- § Messages posted on VMs & www.muoversiaroma.it

UTT (Urban Travel Times):

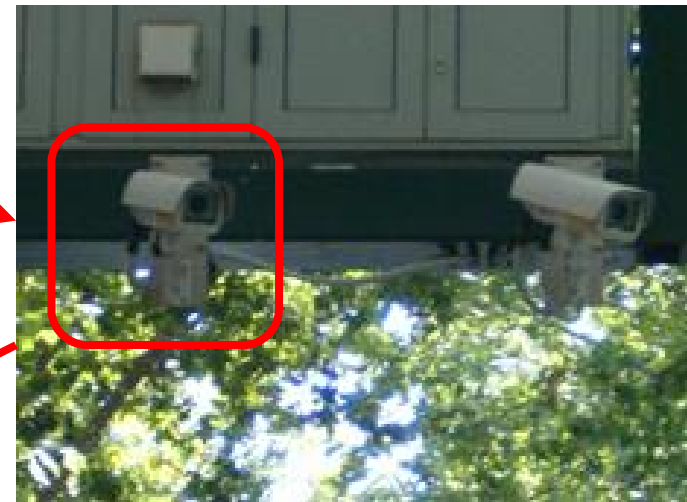


PLATE RECOGNISED
AND TIME RECORDED
AT THE ENTRY SECTION

Targa: CC 555 AA
14-apr-06 11:50:39

PLATE RECOGNISED
AND TIME RECORDED
AT THE EXIT SECTION

Targa: CC 555 AA
14-apr-06 12:11:48

**TRAVEL
TIME
21 mins
9 secs**



AVM – Automatic Vehicle Monitoring

The AVM system, installed on Atac and RomaTPL fleets and bus, allows real-time capture of key figures relating to public transportation, including the location of the coming bus.

The AVM data is feeding in an automatic way both the electronic poles on roads and traffic service operated by Rome Mobility Services, including www.muoversiaroma.it

Information to the citizen through **300 electronic poles**: the Mobility Service Centre sends to the poles electronic information on traffic and road conditions, which alternate on the display to the estimated times of arrival of the bus

To date about **2.600** equipped bus

FOCUS ON

MUOVERSIAROMA.IT

illettino delle 8 -

HOME PRIMO PIANO IN AGENDA OGGI A ROMA

Metro, treni e ferrovie

ATAC **TRENTALIA**

- Metro A
- Metro B/B1
- Metro C

TERMINI-CENTOCELLE

ROMA-LIDO

ROMA-VITERBO

ROMA-VITERBO

ZTL

ADDESSO **SETTIMANA**

- A1 Tridente
- Centro Storico (diurna)
- Centro Storico (notturna)
- Rione Monti (notturna)
- San Lorenzo
- Testaccio
- Trastevere (diurna)
- Trastevere (notturna)

Postazione

Flusso libe

Car2go

Enjoy

Share's

trasporti & mobilità

Riparte l'Onda degli universitari e minaccia altri cortei spontanei

Domenica c'è la Maratona. Arriva un piano salva-transporti

Restrizioni 90 Espresivo 170

La nuova città piano Italia

Il via per la Capitale

Il traffico più pesante

ON AIR

Roma Radio

Trasporti

IN ARRIVO

ESTR. 21

ESTR. 14

A. Capolinea

ROMA

AUGUSTEA RECEPTION



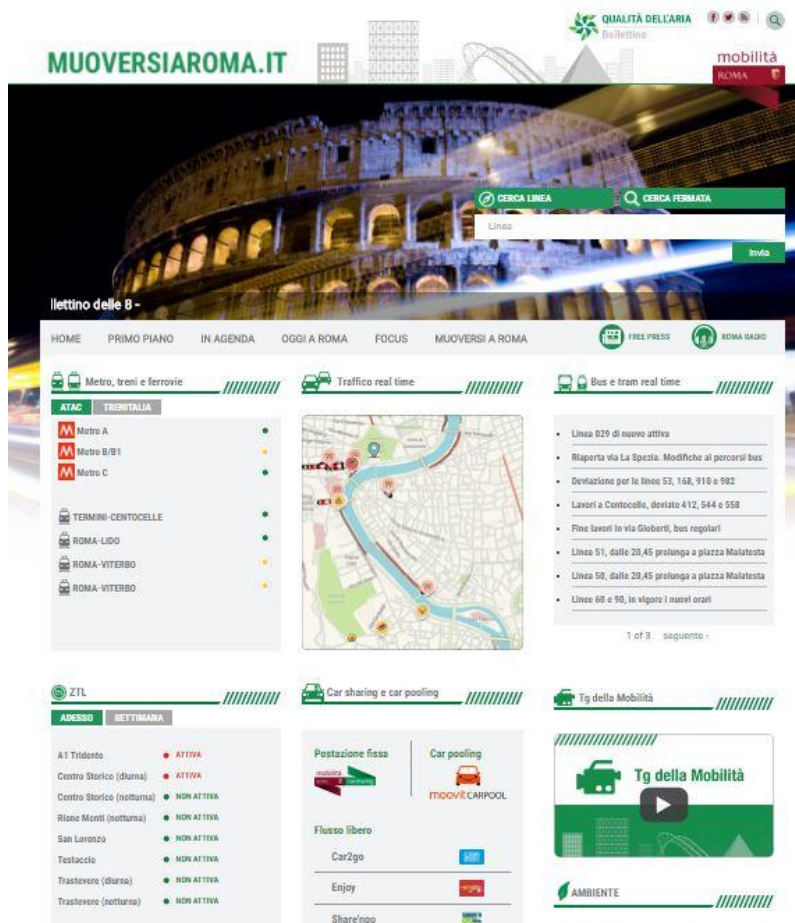
<http://www.muovi.roma.it>
(mobile)

www.muovi.roma.it

Website optimized for use by mobile phone.
Within the site all the information from the various systems of the Mobility Center are collected and published: from raw data to the service to the citizen.

- § Profiling: Users can register and save their preferences
- § Real-time services: news, times and bus routes, journey times, seeking dynamic routing for public transport

Web Page: <http://muoversiaroma.it>



App: muoversiaroma.it

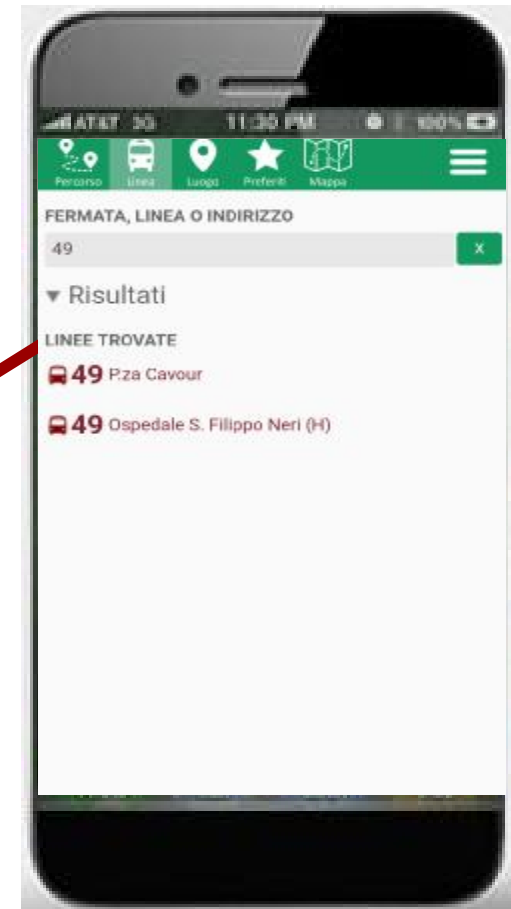
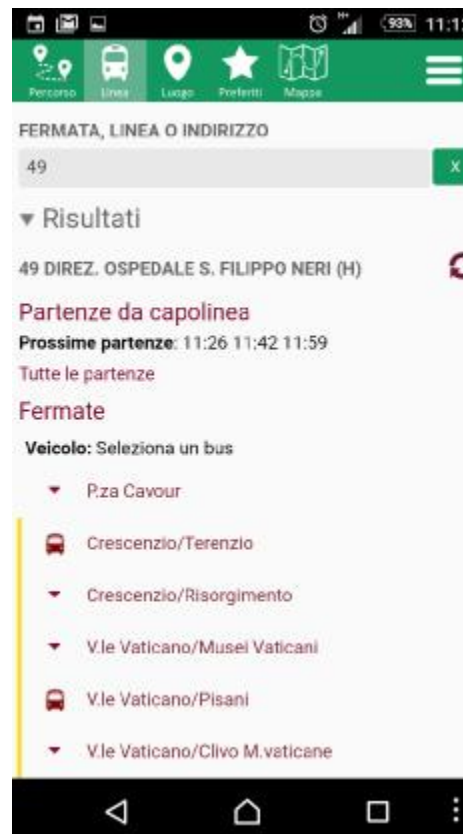


Share information – muoversiaroma

Bus waiting times

The service provides the estimated arrival of the bus at the bus stop of interest. **Registered user can define his preferred bus stops**

The information is generated in real time by Automatic Vehicle Monitoring (AVM), a GPS system installed on the majority of buses.



Thank you for the attention ...



Roma Servizi per la Mobilità - *Service Mobility Agency for the City of Rome*

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