



ROMA CAPITALE



Joint PASTA and Stepping Stone projects
POLIS working group meeting, Brussels, 7-8 April 2014

Rome case study: The new Mobility Masterplan and its active mobility measures



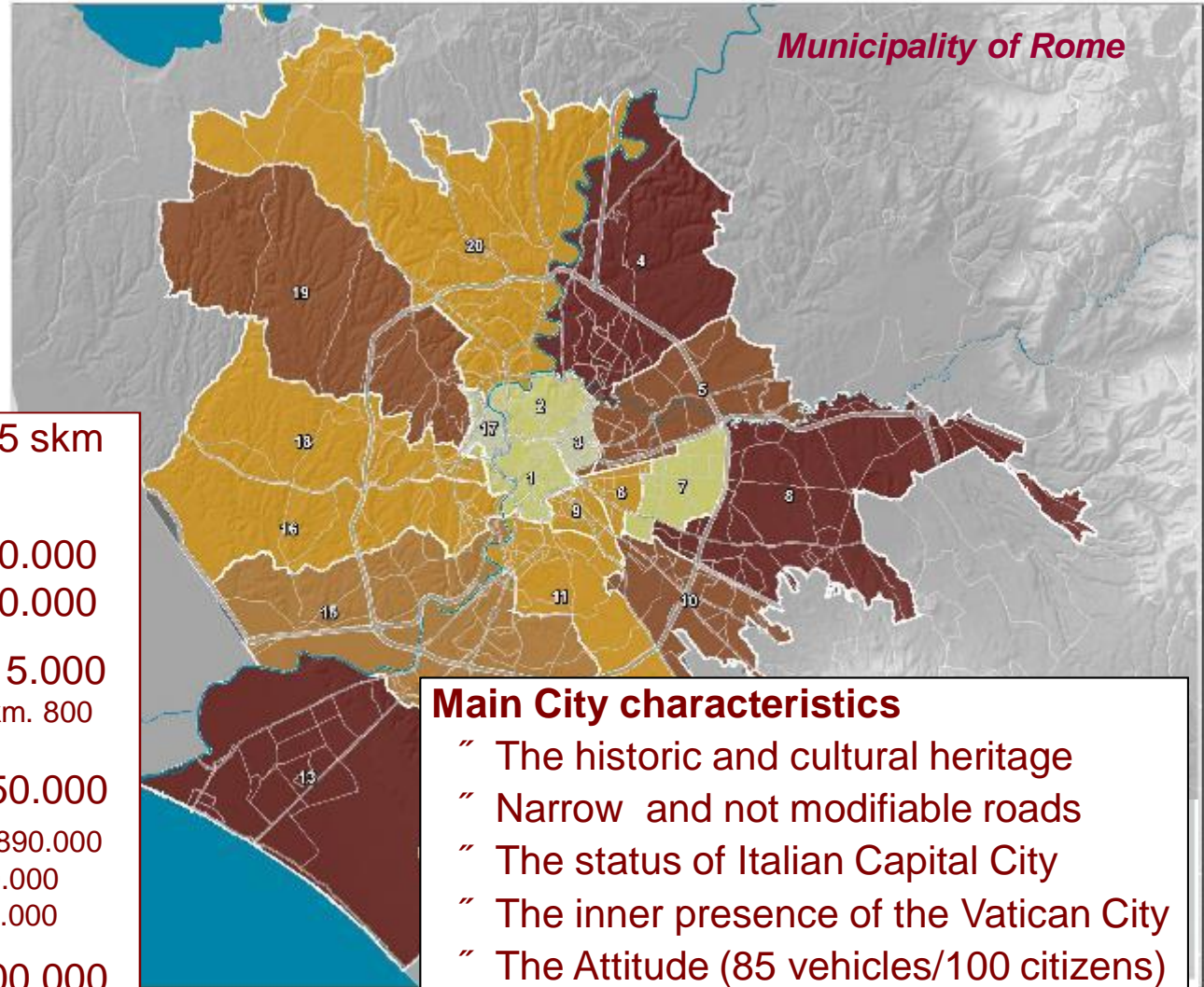
Ing. Fabio Nussio -
Head of International Co-operation
Mobility Agency of the City of Rome

POLIS WG Env & Health - Brussels, 7-8 April 2014

Rome case study: new traffic MP and AM measures



Province of Rome



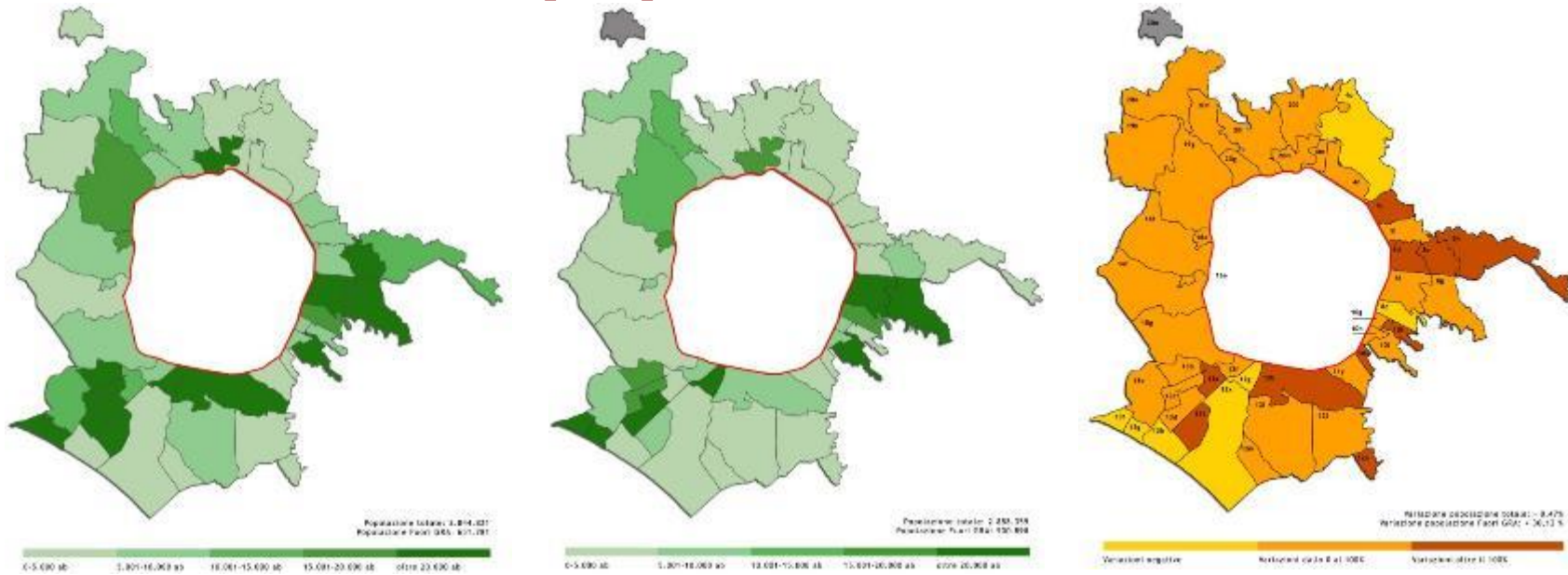
Municipality of Rome

Municipal Area	1.285 skm
Population	
Metr. Area	4.500.000
City residents	2.800.000
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	6.100.000
Peak-hour Trips	560.000

- Main City characteristics**
- “ The historic and cultural heritage
 - “ Narrow and not modifiable roads
 - “ The status of Italian Capital City
 - “ The inner presence of the Vatican City
 - “ The Attitude (85 vehicles/100 citizens)
 - “ The Tourists (>23 millions per year)



Evolution of the population in Rome



Zone	Population 1988	Population 2008	Population 2012	Population expected
Rome municipality	2.858.000	2.884.000	2.884.000	2.980.000
External to Road ring	500.900	704.600	747.000	896.000
% external GRA	17%	24%	26%	30%

Source: Research Roma oltre GRA
Scenari della mobilità romana





ROMA CAPITALE

Metro & Rail Service

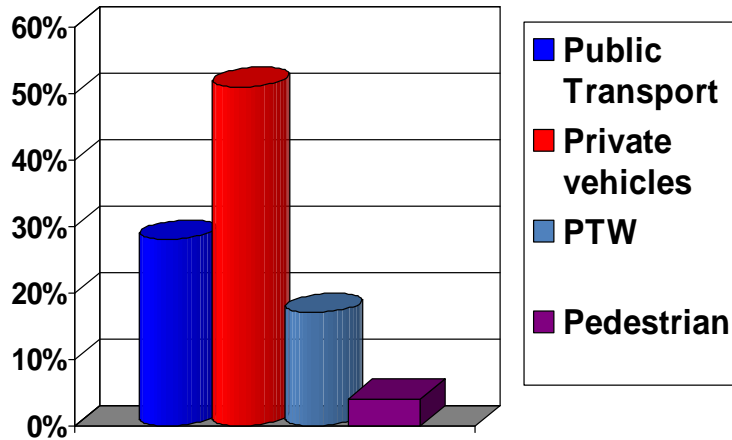


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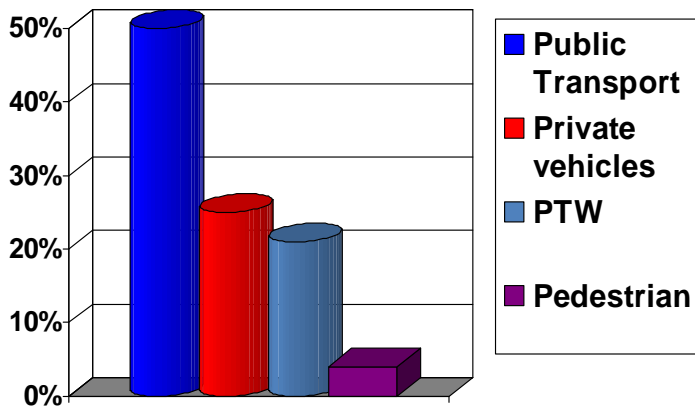


Mobility & Impacts in Rome in 2005

Metropolitan Area

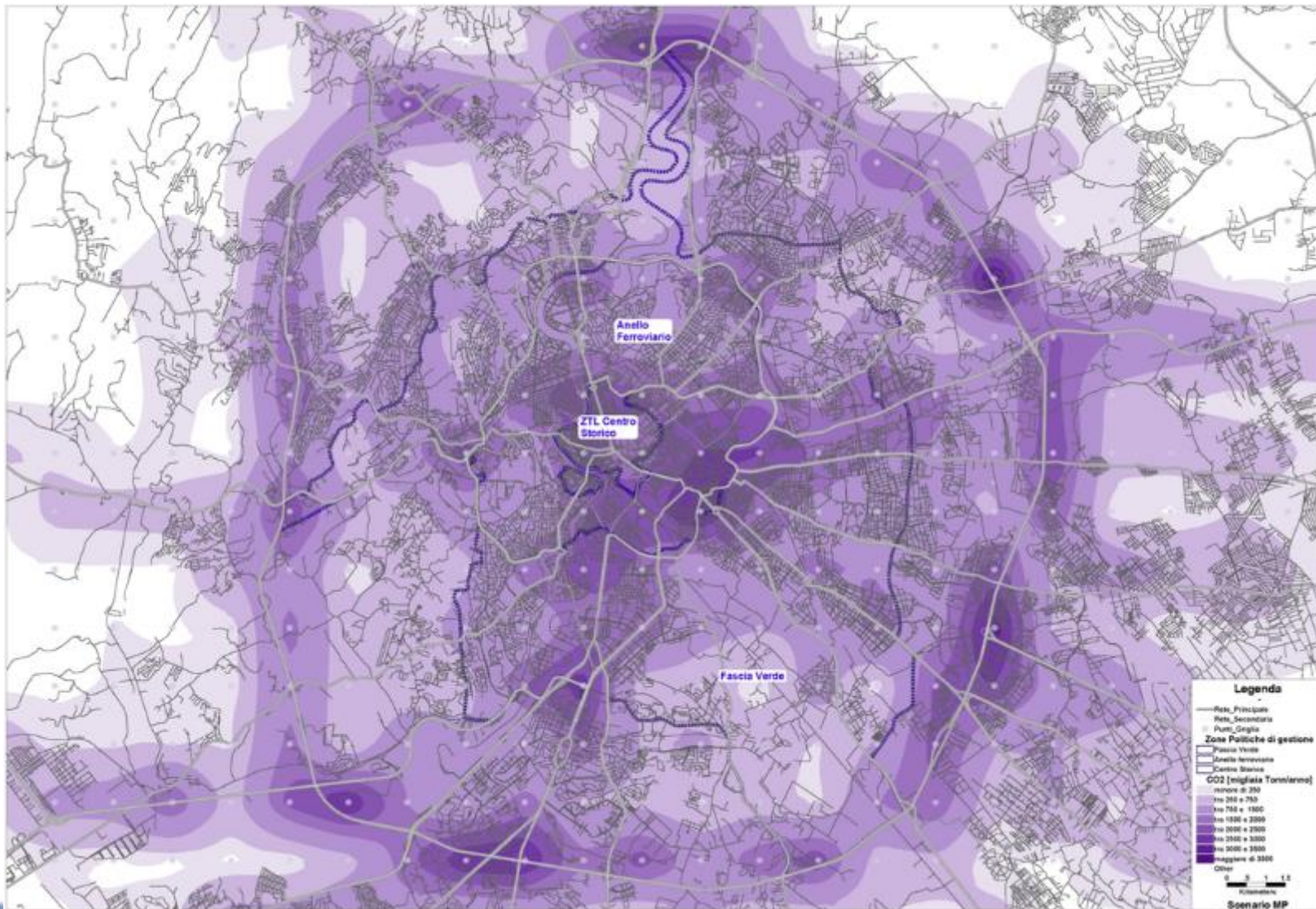


Old Town & City Centre





CO2 emission map (tons/y) from mobility in Rome in 2011





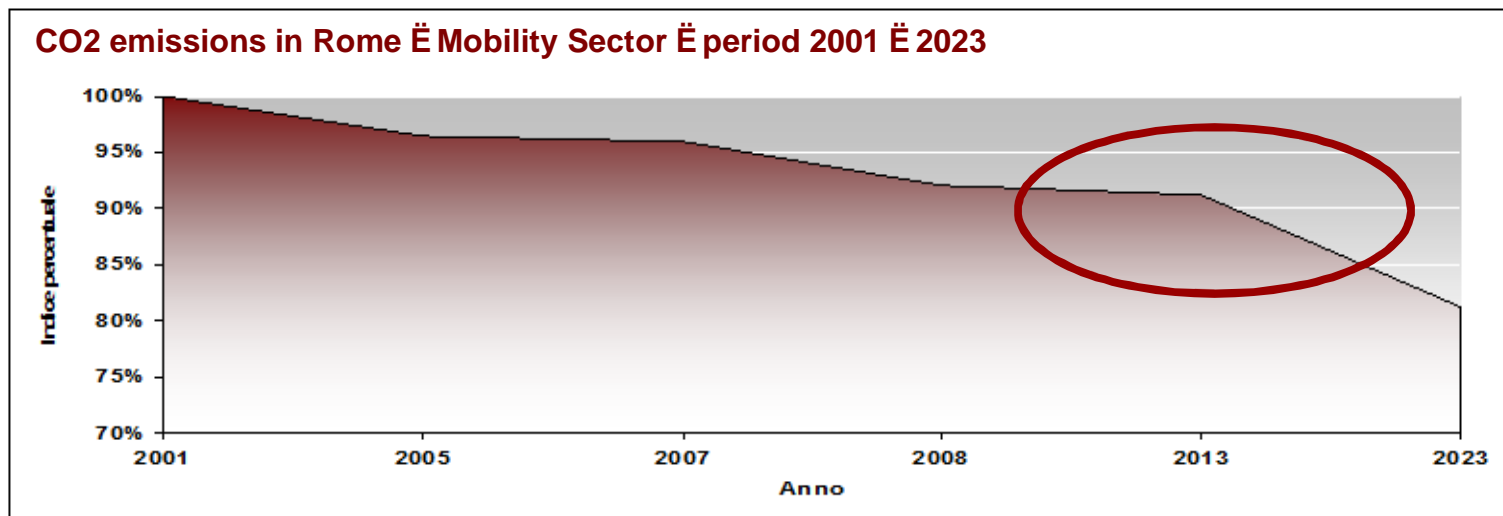
Learning from European co-operation on Sustainable Mobility

The SUMP È Sustainable Urban Mobility Plan & CIVITAS Approach:
Guidelines for Roma Capitale Administration

www.mobilityplans.eu & www.civitas-initiative.org

Large technical & political table: Rome SUMP (2010) - Sustainable (Urban) Mobility Strategic Plan, now updated by new Mobility Masterplan, taking care of the indications given by EC Urban Mobility Package:

Reconnect the city, reduce the use of private vehicles (car & motorbikes), recover and redistribute public spaces and improve the environmental status !





A. Infrastructure development: from 2008 to 2020.

- ❖ **Mass Rapid Transport System Expansion** Underground and Urban Railways, new tramway system.
- ❖ **Completion of the road system** as well as PT priority, parking management and park&ride improvements

Transport Line	Length Km	n° stops
Metro	37	48
Tramway	39	188
Corridors	32	
Urban Railway	58	47
Railways ⁽²⁾	152	42
TOTAL	318	

(2) Metropolitan area

Main line extensions (km)

Metro 66 km (+ 29 km)

- Line B1 (Ionio)
- Line C (Colosseo)

Tramway 69 km (+ 30 km)

Railways 168 km (+ 16 km)

- Rail ring





Line B1: working in a complicate environment



B1 Extension

- Length: 3,9 km
- -1,5% city PM10, -4.500 ton CO2
- 9 million hours saved/yr.
- Open 6/2012 up to Conca D'oro
- Cost: 0,51 Billion "



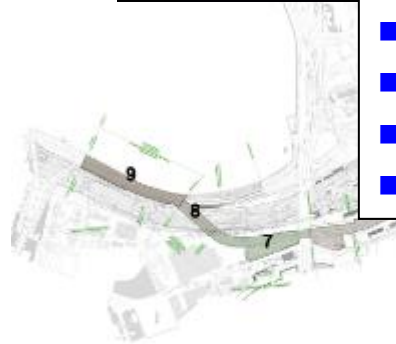


New station Tiburtina (High speed train) & New Int. Freeway Tunnel Already in operation!



New Int. freeway tunnel

- Length: 3,2 km (2,2 in tunnel)
- From Nomentana to A24
- 9 security exit and 56 cameras
- Opened May 2012
- Cost: 168 Million "
- Financing: 100% City



Legenda:

OPERA 1 - Territorio Urbano Consolidato	OPERA 6 - Aree verdi attrezzate	OPERA 9 - Isola d'Isola	OPERA 16 - Operazioni di
OPERA 2 - Centro storico	OPERA 8 - Tronconi NEI	OPERA 12 - Pista ciclopedonale	OPERA 17 - Gestione smaltimento rifiuti
OPERA 3 - Suburbio Meridionale	OPERA 7 - Aree verdi attrezzate di qualità (verde blu)	OPERA 11 - Impianti tecnologici	OPERA 18 - Piani urbanistici
OPERA 4 - Centro storico	OPERA 10 - Viali di servizio	OPERA 13 - Regolarità urbana	OPERA 20 - Servizi organizzati



New tramway implementation completed in 2013



New tramway terminus p.zza Venezia



Requalification Largo Argentina



New tramway line in via Botteghe Oscure

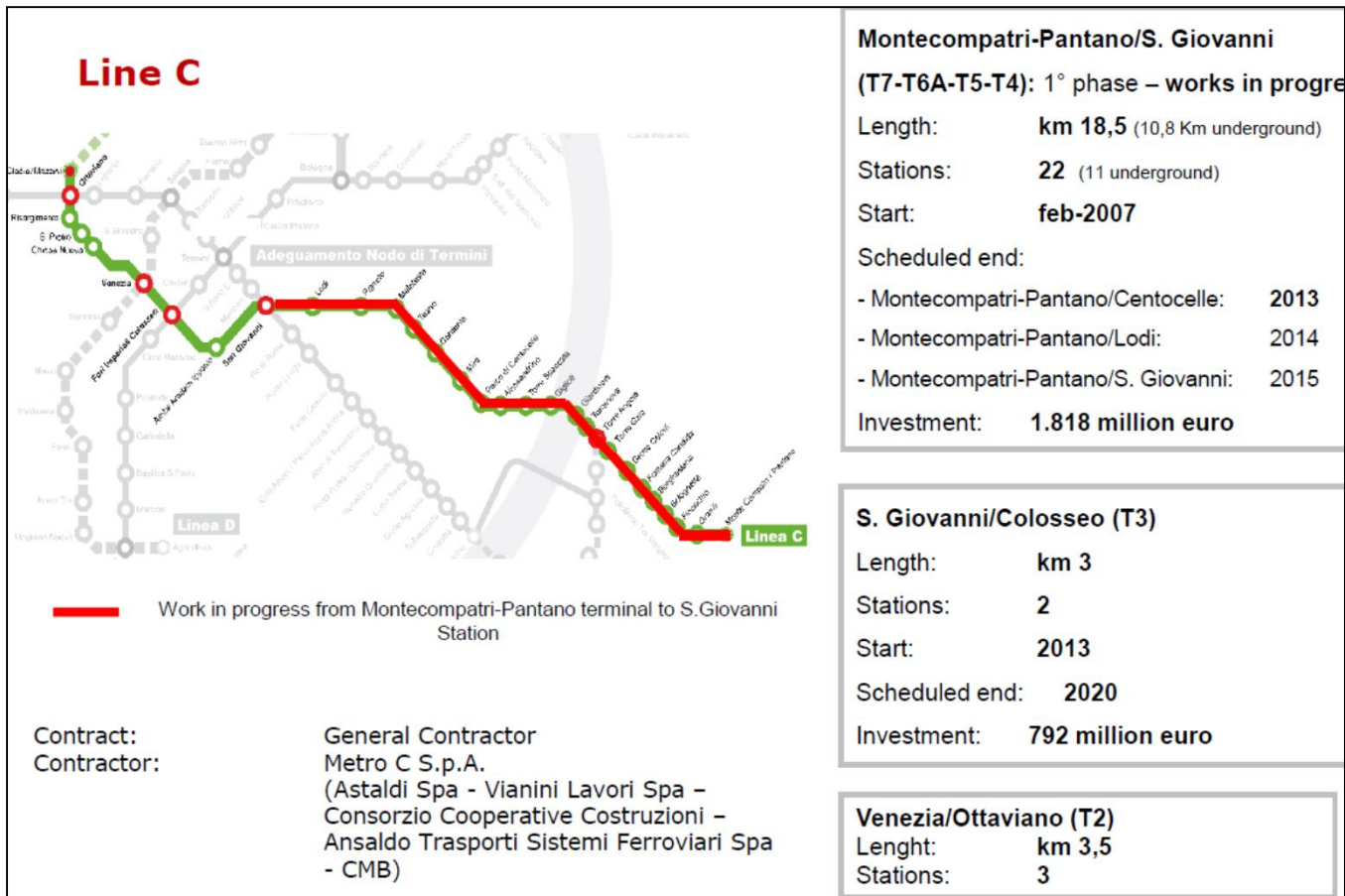


New metro and existing background





Mass Rapid Transport System Expansion: Line C È from south to centre



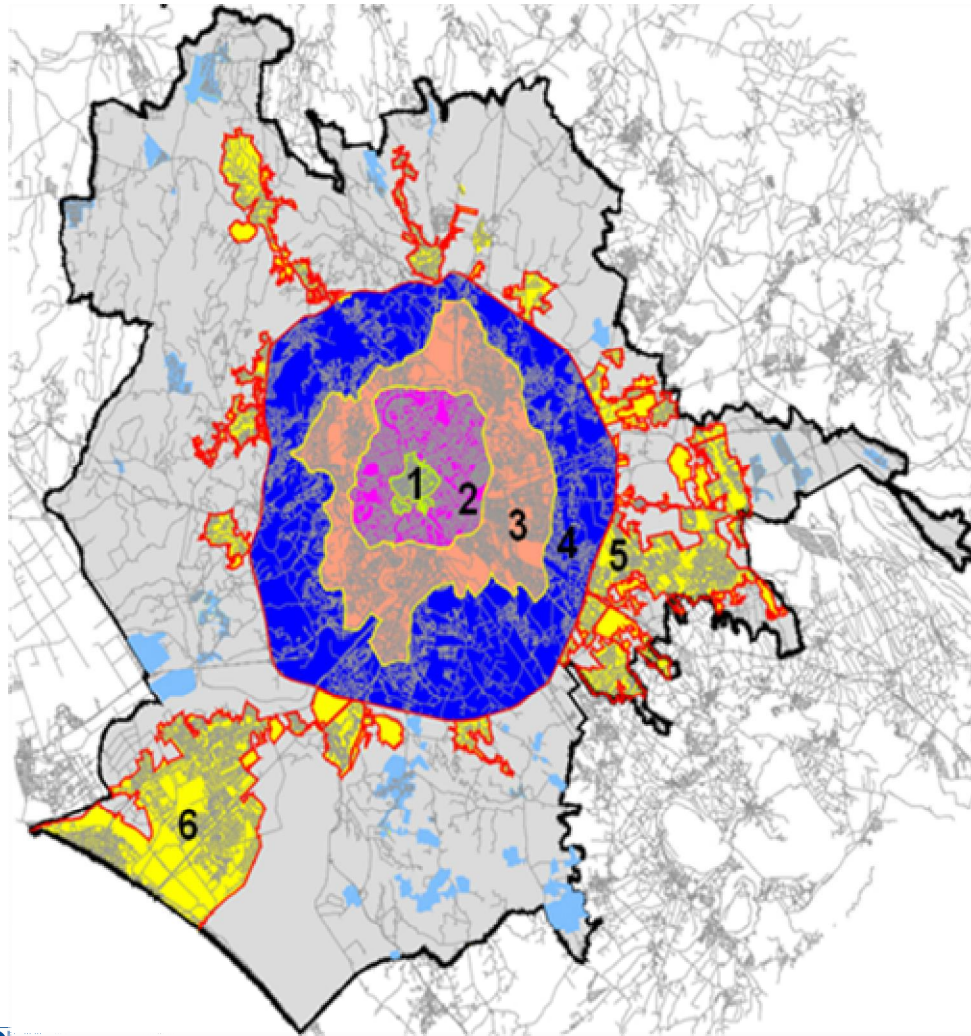


Evolution of the Plan with financial crisis

- ❖ Financial crisis is **limiting the available resources**, in particular on Mass Rapid Transport System Expansion: choices need to be tuned with real economic possibilities of the City Administration
- ❖ **Support by the EU**: Cities are more involved in EU documents, like the **Urban Mobility Action Plan**: SUMP, urban logistic, access control, ITS, road safety, but primarily about **people living in urban context**. Cities are now urban nodes, to be financed by TEN-T CEF tool.
- ❖ New administration is pushing **on the integration of the available infrastructure**, increasing their **efficiency and maintenance** in particular on **PT** as well as planning works on new **tramway system** and better integration with the Lazio Region for what regard **urban railways**
- ❖ **New Administration is already pushing short term action towards sustainable mobility** as well as new pedestrian area and **soft modes**



The new mobility model: 6-zones with different characteristics



Different urban fabrics
characteristics and density of each
zone

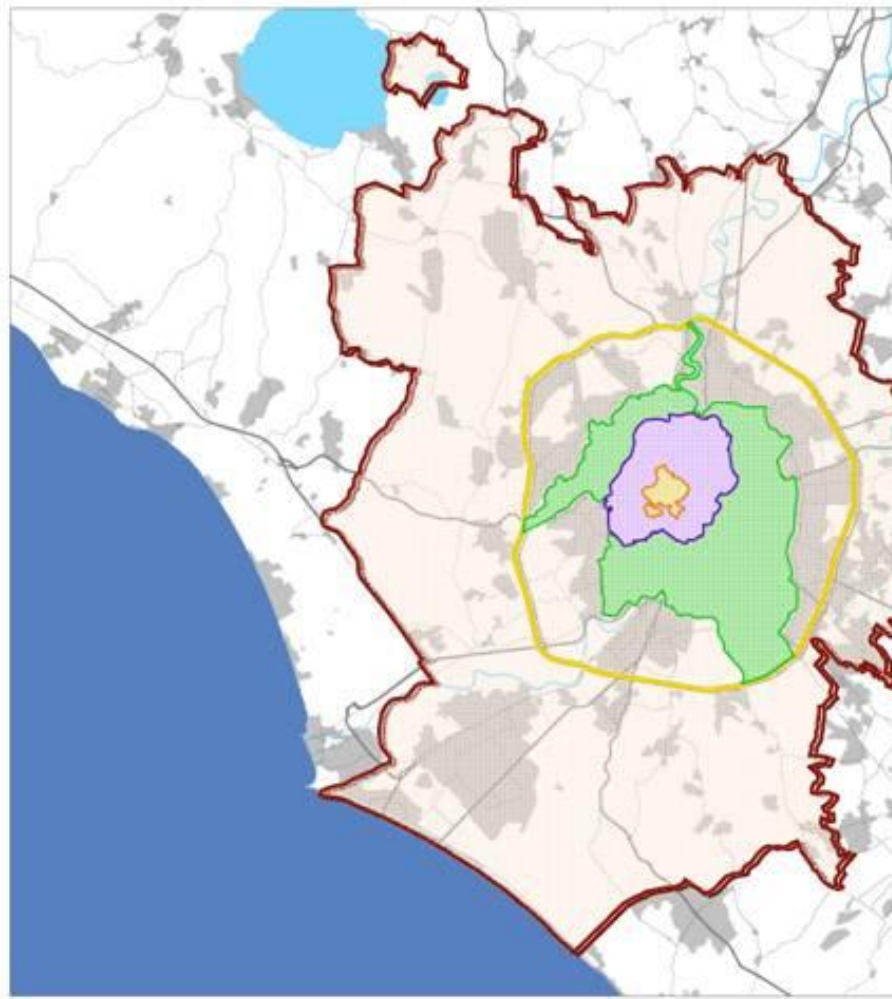
require

different mobility organizations to
make consistent the offer of public
and private transport, with safety
conditions and in compliance with
environmental characteristics

In each area specific objectives
and prevalent actions to recover
balance among all modes and
healthy quality of life are proposed



The mobility & env model: 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 . 0.5 km²
Zero Emission Area (walking & electric)



New characteristics of the zones



The objective of Zone 1 (Central Area) is the maximum reduction of private car traffic crossing the zone and almost exclusive use of pedestrian mobility, bicycle and PT. The entire area will be divided into **environmental islands**, identifying routes for pedestrians and cyclists at the service of the main center historical and tourism poles, while reducing the impacts of goods delivery.

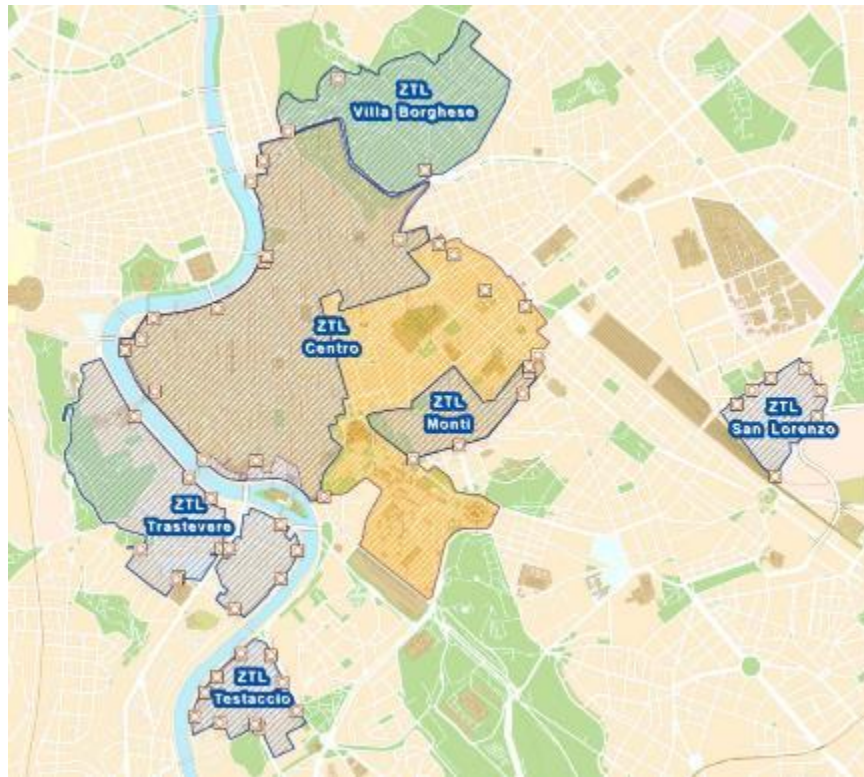
In Zone 2 - Rail Ring, the obj is limitation of private car traffic crossing the zone and to obtain a prevailing use of PT and cycling - environmental islands and progressive introduction of forms of pricing.

In Zone 6, streamlining of PT services for the systematic trips to / from Rome and a better connection with sea resources, encouragement of alternative mobility systems and environmental islands,

In the outer zones, encouraging the use of PT on the penetration lines and interchanging with cycling, supported by the diffusion of cycling park & ride on main TP nodes. Priority is the balance between the use of PT and private mobility.



LTZs & Access control: electronic Gates



San Lorenzo: 7 e-Gates



Trastevere: 12 e-Gates



Historic Center: 22 e-Gates



Testaccio: 10 e-Gates

LTZ Historic Center

Mon. to Fri. 6.30 am - 6 pm
Sat. 2 pm . 6 pm
Fri. & Sat. 11 pm . 3 am

LTZ Trastevere

Mon. to Fri. 6.30. 10 am
Fri. & Sat. 9,30pm. 3am

LTZ Villa Borghese

Mon. to Sun. 0 . 24

LTZ San Lorenzo

From Wed. to Sat. 9.30 pm . 3 am
(May to July & September- October)

Fri. & Sat. 9,30pm. 3am

(November . April)

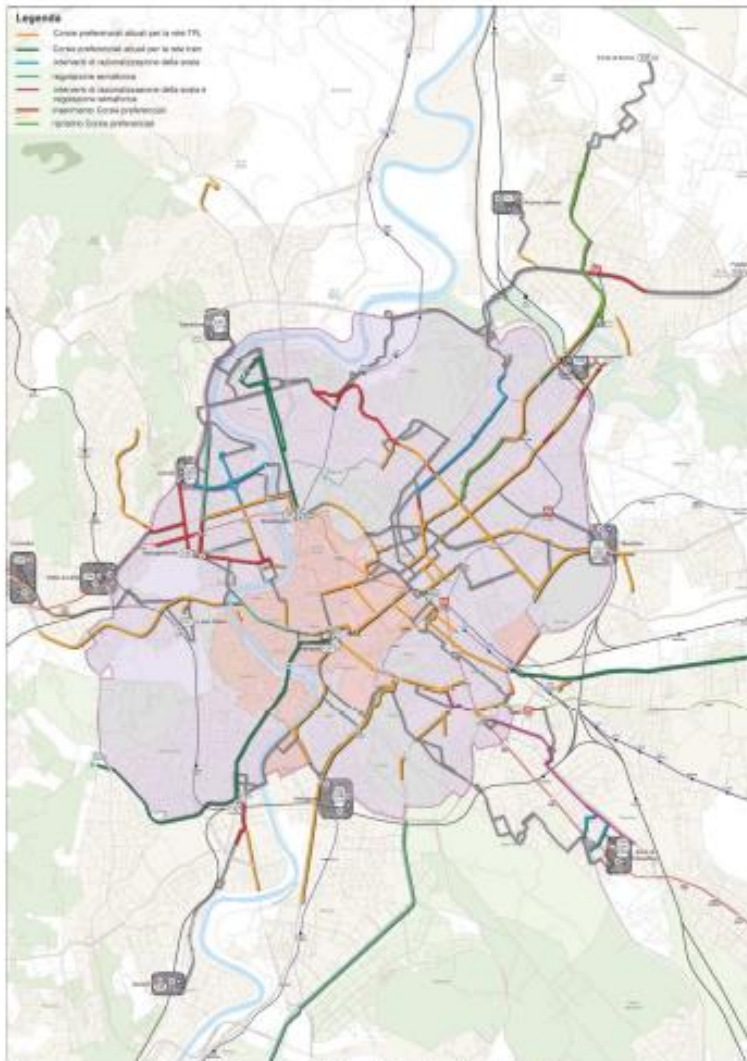
LTZ Testaccio

Fri. & Sat. 9,30pm. 3am





New PT re-organisation and LEZ Rail Ring



- ❖ Rail Ring zone: low emission zone that could become **subject to payment** according to vehicle emission class ;
- ❖ **Restructuration of PT** in order to be more integrated with Metro, Tram and Railways nodes
- ❖ Reinforcement of **PT main axes** to reach and inside the Rail Ring zone;
- ❖ **New protected lanes for PT;**
- ❖ New traffic light regulation;
- ❖ **Fight against illegal car parking** .



Shared services and Active Mobility



“ The new Plan want to actively promote car sharing, car pooling, bike sharing and electric mobility **in a multi-modal approach to everyone mobility**



“ This implies the capacity to guarantee **sustainability of urban transport** and a **drastic reduction of transport emissions in the city** Ë within economically acceptable conditions.

“ **Active Mobility model** is proposed especially for systematic short-distance trips and for commuting more challenging trips with PT



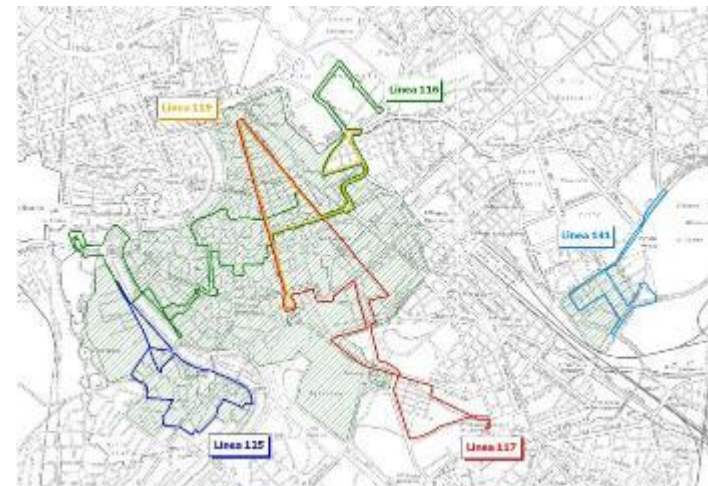
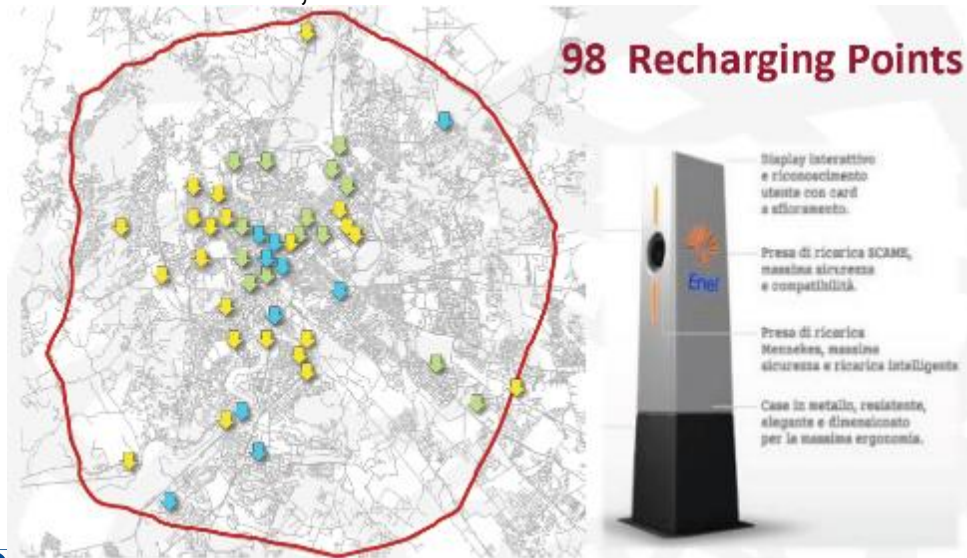
“ **Mobility manager**: enhancing the structure to coordinate the mobility managers of Companies;

“ **Car-pooling**: new apps and integration with Mobility Managers system



Support to e-Mobility diffusion

- “ Implementation of a **wide public recharging network** with a common standard, strengthening **PPP with energy utilities** and automotive industry;
- “ Possible e renewal of public fleets with e-vehicles;
- “ Research and development of **innovative systems of e-vehicles sharing**;
- “ Administrative and political **support measures**;



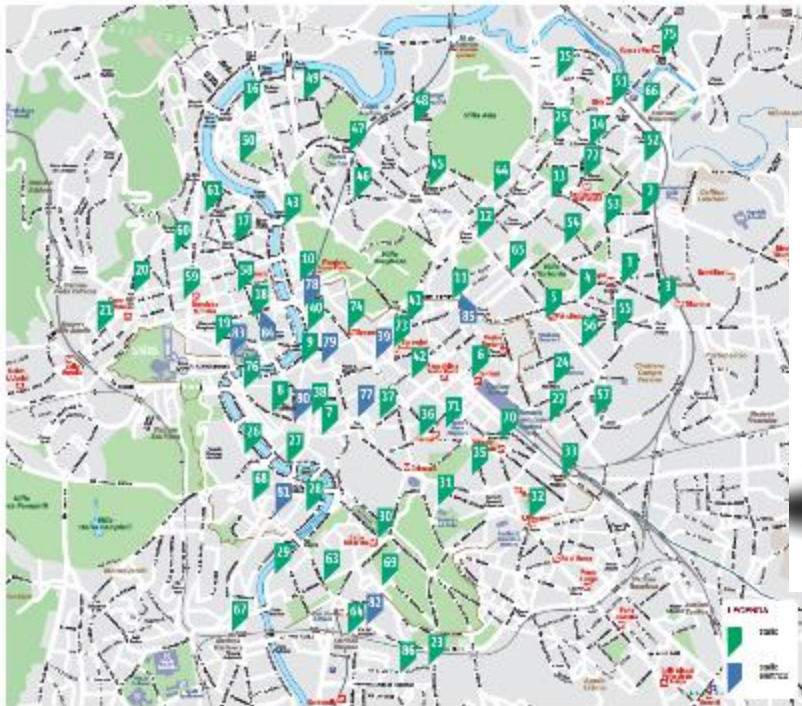


Car-sharing: fixed and free-flow schemes

- “ **Car sharing fixed scheme:** working in 4 central districts.
- “ Annual fee, fixed places, return to same place, low hourly costs.
- “ **10 e-vehicles** (Citroen C0) in regular service from December 2012
- “ Managed in experimental way directly by the **Mobility Agency**



	2005	2006	2007	2008	2009	2010	2011	2012	2013
Vehicles	9	9	33	41	104	106	104	118	122
Parking pl.	5	5	21	25	61	62	68	81	82
Customers	201	318	704	1018	1365	1951	2174	2674	3057



April 2014
measures



Car-sharing: fixed and free-flow schemes

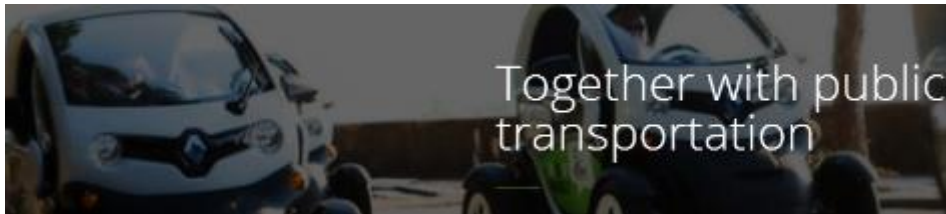
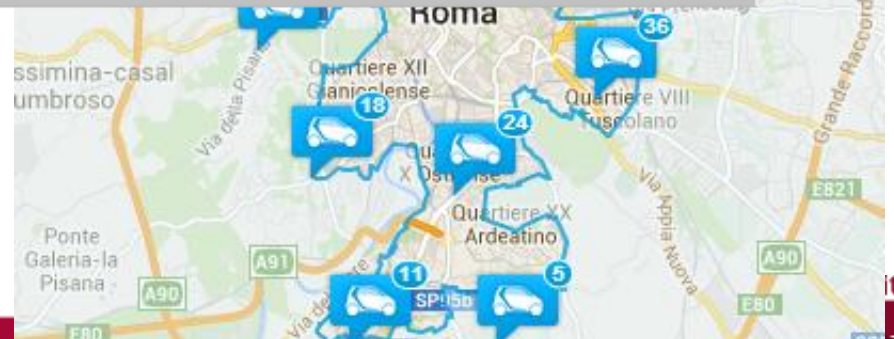
- “ **Car sharing free-flow scheme:** working in 35 sq km of the city, free places, leave where you want, higher costs (per minute).
- “ Managed by three Private Operators: **Car2go** (with Smart, operating from March), **Enjoy** (with FCA 500 starting in June), **BEE** (with Renault Twizy within 2014)



CAR 2GO ISCRIVITI GRATUITAMENTE
 E riceverai 30 minuti GRATUITI!
 Offerta valida fino al 15.04.2014



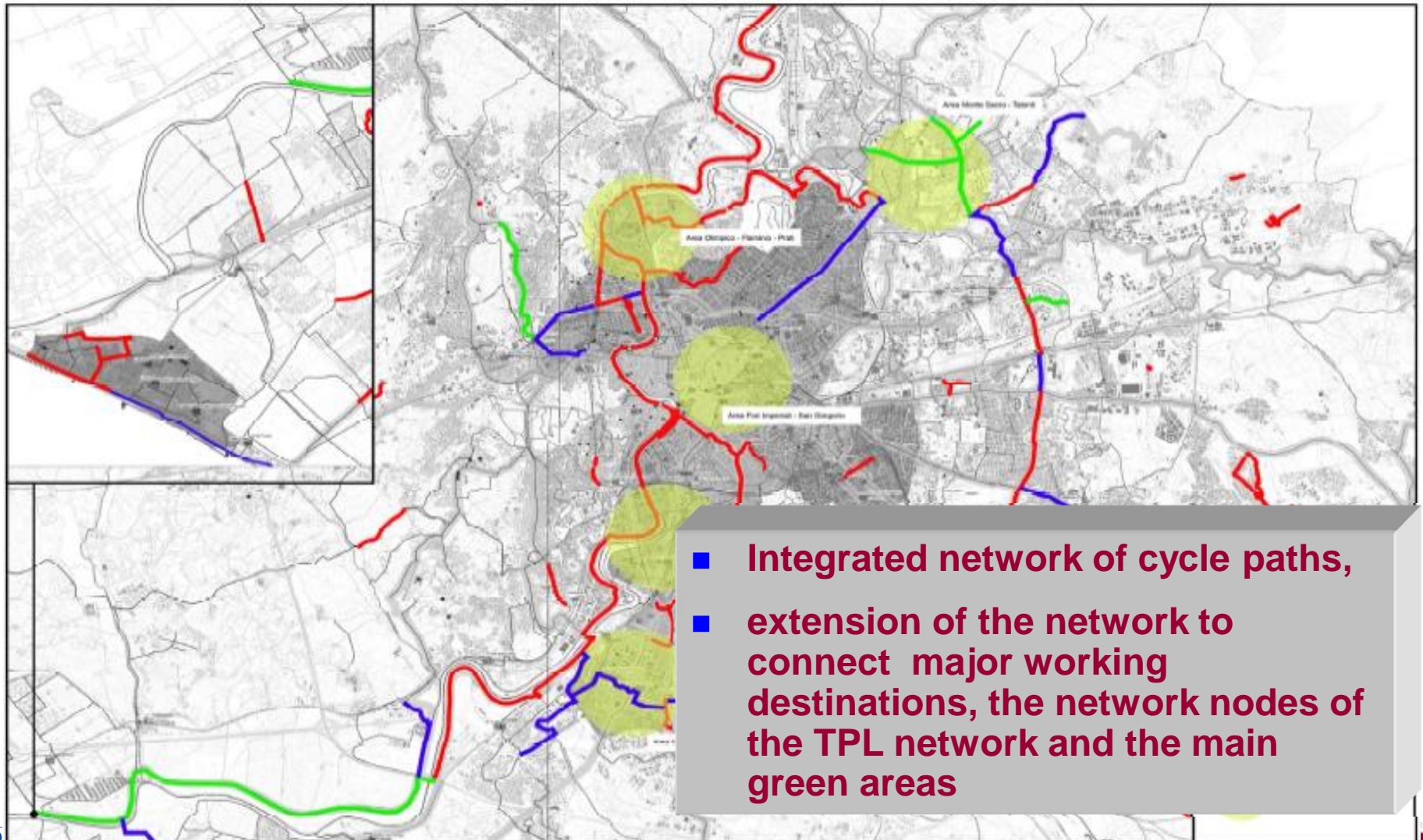
**Strong impulse to vehicle sharing:
 Up to 1500 cars available in 12 months!**





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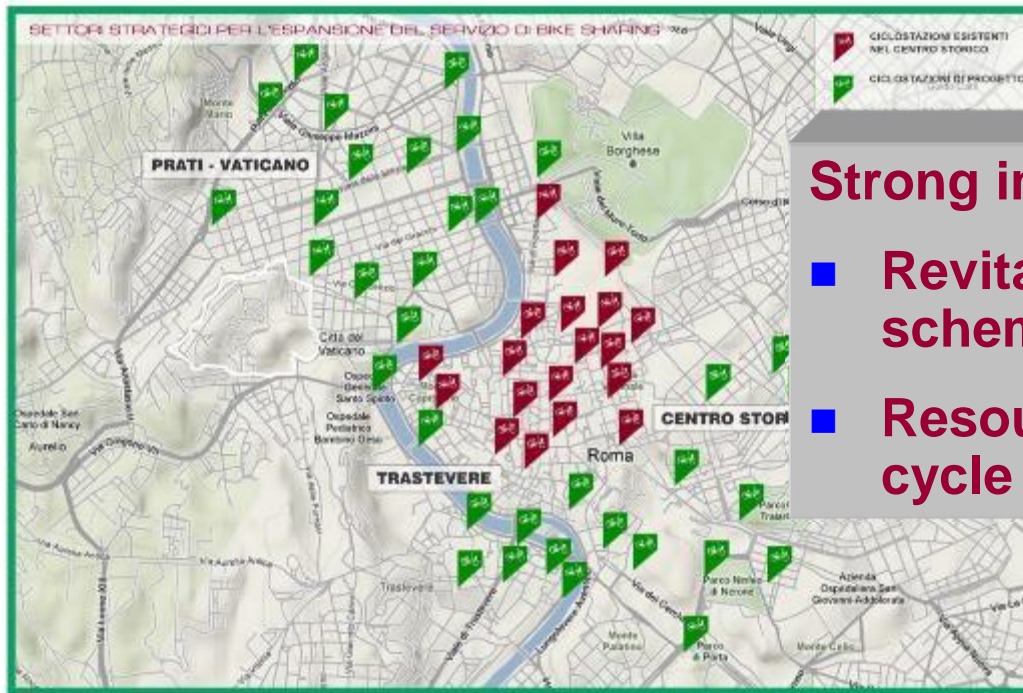
The cycling plan in Rome: existing paths (red) implementations (green), planned (blue), local network (light yellow)





Bike-sharing scheme

- “ **Old scheme:** Managed by Agency with Municipal support. In the past years, lackness of financial support and progressive system failure;
- “ **New administration scheme:** re-launch of the system with more stations, financed by new advertising installations . to be open within 2014.
- “ Bike availability with open data app.



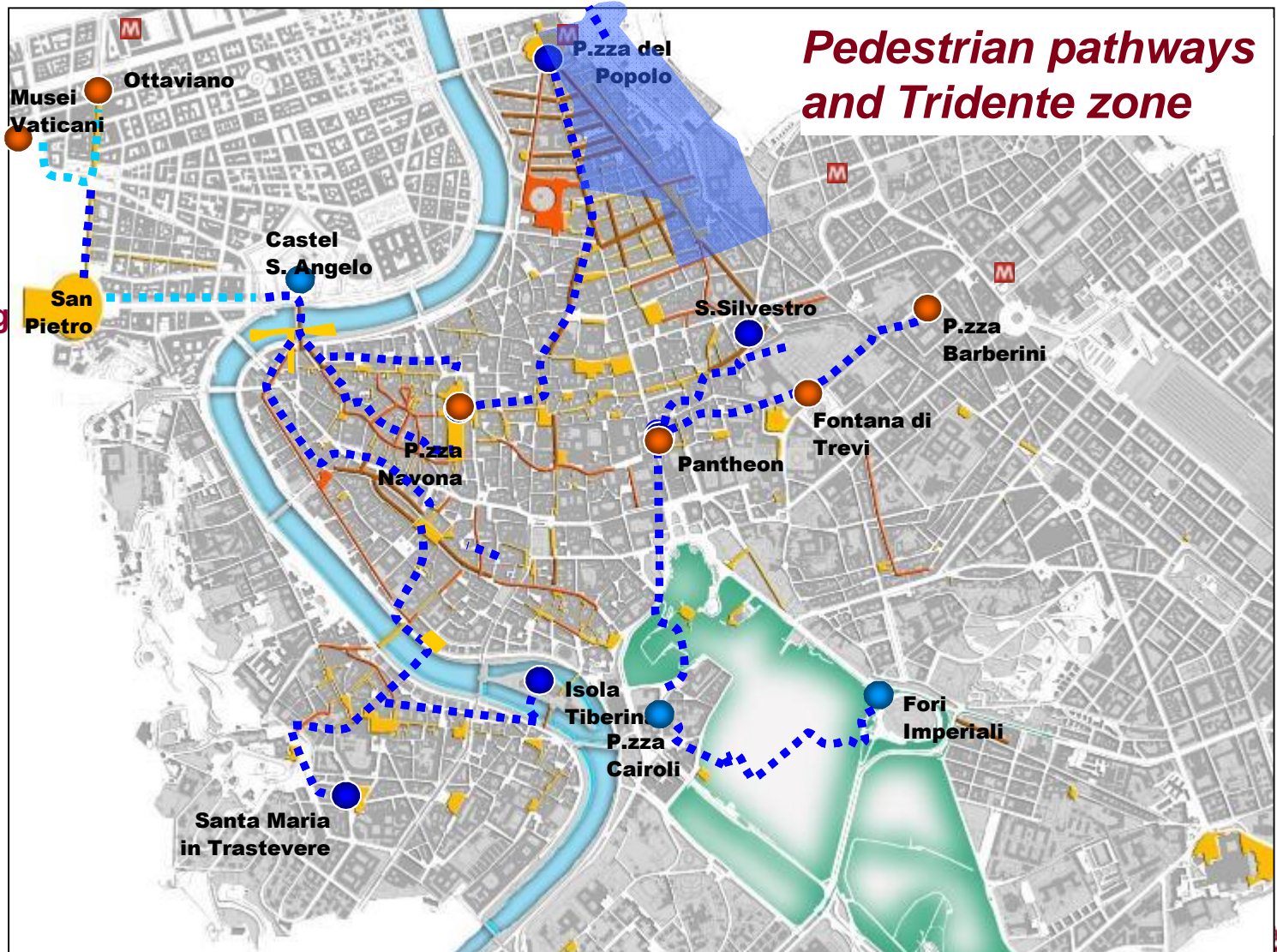
Strong impulse to Bicycle mode

- Revitalisation of bike-sharing scheme.
- Resources to implement the cycle path framework plan



Decarbonisation of the inner city centre

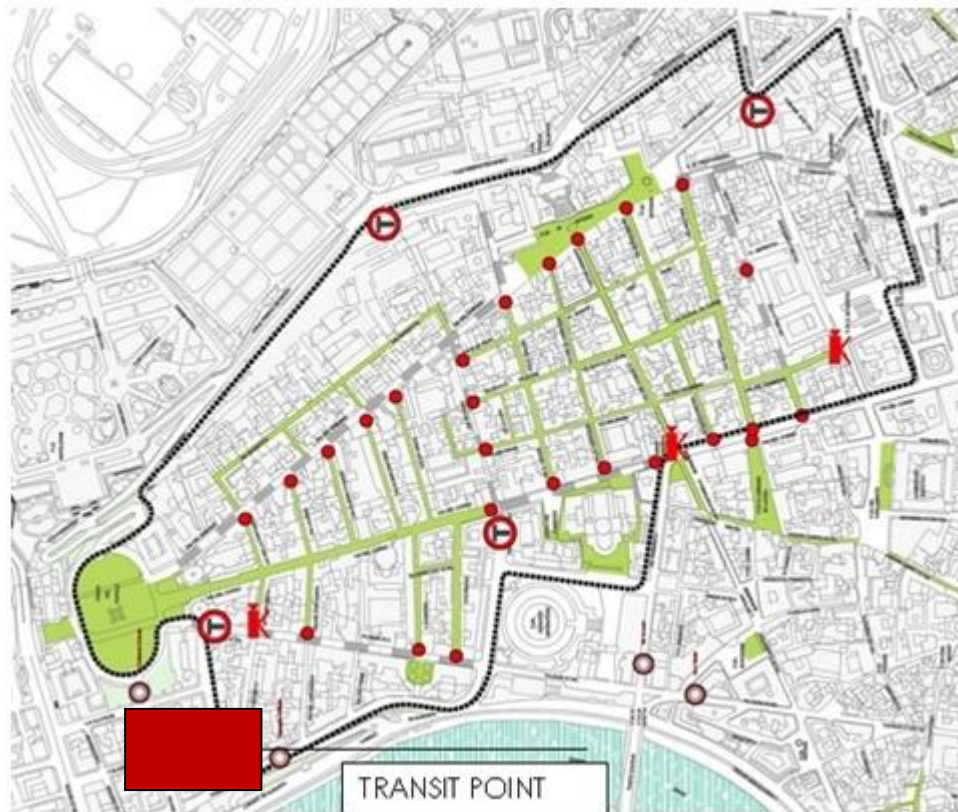
1. Definition of areas and routes closed to traffic & avoidance of flow traffic;
2. Review of regulation for access and parking of vehicles for mobility of people and goods
3. Development of vehicles sharing systems (cars, vans, bicycles)
4. Progressive introduction of electric and hybrid vehicles.
5. Realization of pedestrian areas and pathways





New Freight Delivery Plan: Testing transit-point in city centre

- Based on PPP cooperation between City Administration and main Association of Entrepreneurs (Unindustria). Supported by EU SMARTSET project
- Attempt to manage transport needs with residents and environmental issues: **van-sharing with electric vehicles.**
- In positive case, starting of a permanent Urban Goods Distribution Centre.

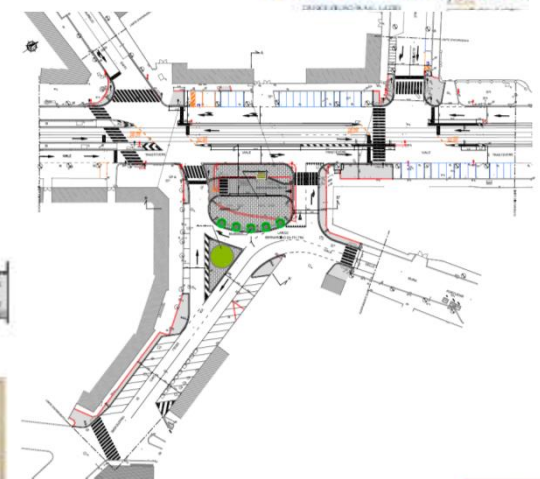
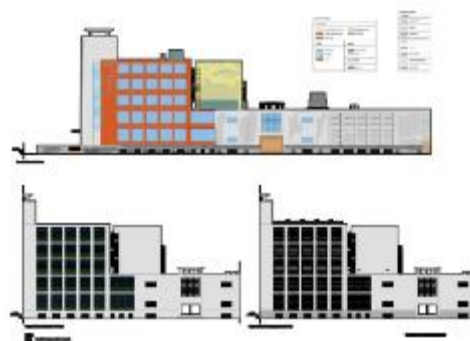
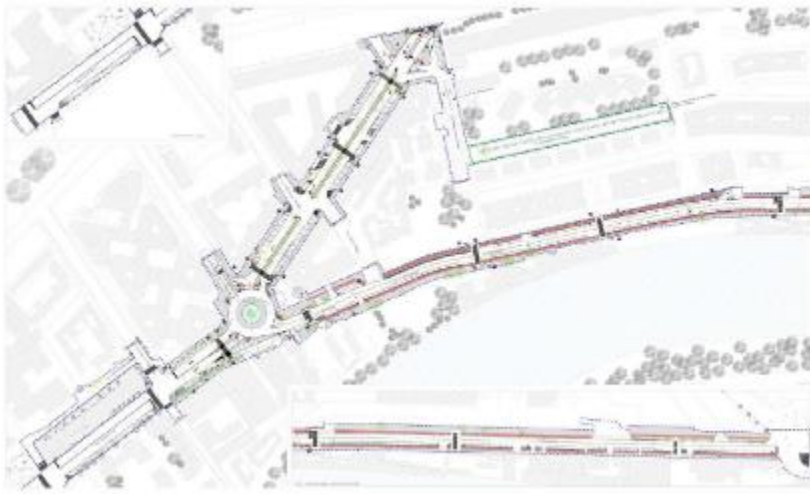




New city district requalification projects

1. Requalification of the Trastevere south district;
2. Refurbishment of the Sunday market area;
3. New traffic schemes with new cycle lane and increase of safety
4. Renovation and use for social activities of historical complex.
5. Incentives for new Small and Micro Enterprises in the area

Porta Portese È a resource for Rome





New City Administration: more attention to soft modes

1. Closure of part of Via Fori Imperiali;
2. Extension of Central LTZ intended as an integration of environmental islands
3. Future extension of archeological park.

Pedestrian Colosseo project



Letteri: n.d.
Diffusione: n.d.
Il Messaggero CRONACA di ROMA
Dir. Resp.: Virman Cucuzza

Marino: «Fori pedonali»
Lo storico: «Un errore»

a pag. 34

Marino: Fori Imperiali pedonalizzati dal 15 agosto

IL CHIRURGO CONFERMA IL PROGETTO LANCIATO DURANTE LA CAMPAGNA ELETTORALE.
«AL COLOSSEO IN BICI? SONO ALLENATO»
► Il sindaco: il 14 faccio l'ultimo giro con la mia Panda

IL PROGETTO

Lo aveva annunciato in campagna elettorale e lo ha ripetuto nel suo primo giorno da sindaco: «Via dei Fori Imperiali diventerà pedonale». Stavolta, però, Ignazio Marino dà qualche dettaglio in più, per esempio la data: il prossimo ferragosto. L'annuncio, durante la trasmissione «Un giorno da pecora» di Raitv2, è esemplificato dal chirurgo con una battuta: «Il 14 agosto farò l'ultimo giro con la mia Panda rossa su via dei Fori Imperiali, dopodiché ci tornerò in bicicletta. Sono allenato perché vado dalla mamma in bicicletta e anche lì devo fare una salita per arrivare a casa sua».

Ai conduttori della trasmissione Marino ha detto: «Sicuramente mi direte che sarà questo il mio primo errore». Quello della chiusura dei Fori è stato uno dei temi più utilizzati dal chirurgo durante la campagna elettorale.

I DUBBI DEL CENTRO

«In questo modo realizzeremo il più grande parco archeologico del mondo», ha ripetuto Marino a più riprese. «Abbiamo questo patrimonio e dobbiamo valorizzarlo».

Durante la campagna elettorale il sito noiroma.it aveva sentito il candidato della Lista Marchini alla presidenza del Municipio Lacio D'Ubaldo, (è stato anche senatore del Pd) che si era detto in disaccordo con la pedonalizzazione: «Tutto l'anno e niente arrosti. Boccio in pieno fideja. Se Marino avesse in mano un progetto calcolato da cima a fondo forse approverei. Pietro Spirito, il suo consulente progettista, ha fatto solo uno schizzo di quella che dovrebbe essere l'intera pianificazione dei lavori. Impensabile per una città come Roma».

AMBIENTALISTI FELICI

Legambiente accoglie la proposta del neo sindaco con soddi-

sazione e si dice bonare: «Accetto sfida che ha i pronti a dare il to di idee e pr dal progetto d e del Colosseo questi anni, rite Vittorio Co ambiente si c chiusura al tr badendo con l tro storico e ur cheologico con losseo, simbol numento più a ni e il più visita essere degrad spartirificco, zione dei Fori que, essere inte to di arrivo m continuare a ri bilità urbana» gno di divent europea della prosegue Cogli da ora è dare l alla città e ris problemi di og tadini».

**ERA UNA STRADA
SARÀ LA PASSEGGIATA
DEI ROMANI**

**I FORI DIVENTANO PEDONALI.
PRIMO PASSO VERSO IL PARCO ARCHEOLOGICO
URBANO PIÙ GRANDE DEL MONDO.**

ROMA CAPITALE
COMUNE ROMAIT

FORIPEDONALI.IT
JUST WALK OR BIKE IT





- “ **in 2011**, there have been over 18 thousand accidents with victims, **186 deaths and 24,000 injured** in road accidents.
- “ Overall, **pedestrians, cyclists and motorcyclists account for 65% of deaths.**
- “ Rome pays **every year** a social cost of more than **2 billions euro for road accidents;**



In 2011 the Municipality approved the **Road Safety Plan 2012-2020.**

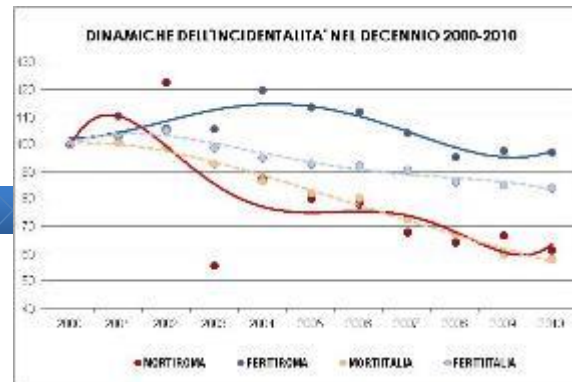
- “ The plan is incorporating the outcomes of EU project like **eSUM** and its action pack.
(<http://www.esum.eu/actionpack.html>)
- “ The overall fixed goal for the Plan is to **halve the number of fatalities within 2020**, with specific goals for each %component of risk+
- “ The Plan also identifies the **road junctions to make secure**, where more than 15 accidents per year happened between 2008 and 2010





The Monitoring Centre for Road Safety

- “ The Centre goal is increasing road safety levels, with **integrated Mobility information layer** dedicated to road safety and linked to other Mobility Agency ITS Systems
- “ Data collection and management, assessment and monitoring of interventions, planning and design activities, production of reports
- “ Development of **traffic projects to improve junctions/roads/areas safety**, according to yearly available resources
- “ Designs and tests of **innovative measures** (infrastructural, signalling, etc ...)
- “ Implementation of a **Shared Procedure**+among all subjects and operators in order to increase road safety.





Some indications on the interventions

From 2004 up now, **about 140 interventions** across the city including **350 crossing** were analysed, solutions were discussed with all citizens, modified, approved and financed.

About 60 interventions are already completed, 25 Millions Euro of investment for the implemented works.

13 City Districts interested (**69% of the whole city population**), 79% areas inside the external road ring (GRA) and 50% of the municipality area.

On 68 crossings where interventions were already completed before 2009, referring to 2004 (before the interventions) and to 2009 (after completion) we have:

“ a **total reduction of accidents of 38%**, a **reduction of the injured of 32%**, **37% less people** involved in accidents !



The Road Safety Monitoring Centre & Information system







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CENTRO DI COMPETENZA SULLA SICUREZZA STRADALE

Incidenti Persone Veicoli Analisi Misure

Appuntamenti

Layer

Zona Castro Pretorio punti

2 Rischi 2012

Severità costo busto

Realizzazioni

- Google Satellite
- Google Street
- Google Hybrid
- OpenStreetMap
- Google Physical
- Blas

+441,400

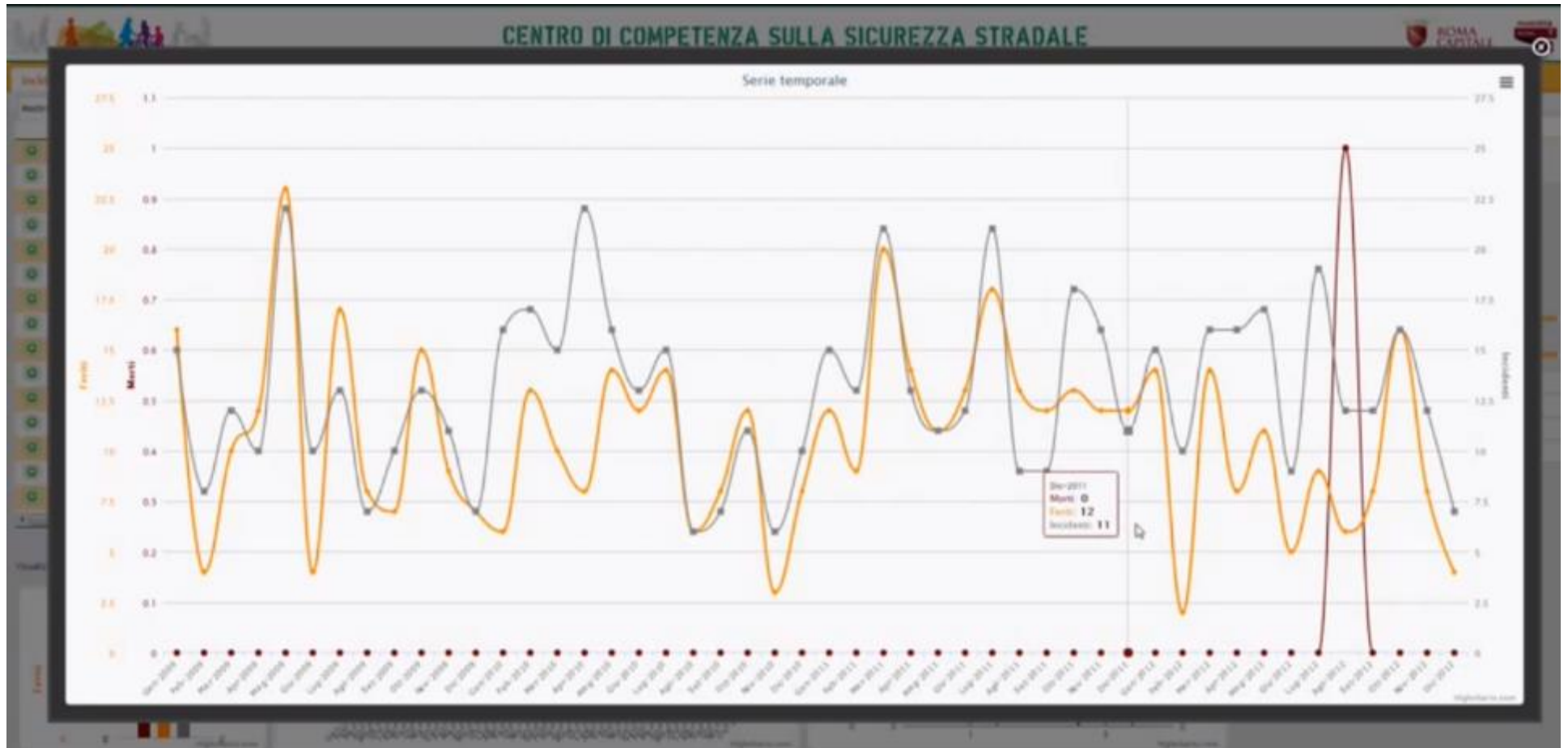


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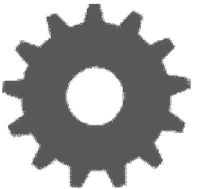


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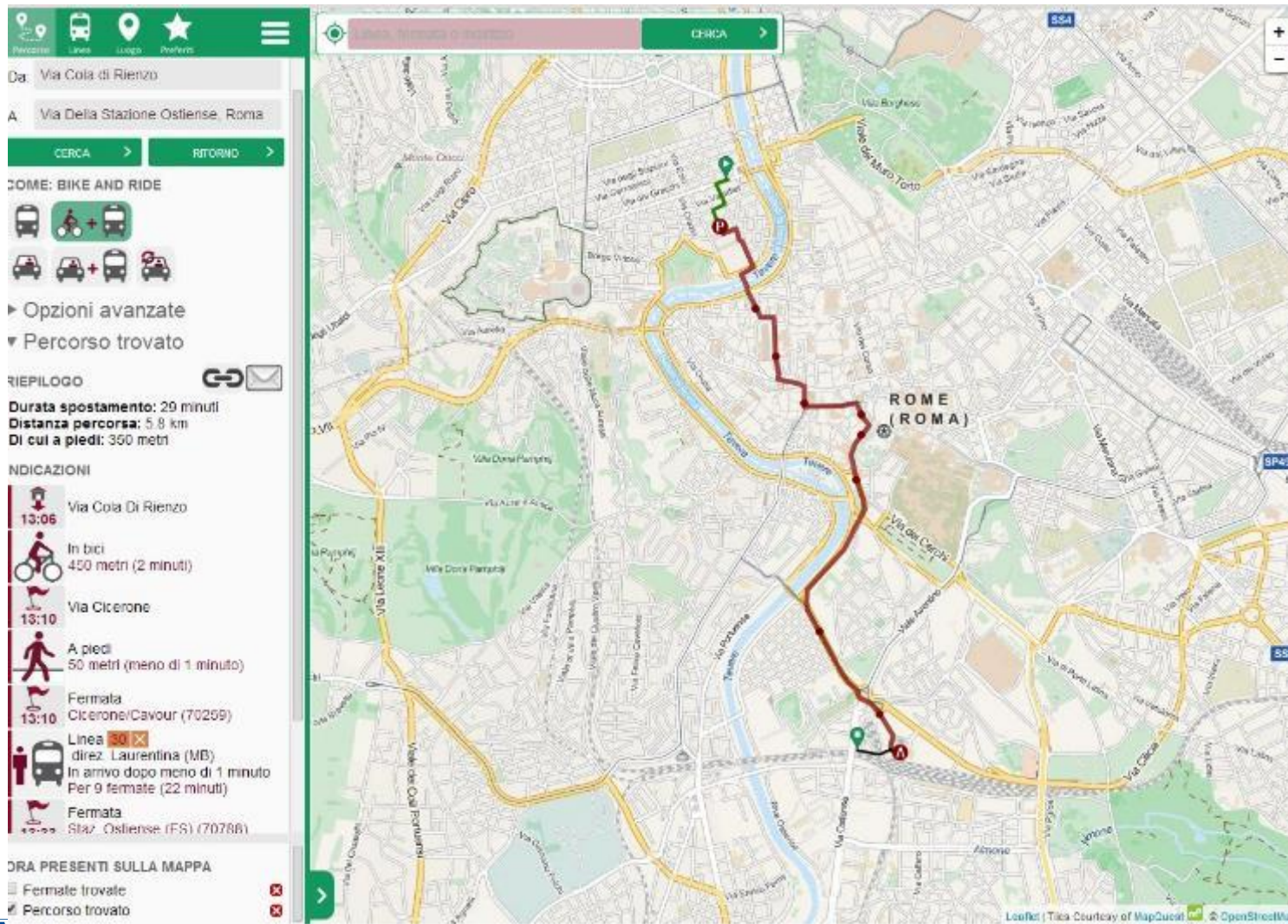
ITS & AM: Mobility Center today . facts & figures

 http://muoversiaroma.it ↓ http://muovi.roma.it (mobile)	  	Infomobility Variable message signs (VMS) 66 UTT (Urban Travel Times) 51 Electronic poles of bus stop muoversiaroma.it - mobile 300
		Sanctioning & fining E-gates for Limited Traffic Zones & Pre-signalling signs 47 E-gates for PT bus lanes 17 Fotored 1 Vistared 10 Velox 4 Safety Tutor 2
		Monitoring, Controlling Management Video surveillance cameras 45 Traffic Measurement Stations 130 Traffic lights 1376



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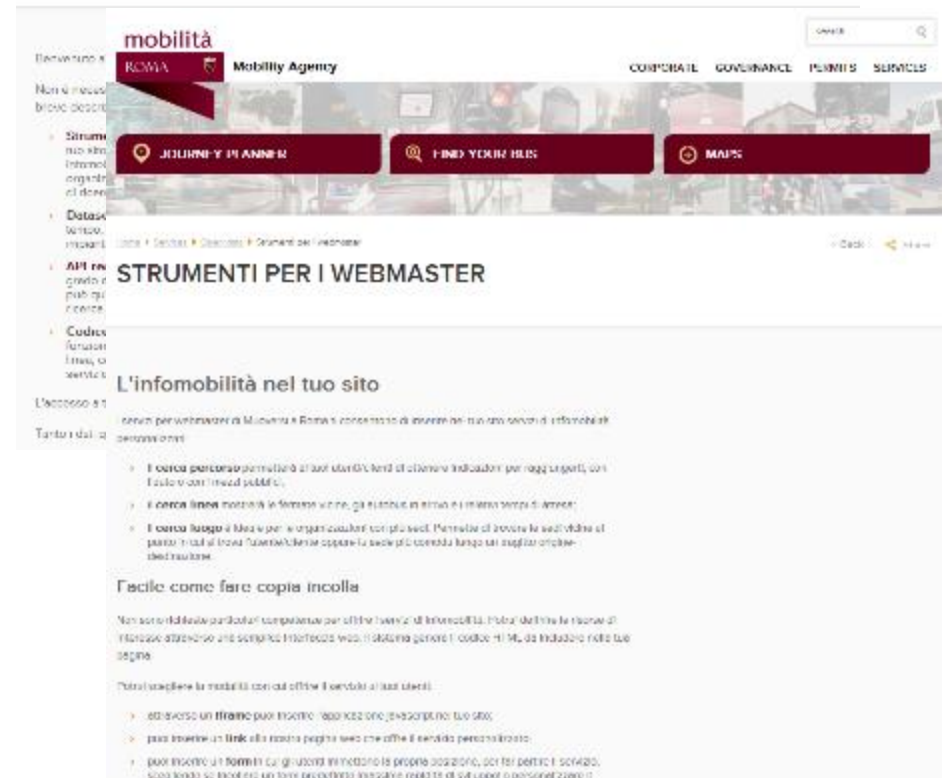
New multi-modal personal travel: new AM choices !!





Open data

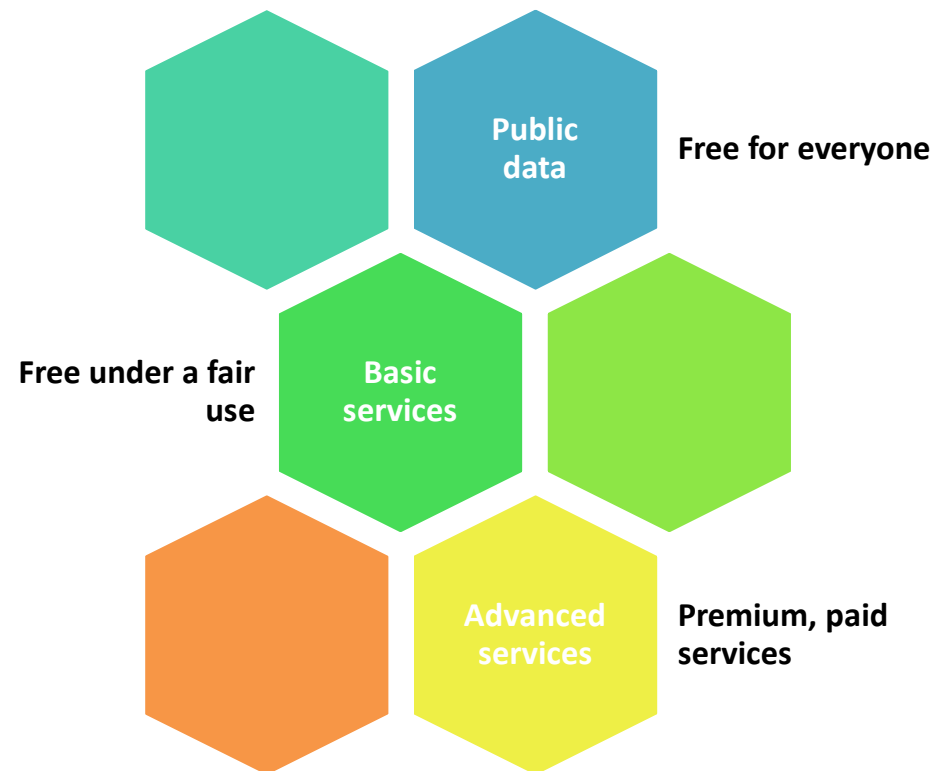
- “ By the end of 2013, the Agency made available to the public a **Developers Portal**, inside the new corporate web site (<http://www.agenziamobilita.roma.it/en/open-data.html>)
- “ In this portal, both developers and citizens are finding static and real time data, under a standard a publishing license, where find:
 - “ (a selection of) XML real time services
 - “ Static set of data
 - “ HTML widgets to be included on other websites
 - “ Source code (GPL v3)/





Open data

- “ By the end of 2013, the Agency made available to the public a **Developers Portal**, inside the new corporate web site (<http://www.agenziamobilita.roma.it/en/open-data.html>)
- “ In this portal, both developers and citizens are finding static and real time data, under a standard a publishing license, where find:
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 - “ Source code (GPL v3)/





Mobile app & open data



- “ App and HTML5 now available for **iOS/Android/WP8**
- “ Position-aware functionalities
- “ Future crowdsourced data
- “ But also ò .





Plans for coming years

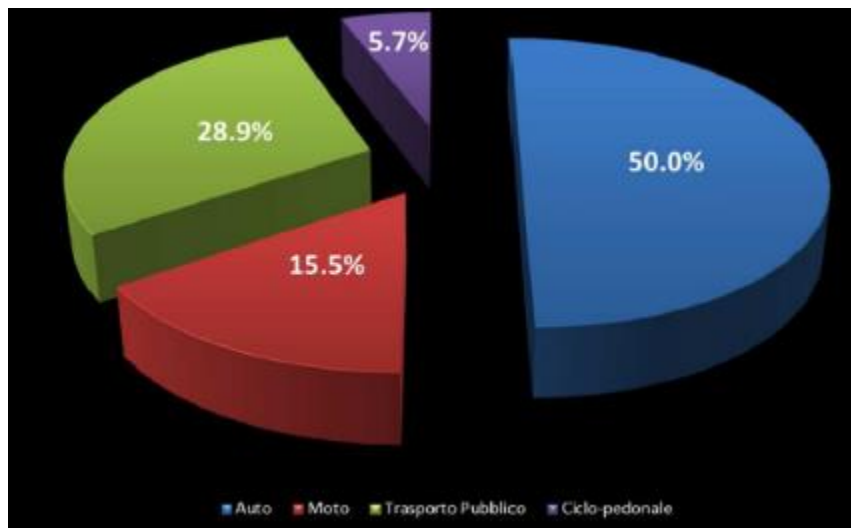
- **Data ware-house:** integration among different databases and with TEN-T corridor operator
- **Multi-modal path-finder:** better support to AM choices **for all city users**
- **Open Data & Co-operation:** new projects with EU and int. actors (Google, IBM, moovit), adapt to standards (DATEX II, REST/JSON) , better service and social contribution



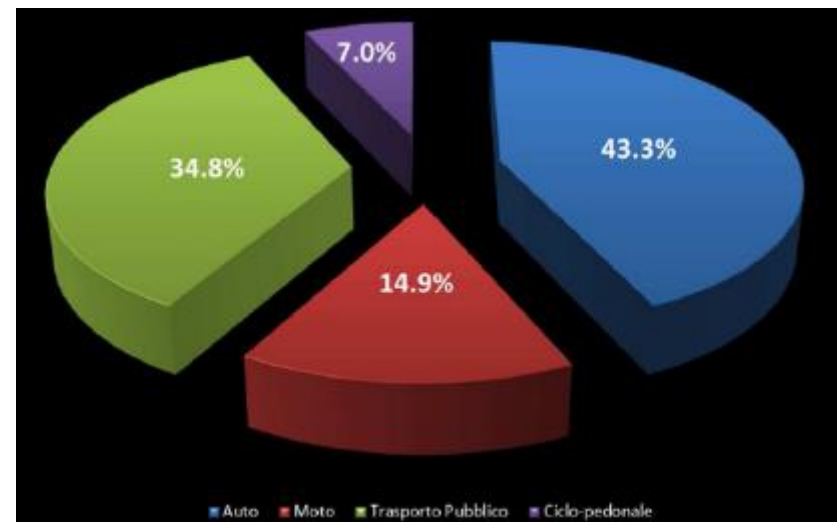
Results of Mobility Masterplan

- ✓ Public transport: from 26,9% to 34,8% (+ 64.000 passengers in peak hour)
- ✓ Private cars: from 50% to 43,4% (- 38.000 movements in peak hour)
- ✓ PTW: from 15,4% to 14,9%; (- 3.000 movements in peak hour)
- ✓ Bike + pedestrian: from 5,6% to 7,0% (+ 7.500 in peak hour)

Before (2013)



After (2018)





Effect of the Mobility Masterplan on environment

First results on pollutant emissions from transport (peak hour 2018 vs. 2013) are showing a significant decrease of **main pollutants (about 15%)**

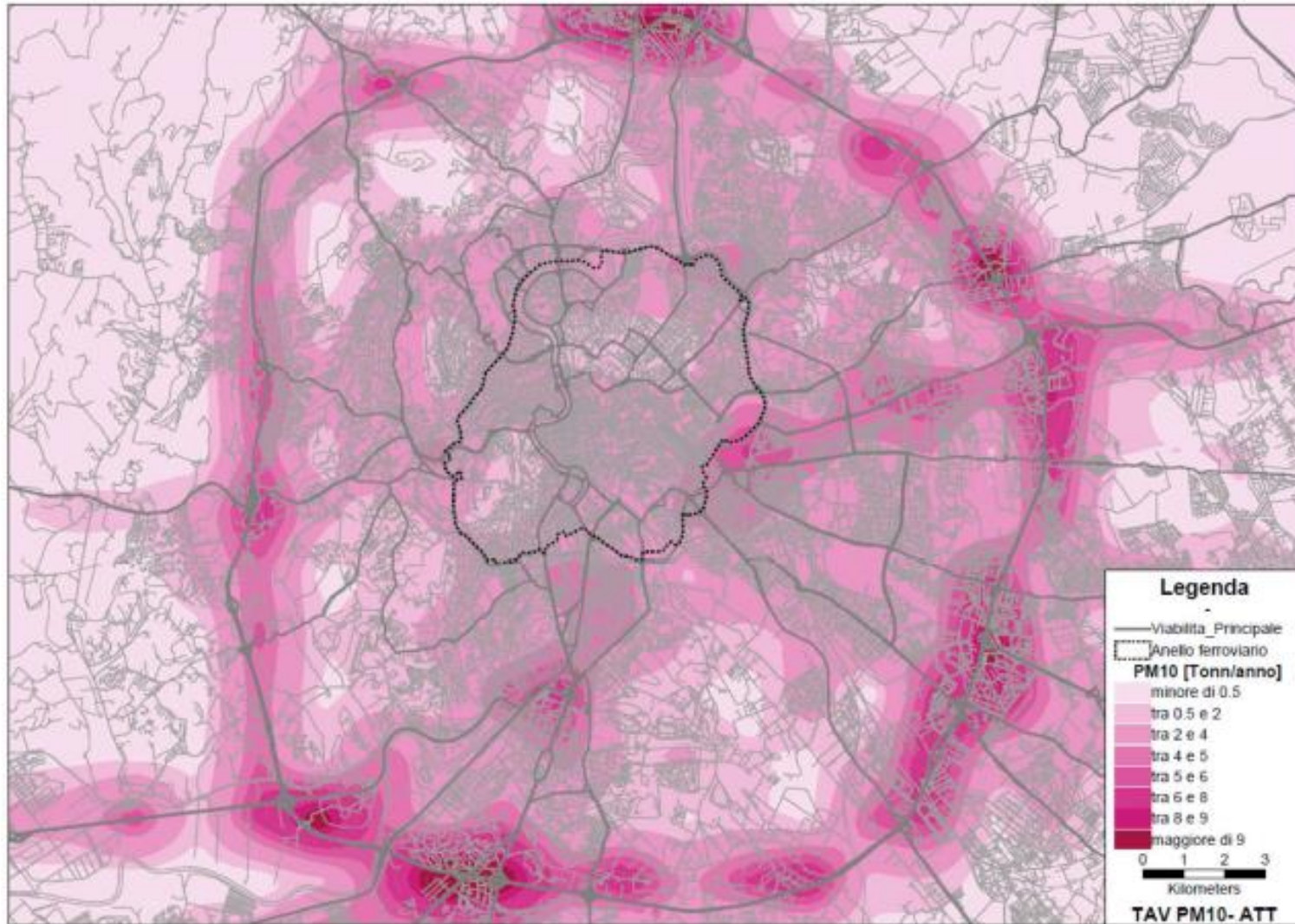
Zona	(Scenario PGTU -Attuale)			
	CO	NO _x	COVNM	PM ₁₀
Anello ferroviario	-32%	-45%	-25%	-52%
Fascia Verde	-14%	-15%	-12%	-16%
Intra Gra	-17%	-17%	-16%	-18%
Extra Gra	-12%	-10%	-12%	-11%
ROMA	-14%	-14%	-14%	-15%

CO2 decrease is also expected in the same percentage

Zona	CO ₂
Anello ferroviario	-24%
Fascia Verde	-17%
Intra Gra	-18%
Extra Gra	-11%
ROMA	-14%

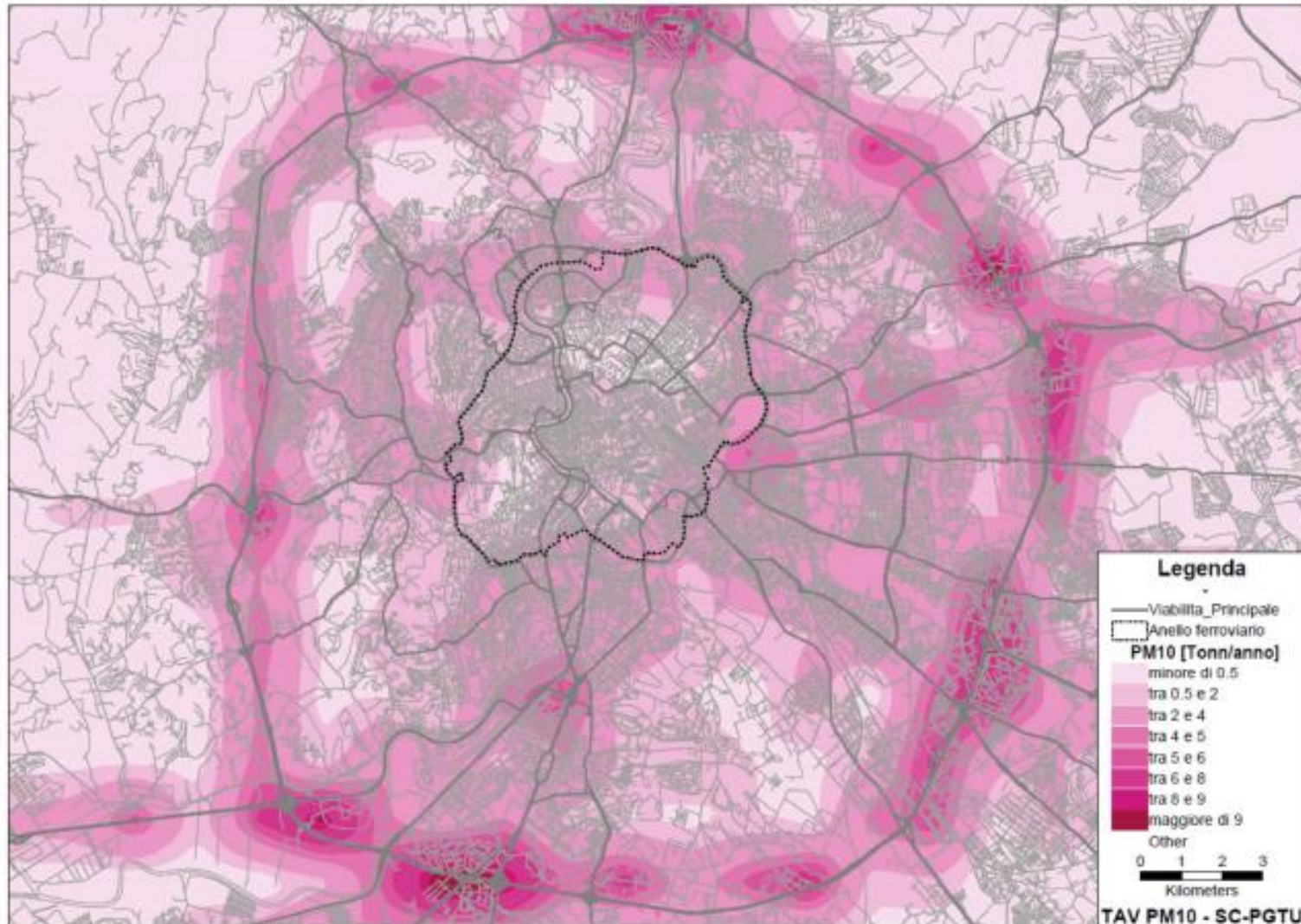


Effect of the Mobility Masterplan on environment: PM10





Effect of the Mobility Masterplan on environment: PM10





Effect of the Mobility Masterplan on environment: PM10

In other words ...

Moving about 10% of mobility flows towards Active Mobility is better for health and environment !

NEXT STEPS:

- “ **Evaluation of AM effects on health according to PASTA methodology, trying to include it in the City Council approval of the Mobility Masterplan;**
- “ **Real Test during PASTA.**



ROMA CAPITALE

**Thank you for
your attention.**



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POLIS WG Env & Health - Brussels, 7-8 April 2014
Rome case study: new traffic MP and AM measures