Improving passengers’ experience in public transport

Accessible public transport service – Multimodal strategy in Rome

EESC – Brussels 10 September 2015

Ing. Fabio Nussio
Head of International Co-operation
Mobility Agency of the City of Rome
The city of Rome and its mobility

<table>
<thead>
<tr>
<th>Description</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Municipal Area</td>
<td>1.285 km</td>
</tr>
<tr>
<td>Population</td>
<td>Metr. Area 4.400.000</td>
</tr>
<tr>
<td></td>
<td>City residents 2.900.000</td>
</tr>
<tr>
<td>Road Network</td>
<td>km 5.000</td>
</tr>
<tr>
<td></td>
<td>Main road network km. 800</td>
</tr>
<tr>
<td>Vehicles</td>
<td>2.650.000</td>
</tr>
<tr>
<td></td>
<td>cars 1.890.000</td>
</tr>
<tr>
<td></td>
<td>2 wheels 600.000</td>
</tr>
<tr>
<td></td>
<td>goods delivery 160.000</td>
</tr>
<tr>
<td>Daily Trips</td>
<td>5.500.000</td>
</tr>
<tr>
<td>Peak-hour Trips</td>
<td>670.000</td>
</tr>
</tbody>
</table>

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 Mobility Agency role

- Planning, Regulating and Controlling Mobility (Public and Private);
- Permits and user contacts;
- Development of new mobility projects;
- ITS tools, infomobility & Mobility Centre;
- Management of Sustainable Mobility Policies
- R&D projects (+50 from 1998)

Rome Mobility Agency

- Rome Mobility Agency manages the bus service contracts performed by the PT Operators: **public operator ATAC**, managing metro, tram networks and 80% of surface PT

- A contract has been assigned for 8 years to the PT operator **Roma TPL** for 450 buses, 28 M km/year, i.e. 20% of the Bus service in Rome, mainly in the peripheral net

- Monthly payments to the PT operators is based on AVM service certification data
## PT indicators – Scenario before new Mobility master plan

<table>
<thead>
<tr>
<th>Segment</th>
<th>Extension</th>
<th>Users/day</th>
<th>Active TPL Accessibility</th>
<th>Passive TPL Accessibility</th>
<th>Modal Efficiency</th>
<th>Change 2012-2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban Bus Network</td>
<td>2,060</td>
<td>789,000</td>
<td>50%</td>
<td>52%</td>
<td>7.3%</td>
<td>+1.5% ▲</td>
</tr>
<tr>
<td>Regional Bus Network</td>
<td>1,847</td>
<td>167,000</td>
<td>76%</td>
<td>24%</td>
<td>1.5%</td>
<td>-0.3% ▼</td>
</tr>
<tr>
<td>Metropolitana Network</td>
<td>41</td>
<td>713,000</td>
<td>19%</td>
<td>54%</td>
<td>6.6%</td>
<td>+0.5% ▲</td>
</tr>
<tr>
<td>Tram Network</td>
<td>39</td>
<td>90,000</td>
<td>39%</td>
<td>59%</td>
<td>0.8%</td>
<td>-0.7% ▼</td>
</tr>
<tr>
<td>Urban and Regional Train</td>
<td>872</td>
<td>547,000</td>
<td>62%</td>
<td>24%</td>
<td>5.1%</td>
<td>+0.6% ▲</td>
</tr>
</tbody>
</table>

**Total Network of the Metropolitan Area of Rome Capital: Average Working Day**

**Network Efficiency of Public Transport: 21.3%**

**Legend**
- Active TPL Accessibility: The user who arrives at the stop/station of the Local Public Transport without using other means of public transport (walking/biking/driving).
- Passive TPL Accessibility: The user who departs from the stop/station of the Local Public Transport and arrives at the destination without using other means of public transport (walking/biking/driving).
- Modal Efficiency of the Public Transport Network: The modal share of spontaneous travels made by the users of the Public Transport network.
“Metrebus” - Integrated regional PT system with single ticket

Participants
- ATAC (Public PT operator – City of Rome)
- ROMA TPL (Peripheral bus lines – City of Rome)
- Cotral (Regional Bus PT service)
- TRENITALIA (Metropolitan and regional railways)

- Cost of single tickets: Rome 1,5 €, region by zones
- 106 millions single Rome tickets sold (BIT)
- about 5,5 million daily tickets (BIT+BIRG)
- about 5 millions monthly abonments
- about 200.000 yearly abonments
RSM and the customer satisfaction service

Public Services providers have to issue a “Charter of the Services”, where are committed to meet certain standards of quality and quantity.

Rome Mobility Agency on behalf or the City of Rome carries out annual surveys of the quality perceived by the citizens-users for all services of public and private mobility, using the same methodology in order to have consistent time series data.

The surveys happen twice a year (May / June and September / October), on a sample of users (residents, commuters, tourists, students and foreigners - city users), directly at the place of services (stops, stations, exchange parking, on-street parking, contact centers ...).

In total about 13,000 interviews per year, of which about 80% are given "in person" (face to face interviews), with the remaining are made by telephone (CATI).
Production of Indices of satisfaction, maps of intervention priorities and indices of expectations.

Multimodal users to be addressed next editions with travel experience – METPEX Tool to be deeply analysed.
# Surveys carried out in 2014

<table>
<thead>
<tr>
<th>Areas of Service</th>
<th>Survey</th>
<th>Target</th>
<th>Methodology</th>
<th>Type</th>
<th>Interviews</th>
<th>Period (single or double phase)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Background survey</td>
<td>Mobility habits</td>
<td>Roman citizens</td>
<td>C.A.T.I</td>
<td>by gender and age classes</td>
<td>1,207</td>
<td>sept-oct</td>
</tr>
<tr>
<td></td>
<td>Surface Public Transport</td>
<td>Users of Surface Public Transport</td>
<td>Face to face</td>
<td>by zone, PT operator, time band</td>
<td>2,532</td>
<td>may-june, sept-oct</td>
</tr>
<tr>
<td></td>
<td>Metro Public Transport</td>
<td>Users of Metro Public Transport</td>
<td>Face to face</td>
<td>by line and time band</td>
<td>3,352</td>
<td>may-june, sept-oct</td>
</tr>
<tr>
<td>Parking sector</td>
<td>Park &amp; Ride</td>
<td>P&amp;R users</td>
<td>Face to face</td>
<td>by zone and by parking area</td>
<td>921</td>
<td>may-june, sept-oct</td>
</tr>
<tr>
<td></td>
<td>on-street payment parking</td>
<td>Service users</td>
<td>Face to face</td>
<td>by zone</td>
<td>570</td>
<td>may-june, sept-oct</td>
</tr>
<tr>
<td></td>
<td>Contact Center service</td>
<td>Service users</td>
<td>C.A.T.I</td>
<td>User database authorizing interview</td>
<td>801</td>
<td>may-june, sept-oct</td>
</tr>
<tr>
<td></td>
<td>Public interface service</td>
<td>Service users</td>
<td>Face to face</td>
<td>by service type</td>
<td>779</td>
<td>may-june, sept-oct</td>
</tr>
<tr>
<td></td>
<td>Information systems</td>
<td>City users</td>
<td>Face to face</td>
<td>by mobility places</td>
<td>883</td>
<td>sept-oct</td>
</tr>
<tr>
<td>Permits, licences, business</td>
<td>Tourism Coach system</td>
<td>Business users</td>
<td>Mista.C.A.T.I. - C.A.W.I. - Face to face</td>
<td>by user typology and geographic area</td>
<td>671 +162</td>
<td>may-june, sept-oct</td>
</tr>
<tr>
<td></td>
<td>no-line public transport: Taxi, short-term renting with driver, other</td>
<td>Service users</td>
<td>Mixed Face to face - C.A.T.I.</td>
<td>By type of permit and activity area</td>
<td>841</td>
<td>may-june</td>
</tr>
<tr>
<td>ITS service</td>
<td>Traffic light system</td>
<td>Roman citizens</td>
<td>C.A.T.I</td>
<td>by gender and age classes</td>
<td>420</td>
<td>may-june</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Specific users (bus and taxi drivers)</td>
<td>Face to face</td>
<td>By zone and user type</td>
<td>799</td>
<td></td>
</tr>
<tr>
<td>VMS (Visual Message system)</td>
<td>Traffic light system</td>
<td>Roman citizens</td>
<td>C.A.T.I</td>
<td>by gender and age classes</td>
<td>420</td>
<td>may-june</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Specific users (bus and taxi drivers)</td>
<td>Face to face</td>
<td>By zone and user type</td>
<td>799</td>
<td></td>
</tr>
</tbody>
</table>
### Surveys results in 2014 and trends

<table>
<thead>
<tr>
<th>Service</th>
<th>Customer Satisfaction</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sportello al pubblico</td>
<td>90</td>
<td>+9</td>
</tr>
<tr>
<td>Contact Center</td>
<td>78</td>
<td>-4</td>
</tr>
<tr>
<td>Licenze TP non di linea</td>
<td>68</td>
<td>+3</td>
</tr>
<tr>
<td>Parcheggi di scambio</td>
<td>68</td>
<td>+6</td>
</tr>
<tr>
<td>PMV</td>
<td>65</td>
<td>+2</td>
</tr>
<tr>
<td>osta tariffata su strada</td>
<td>62</td>
<td>+4</td>
</tr>
<tr>
<td>Impianti semaforici</td>
<td>60</td>
<td>+1</td>
</tr>
<tr>
<td>Piano Pullman</td>
<td>58</td>
<td>-12</td>
</tr>
<tr>
<td>Sistemi informativi</td>
<td>58</td>
<td>+5</td>
</tr>
<tr>
<td>Linee Metropolitana</td>
<td>55</td>
<td>-5</td>
</tr>
<tr>
<td>Trasporto Superficie</td>
<td>52</td>
<td>-1</td>
</tr>
</tbody>
</table>
New mobility Masterplan

GENERAL GOALS

Reconnect the city, reduce private vehicles, recover public spaces, improve the environment and quality of life with limited financial resources.

EXPECTED OUTCOMES

• Increase by 20% public transport speed and users;
• **Reduce by 50% road fatalities** by 2020
• Increase bicycle use within 2 years from current 0.6% to 2% (daily), and **within 5 years** to 4% (in town) and to **10% in the city center**;
• Increase car and bike sharing systems
• Reduce access of private vehicles to city center
The new mobility model: 6-zones with different characteristics

Different urban fabrics characteristics and density of each zone require different mobility organizations.

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

In Zone 6, PT services for commuters and a better connection with sea resources, local soft mobility and environmental islands,

In the outer zones, priority is the balance between the use of PT and private mobility. Use of PT on penetration lines and interchanging with cycling, park & ride on main TP nodes.
Improving passenger experience - Mobility in Rome: An integral strategy – September 10, 2015 Brussels

Collective Transport

Main line extensions (km)

Metro 65 km (+ 28 km)
- Line B1 (Conca d’Oro - Ionio)
- Line C (Pantano – Colosseo)

Tramway 47 km (+ 8 km)

Cable Systems 2 km

Urban PT Corridor +27 km

Modal share of the PT network (short-term):

25.8%
New metro and existing background:
Fori Imperiali: preserving our heritage!
Mass Rapid Transport System Expansion: Line C – from south to centre

Opening of the southern part of C Line (up to piazza Lodi):
Completed June 29, 2015!

Montecompatri-Pantano/S. Giovanni
(T7-T6A-T5-T4): 1° phase – works in progress
Length: km 18.5 (10.8 km underground)
Stations: 22 (11 underground)
Start: Feb-2007
Scheduled end:
- Montecompatri-Pantano/Centocelle: 2013
- Montecompatri-Pantano/Lodi: 2014
- Montecompatri-Pantano/S. Giovanni: 2015
Investment: 1.818 million euro

Venezia/Ottaviano (T2)
Length: km 3.5
Stations: 3

Investment: 792 million euro

Contract:
General Contractor
Metro C S.p.A.
(Astaldi Spa - Vianini Lavori Spa – Consorzio Cooperative Costruzioni - Ansaldo Trasporti Sistemi Ferroviari Spa - CMB)
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 €

Opening of Ionio station:
April 21, 2015
Rail Ring zone: PT reorganization and CC scheme

- **Rail Ring zone (700,000 inh.):** revised rules to limit private traffic.

- **Rationalization of PT:** more integrated with Metro, Tram and Railways nodes. Reducing and optimizing stops and lines with multiple steps program.

- Promotion of car sharing, car pooling, bike sharing and electric mobility in a **multi-modal approach**;

- **New LTZ concept:** by 2017 rewarding system for non-pollutant drivers with **congestion charging concept.**
LTZs & Access control: electronic 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
Sustainable Mobility: Priority of new City Administration

Tridente environmental island

1. Closed from-to: 6.30 am – 7 pm (mon-fri) 10am – 7 pm (sat)
2. 4 new e-gates to be made operational next months
3. Closed also to PTW !!
1. Review of access & parking regulation
2. Increase car and bike sharing systems
3. Introduce electric and hybrid vehicles.
4. Create environmental islands, pedestrian areas and pathways.
Car-sharing: fixed and free-flow schemes

- **Car sharing fixed scheme**: managed by Mobility Agency, working in 4 central districts. Annual fee, fixed places, return to same place, low hourly costs.

- **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 two Private Operators: **Car2go** (with Smart, operating from March), **Enjoy** (with FCA 500 started in June 2014)

> Up to 1500 shared vehicles in 18 months!!

> > 100.000 registered users.
• **New bike-sharing scheme**: re-launch of the system with more stations, financed by new advertising installations – to be soon open.
• Bike availability with open data app.
• **Call for Tender** for scooter-sharing scheme, following the “roman attitude” towards this historic way of moving.

**Strong impulse to sharing modes**

- Promotion of multimodality and “active mobility”
- Scooter-sharing to limit purchase and travelling of old scooters within the city
- Revitalisation of bike-sharing scheme to be integrated with cycling plan.
- **Working tables** with City Boroughs and associations

- **Selected about 80 Km of track paths, some already in final design or implementation.**
Mobility Center of Rome

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.

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

<table>
<thead>
<tr>
<th>Infomobility</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable message signs (VMS)</td>
<td>66</td>
</tr>
<tr>
<td>UTT (Urban Travel Times)</td>
<td>51</td>
</tr>
<tr>
<td>Electronic poles of bus stop</td>
<td>300</td>
</tr>
</tbody>
</table>

### Sanctioning & fining
- E-gates for Limited Traffic Zones & Pre-signalling signs
- E-gates for PT bus lanes
- Fotored
- Vistared
- Velox
- Safety Tutor

<table>
<thead>
<tr>
<th>Sanctioning &amp; fining</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-gates for Limited Traffic Zones</td>
<td>47</td>
</tr>
<tr>
<td>&amp; Pre-signalling signs</td>
<td></td>
</tr>
<tr>
<td>E-gates for PT bus lanes</td>
<td>17</td>
</tr>
<tr>
<td>Fotored</td>
<td>1</td>
</tr>
<tr>
<td>Vistared</td>
<td>10</td>
</tr>
<tr>
<td>Velox</td>
<td>4</td>
</tr>
<tr>
<td>Safety Tutor</td>
<td>2</td>
</tr>
</tbody>
</table>

### Monitoring, Controlling, Management
- Video surveillance cameras
- Traffic Measurement Stations
- Traffic lights

<table>
<thead>
<tr>
<th>Monitoring, Controlling, Management</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Video surveillance cameras</td>
<td>45</td>
</tr>
<tr>
<td>Traffic Measurement Stations</td>
<td>130</td>
</tr>
<tr>
<td>Traffic lights</td>
<td>1376</td>
</tr>
</tbody>
</table>
New multi-modal personal travel: new AM choices!!

New features:

- **Open data portal**: already operational at http://www.agenziamobilita.roma.it/it/servizi/open-data/. + 30 apps developed + dev. community

In the coming years:

- **Data ware-house**: integration among different databases and with TEN-T corridor operators
- **Location-aware services and mobile ticketing**, both for PT and parking lots.
- **Open Data & Co-operation**: new projects with EU and int. actors, adapt to standards (DATEX II, REST/JSON), crowdsourcing
Jubilee of Mercy in Rome: from December 8, 2015
Jubilee of Mercy in Rome: from December 8, 2015

Short terms (end 2015) intervention plan to improve mobility and pollution conditions in order to facilitate the reception of pilgrims coming in Rome.

- Strengthening the mobility network (roads, subways, junctions of the railway system and of tramways with requalification of surrounding zones, starting from Termini.

- Actions not only centered on the Jubilee events, but also aimed at "re-stitching the suburbs" and draining traffic;

- Increase PT efficiency and maintenance, rearrange spaces near main PT & railway nodes, exchange bus parking areas outside the center, new pedestrian and bike paths.
Open data, ITS: smart city for the Jubilee

For the new Jubilee (December 2015 - November 2016) is expected to:

- Extend the Open data concept, data standardisation according emerging EU Regulations, new Priority Zones and link with EU Corridors
- Support the implementation of a “personal mobility assistant”;
- ITS to support the city governance, and the protection of “environmental Islands”
- Integration of information between transport modes and transport operators (ATAC, TRENITALIA, COTRAL), integration of the information coming from the social networks.
- Increase accessibility, optimisation with LED lamps of the traffic light network and its use as Internet of Things on Rome territory
Active mobility and better public transportation create multiple benefits:

- significant decrease of main pollutants and CO2 (about 15%);
- moving about 10% of mobility flows towards Active Mobility improves congestion, the environment and our health!
Thank you for your attention!

International Co-operation
Mobility Agency of the City of Rome
Fabio.nussio@agenziamobilita.roma.it

Improving passengers’ experience in public transport
Accessible public transport service – Multimodal strategy in Rome