

# POLIS

CITIES AND REGIONS FOR TRANSPORT INNOVATION

ANNUAL  
CONFERENCE

# 2022

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1 December, 2022  
Brussels, Belgium



#POLIS2022

# SUMP DEMAND MANAGEMENT AND MAAS IN ROME: FROM POLICY TO THE NEW MOBILITY CENTRE

*Session 2B. TOOLS AND STRATEGIES FOR MODERN TRAFFIC MANAGEMENT*



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Mobility Agency of the City of Rome



# The approved SUMP for Rome (February 22, 2022).

## MAIN COMPONENTS



# SUMP Objectives in Rome

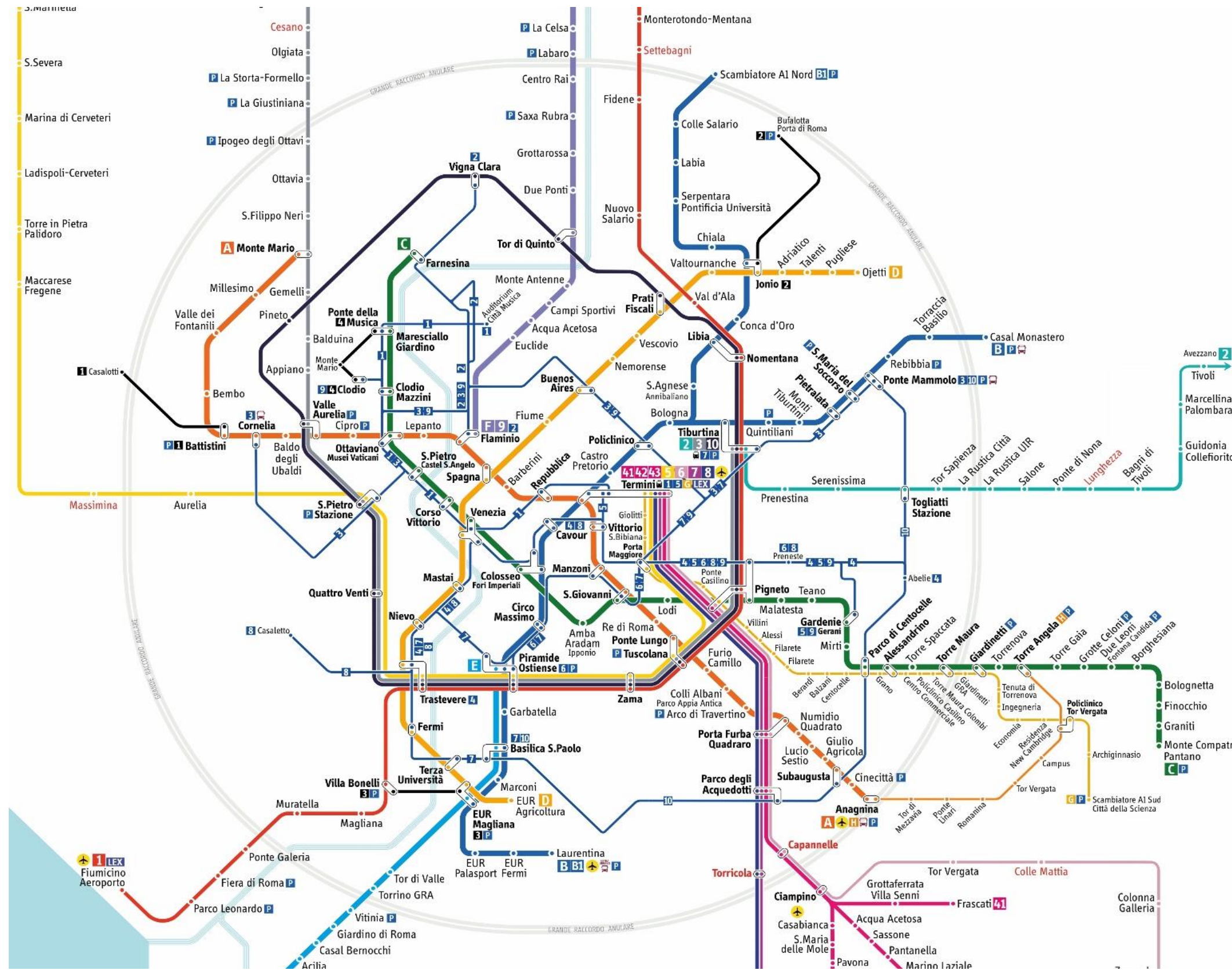
Overcome the present “**traffic approach**” towards “**Plan for people**” with:

- Improve integration of mobility resources
- **Multimodality** & reduction of private car ownership
- **Safety levels increase** for PT and road traffic
- **Public transport capacity increase**
- Soft & sharing mobility increase (car pooling, car, **bike**, van sharing, mobility manager activities)
- **Less congestion and atmospheric & acoustic pollution** - energy consumption reduction – **CO<sub>2</sub>**





# SUMP SCENARIO: Whole Rail PT Network



- legenda**
- M** linee metropolitane
  - A** Anagnina-Monte Mario FS
  - B** Casal Monastero-Laurentina
  - B1** A1 Scambiatore Nord-Laurentina
  - C** Monte Compatri/Pantano-Farnesina
  - D** Ogetti-EUR Agricoltura
  - E** Piramide/Ostiense-Ostia C.Colombo
  - F** Flaminio/Piazza del Popolo-Montebello
  - T** linee tramviarie
  - 1** Stazione Termini-Auditorium/Gttà della Musica
  - 2** Flaminio/Piazza del Popolo-Vigna Clara
  - 3** Cornelia-Ponte Mammolo
  - 4** Togliatti/Abellie-stazione Trastevere
  - 5** piazza dei Gerani-stazione Termini
  - 6** largo Preneste-stazione Ostiense
  - 7** Basilica S.Paolo-Ponte Mammolo
  - 8** largo Preneste-Casaletto
  - 9** piazza dei Gerani-piazzale Clodio
  - 10** Ponte Mammolo-Basilica S.Paolo
  - 6** metrotram Giolitti-Scambiatore Al Sud
  - H** metrotram Torre Angela-Anagnina
  - FL** linee ferroviarie regionali
  - 1** Orte-Fiumicino Aeroporto
  - 2** Roma Tiburtina-Tivoli-Avezzano
  - 3** Roma Tiburtina-Cesano-Viterbo
  - 41** Roma Termini-Frascati
  - 42** Roma Termini-Albano Laziale
  - 43** Roma Termini-Velletri
  - 5** Roma Termini-Civitavecchia-Grosseto
  - 6** Roma Termini-Cassino
  - 7** Roma Termini-Minturno/Scauri
  - 8** Roma Termini-Nettuno
  - 9** Roma Flaminio/Piazza del Popolo-Viterbo
  - 10** Anello metropolitano
  - LEX** servizio espresso Termini-Fiumicino Aeroporto
  - bus** capolinea bus regionali
  - ✈** bus per aeroporti
  - 🚆** treni nazionali
  - P** parcheggio di scambio
  - Stazione** limite di validità della tariffa urbana Metrebus

Metro & railways: + 45 km;  
 Cableways, other: +10 km;  
 Tramway branches: + 58 km;  
 New stations/stops: 185

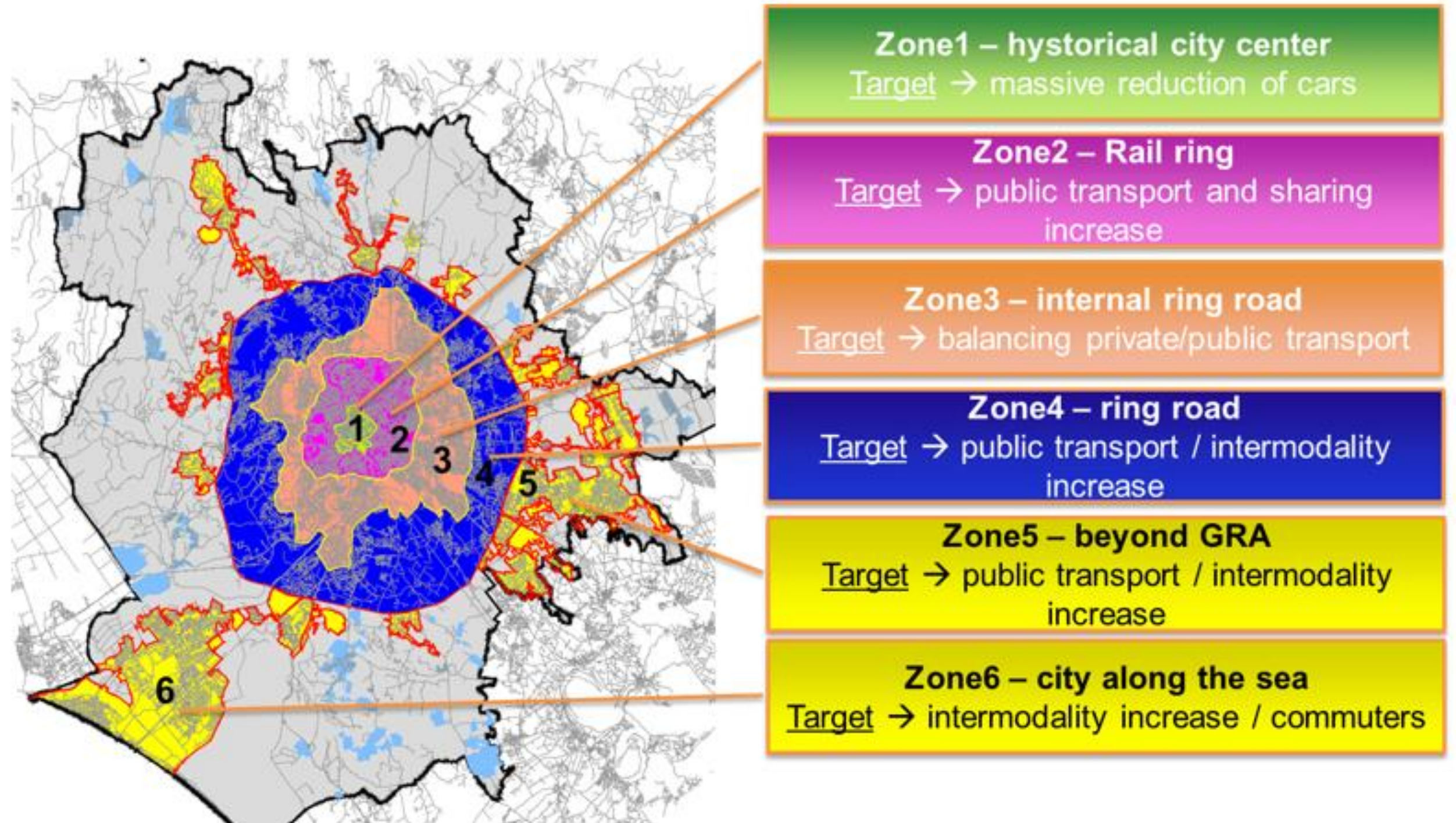




# SUMP: Demand Management Policies

City zoning in 6 areas with increasing constraints to private mobility

Focusing on multimodal mobility with emphasis to soft modes, supported by ITS measures.





# Beyond the SUMP: Rome in the EU missions

Mission "**100 climate-neutral cities by 2030**" in the **third pillar of EC Horizon Europe**.

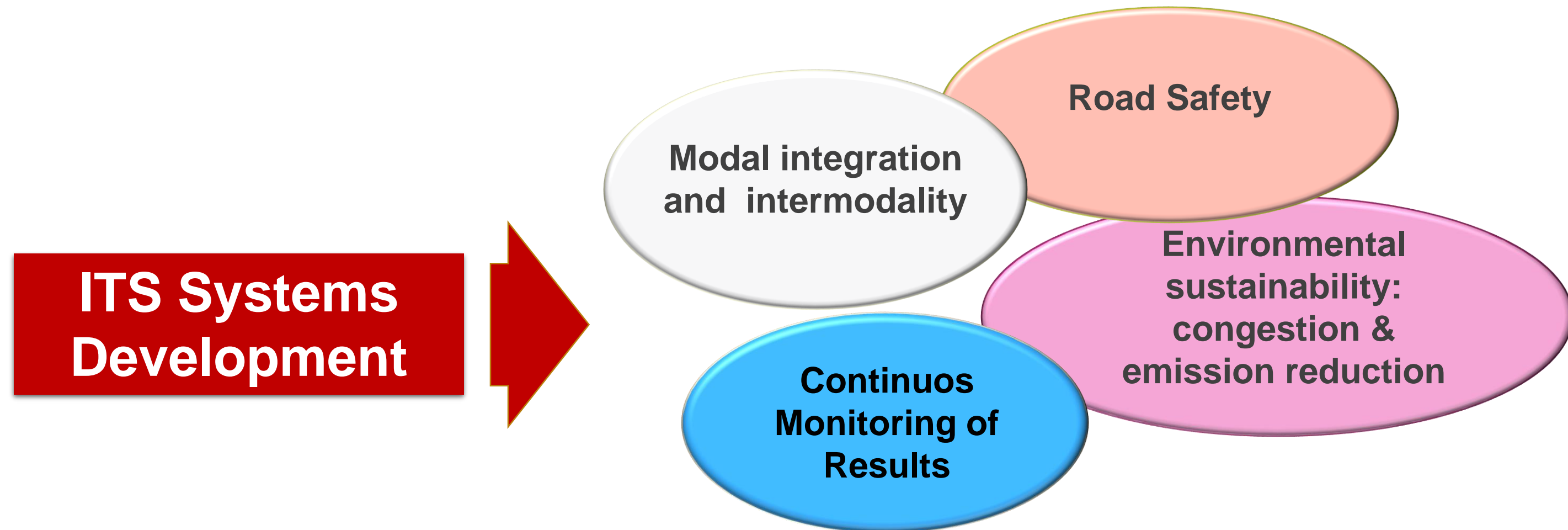
**Cities as innovation "clean" centers**, showing the road to other EU cities to reach the goal within 2050.

**Circular approach** in terms of: energy efficiency of buildings, electricity from renewable sources only, **mobility**, circular economy, **smart city**.

**Rome was selected among the 100 cities**, it is already participating in the Mission Call of 2022 and this summer established a "Climate Office"



# Need of ITS for SUMP development



- *ITS systems are **key in fostering a modal split in favor of collective transport modes***
- *ITS increase the knowledge of mobility phenomena and the detection of anomalous events*
- *ITS can **help the city to achieve future climate neutrality goals***






# The Mobility Centre

P.Le Degli Archivi, Roma



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

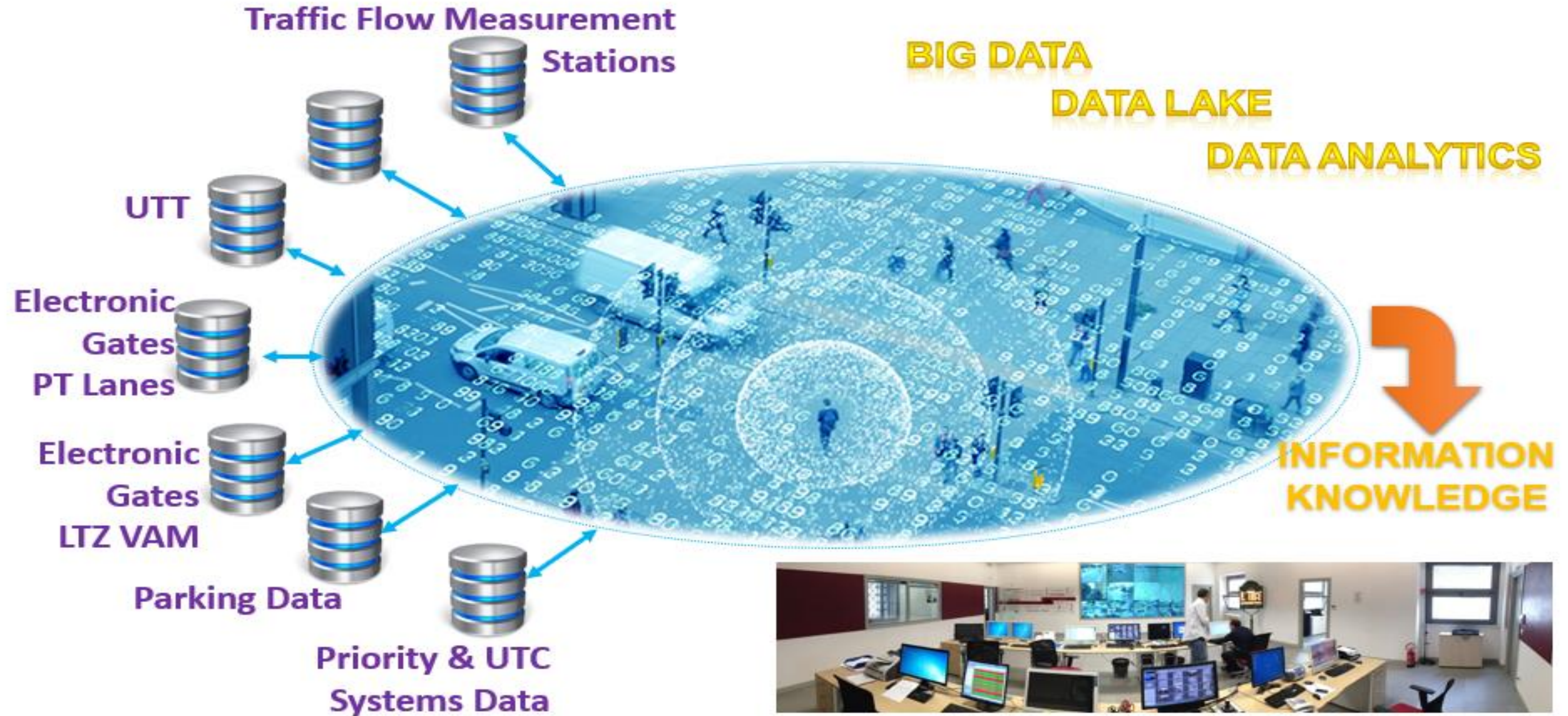
Free acces to all services, codes and open data, updated real-time when available

|  |                                      | Year 2016 | Today |
|--|--------------------------------------|-----------|-------|
|  <b>Real-time information</b>          | Variable message signs (VMS)         | 66        | 80    |
|  | UTT (Urban Travel Times) – positions | 51        | 89    |
|  | Electronic poles for PT              | 300       | 320   |
|  <b>Fining &amp; Control Systems</b>  | e-Gates for LTZ control              | 47        | 113   |
|  | e-Gates for TP bus lanes             | 17        | 39    |
|  | Fotored                              | 1         | 1     |
|  | Vistared                             | 10        | 10    |
|  | Safety Tutor                         | 2         | 2     |
|  <b>Monitoring Regulation Control</b> | Video surveillance camera            | 75        | 93    |
|  | Measurement stations                 | 130       | 64    |
|  | Traffic Lights                       | 1376      | 1410  |





# CENTRAL SYSTEMS DEVELOPMENT & AI





# Big Data – Data Lake & Data Fusion

The new Mobility Center is part of an overall framework based on the creation of the **Data Lake** where data from over **30 types of ITS** systems managed by Roma Servizi per la Mobilità are integrated in 18 data tipology functional areas



## Data tipology functional areas

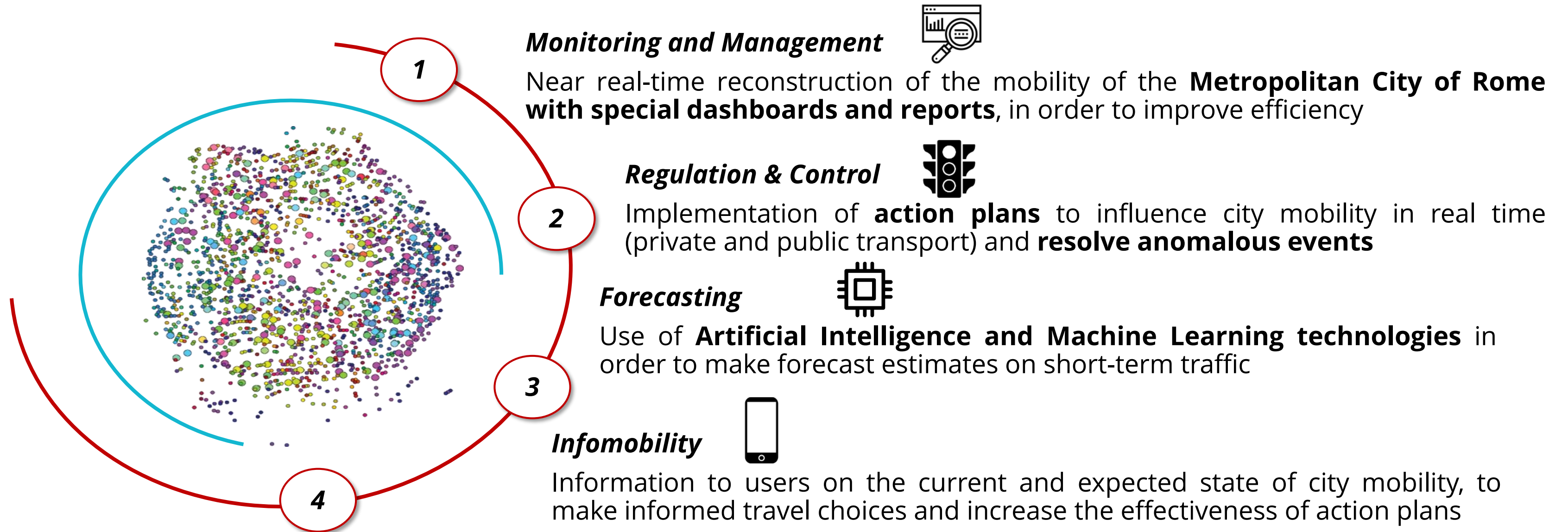
- ✓ PT (Open data)
- ✓ Local Police Event Reporting
- ✓ Floating Car Data
- ✓ Passengers counting
- ✓ Cartography
- ✓ UTT
- ✓ Pedestrian Mobility
- ✓ Accidents
- ✓ Permits
- ✓ LTZ and fining
- ✓ VMS
- ✓ UTC
- ✓ CCTV
- ✓ Public Sharing
- ✓ Private Sharing
- ✓ Maintenance
- ✓ Taxi
- ✓ Measurement stations





# The new Command & Control Room

The new Mobility Center (CdM), currently in the final release phase, will be a tool available to the entire **metropolitan area of Rome** in order to unify, manage and use the information coming from all the actors involved in mobility and from different ITS systems present on the territory





# The new Command & Control Room: operator interface



admin

Logout



Mappa



Eventi di traffico



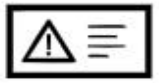
Trasporto Pubblico  
Locale



Analisi Eventi



Sistema ZTL



Sistema PMV



Sistema UTC



Videosorveglianza



Allarmi



Ordinanze



Analytics



Videowall



Activity Management



GTFS Editor



Gestione Utenti

Versione 0.22.3

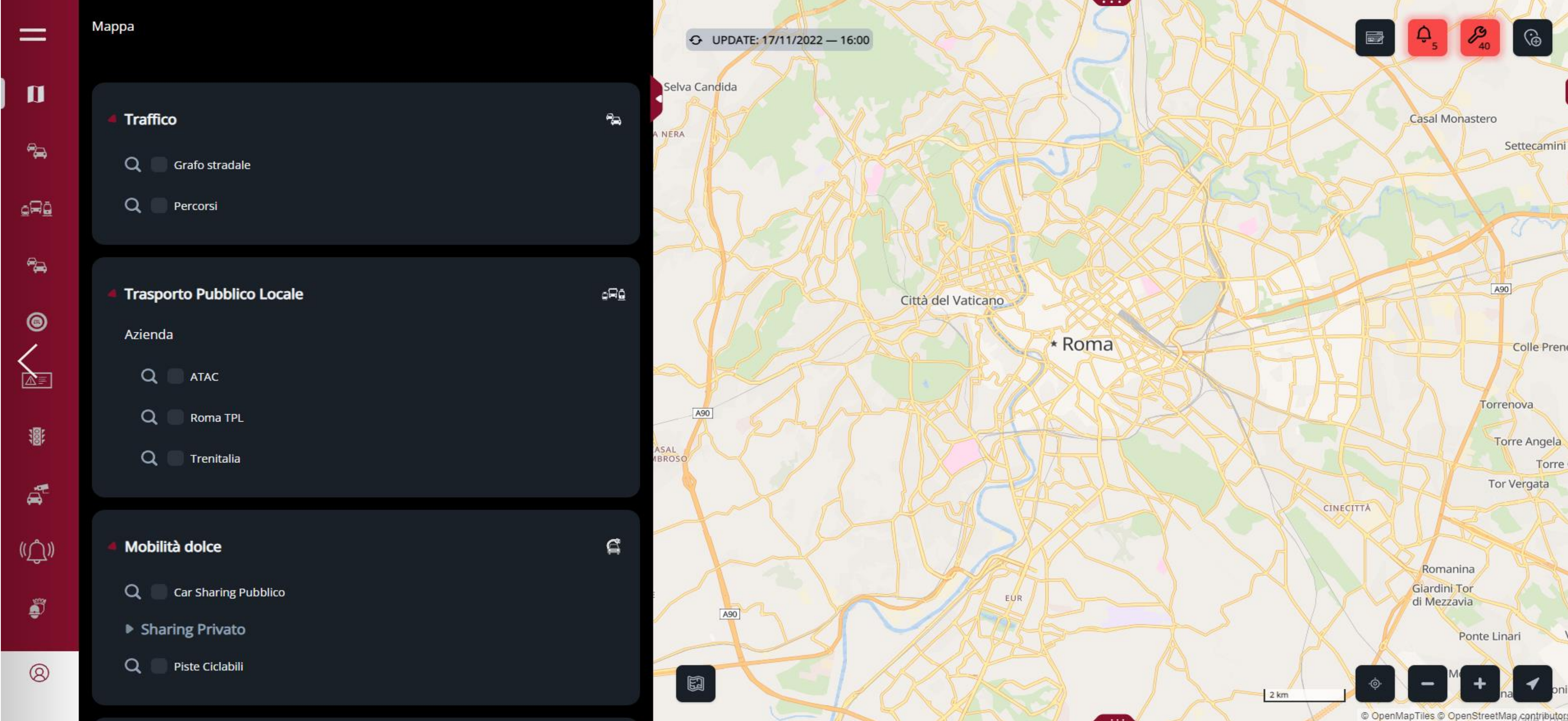


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# The new Command & Control Room: operator interface





# The new Command & Control Room: operator interface

The screenshot displays the operator interface for the Command & Control Room. On the left, a sidebar menu contains several categories: **Traffico**, **Trasporto Pubblico Locale**, **Mobilità dolce**, **Impianti e Sistemi ITS** (which is currently selected), and **Eventi di traffico**. Under **Impianti e Sistemi ITS**, there are sub-categories: **UTT**, **Varchi ZTL**, **Arete ZTL**, and a search list including **Impianti semaforici** (selected), **Sensori di traffico**, **PMV**, and **TVCC**. The main area shows a map of Rome with various traffic indicators. A specific traffic light is highlighted with a blue tooltip: **Codice impianto: 01132**, **Strada: VIA DI S. GREGORIO - INGRESSO PALATINO**. A larger black popup window titled **Dettaglio impianto semaforico** provides detailed information: **Codice impianto: 01132**, **Strada: VIA DI S. GREGORIO - INGRESSO PALATINO**, **Gestore: SWARCO**, **Stato operativo: CENTRALISED**, **Piano semaforico corrente: Schema intersezione**, and **Stato diagnostico: Up** (with a green dot). The top of the interface shows a map update timestamp: **UPDATE: 17/11/2022 - 16:04**. The bottom right corner of the map includes navigation controls and a scale bar (200m).



# The new Command & Control Room: operator interface

The screenshot displays the operator interface for the Command & Control Room. On the left, a dark sidebar contains navigation icons. The main interface is divided into two panels. The left panel, titled 'Eventi', features a search bar, a filter dropdown set to 'Tutti', and a list of event types: 'Incidente' (repeated 7 times), 'Allerta Veicoli' (repeated 2 times), and 'Operazioni delle Autorità'. At the bottom of this panel, it shows 'Elementi 50' and '1 - 50 di 916'. The right panel is a map of Rome, centered on the Colli Portuensi area, with a red location pin and a yellow warning triangle. The map includes street names like 'Via Portuense' and 'Via della Magliana', and various landmarks. A top status bar shows 'UPDATE: 17/11/2022 - 16:04'. The bottom right corner of the map area contains navigation controls and a scale bar.





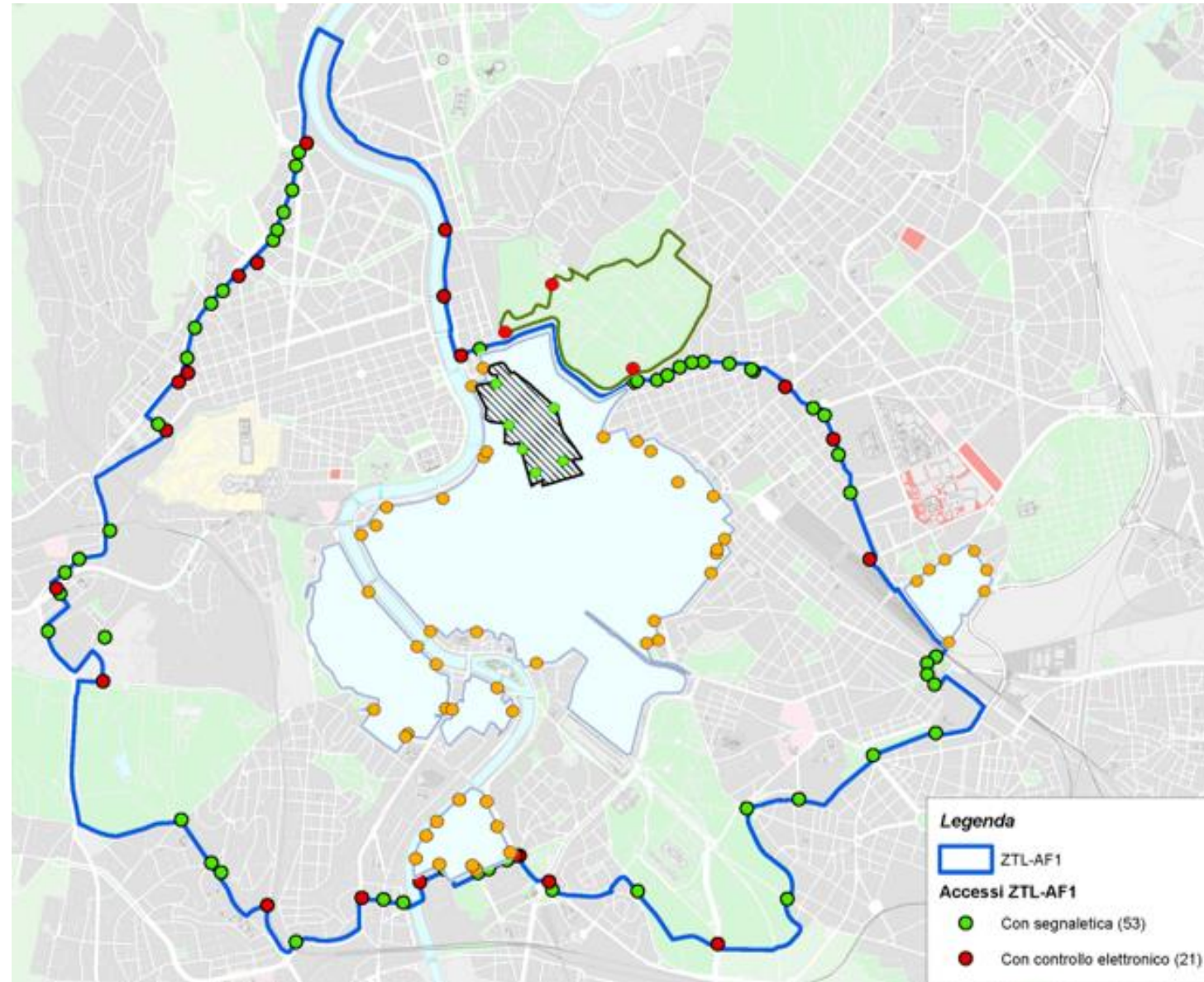
# SUMP: Demand Management Policies

## Present status of City Centre LTZs & electronic access control

**LTZ VAM-AF1:**  
21 electronic gates

**LTZ VAM-AF1**  
All days  
05.00 – 24.00

Restriction for all vehicles  
with total length over 7,5  
meter, except authorized  
(tourist coaches)



**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





# SUMP SCENARIO: Demand Management

## Towards zero emission areas

- Continuous control and reduction of **vehicle congestion and emissions on the whole network**;
- Realization of at least one **urban area "with zero emissions"** from transport within 2030

## UVAR in the Railway Ring Area

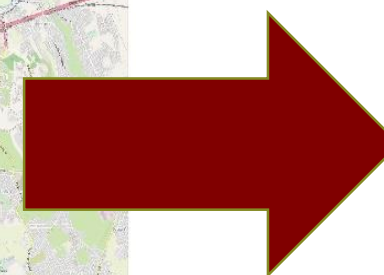
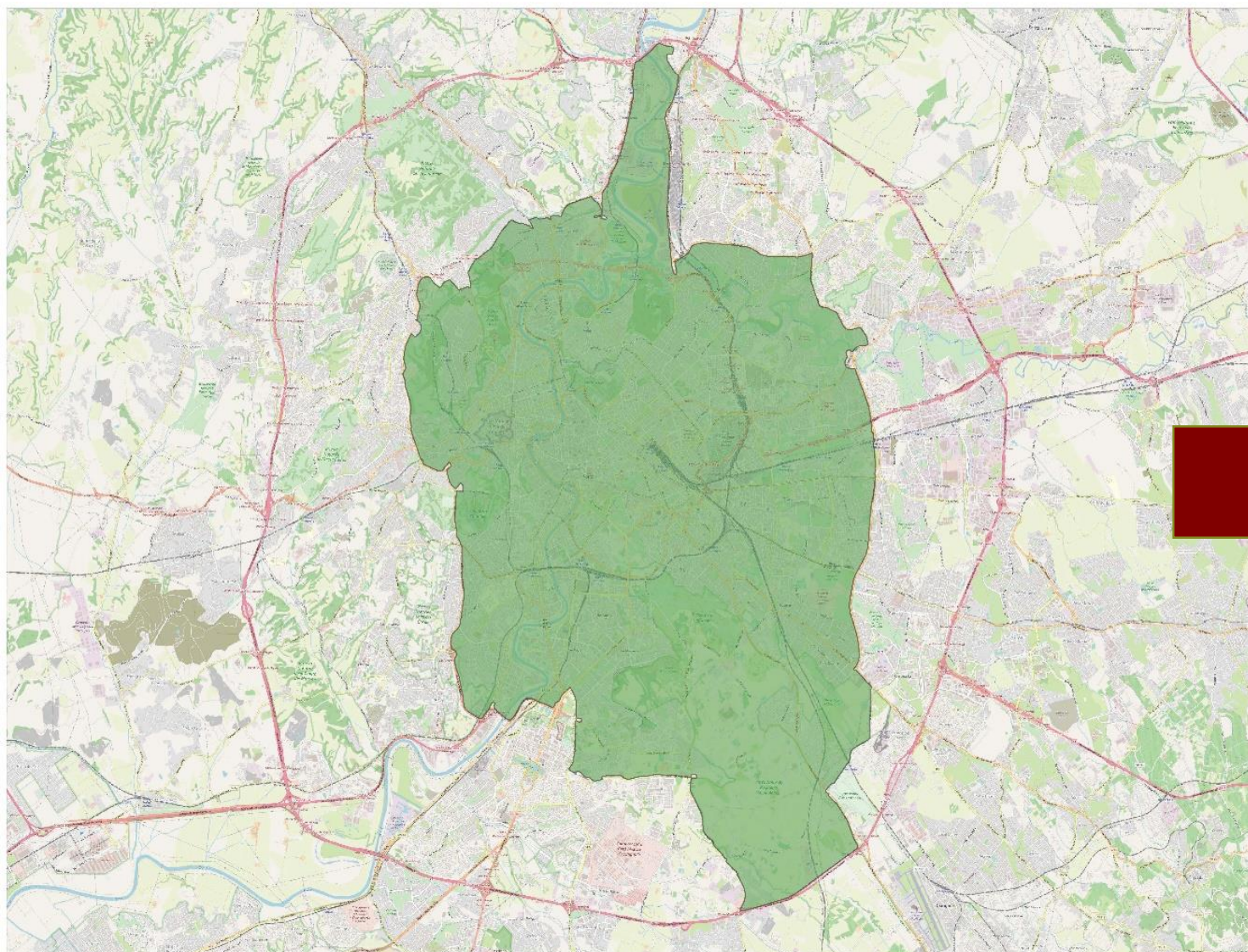
Installation of the **53 gates of the ZTL AF1 - VAM** for vehicle control. towards "**Pollution Charge**" model and **MaaS** promotion.

## LEZ in the Green Band

Installation of the **160 gates of the ZTL Green Area** missing for vehicle control on emission standards, towards access reduced only to compliant categories, enforced with e-gates and flexibility rules.



# LEZ & Electronic gates on the Green Band



**A Council Act approved the LEZ on November 10.**

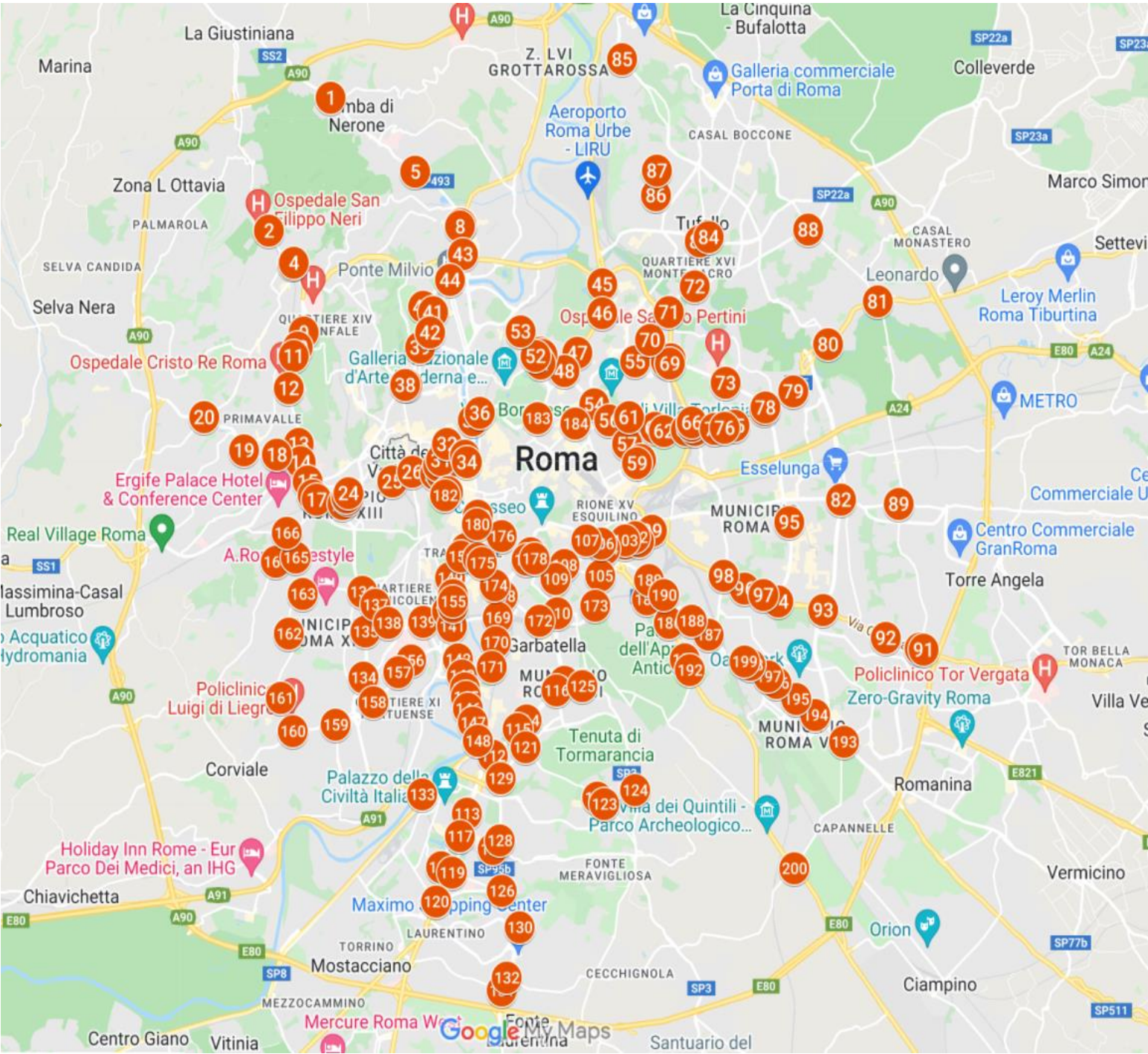
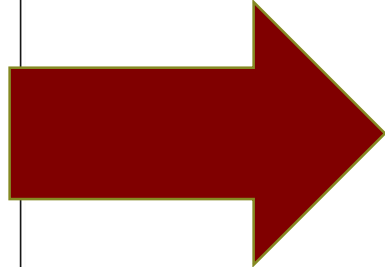
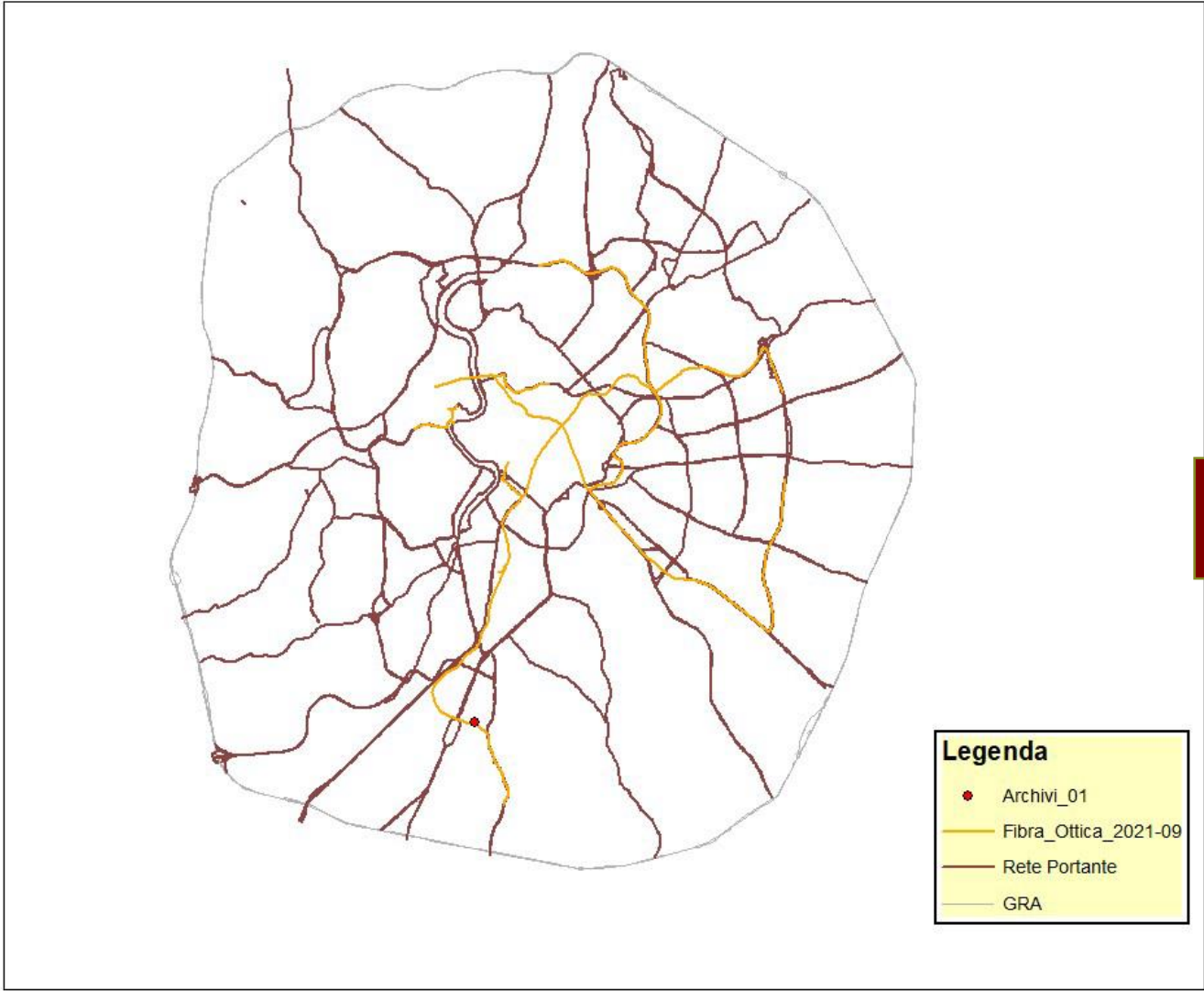
**REACT-EU is funding the first batch of the e-gates project (8 ML€)**

- Completion of the **System Data Center**
- Installation of the **first 80 electronic gates**





# Monitoring congestion on main city roadways



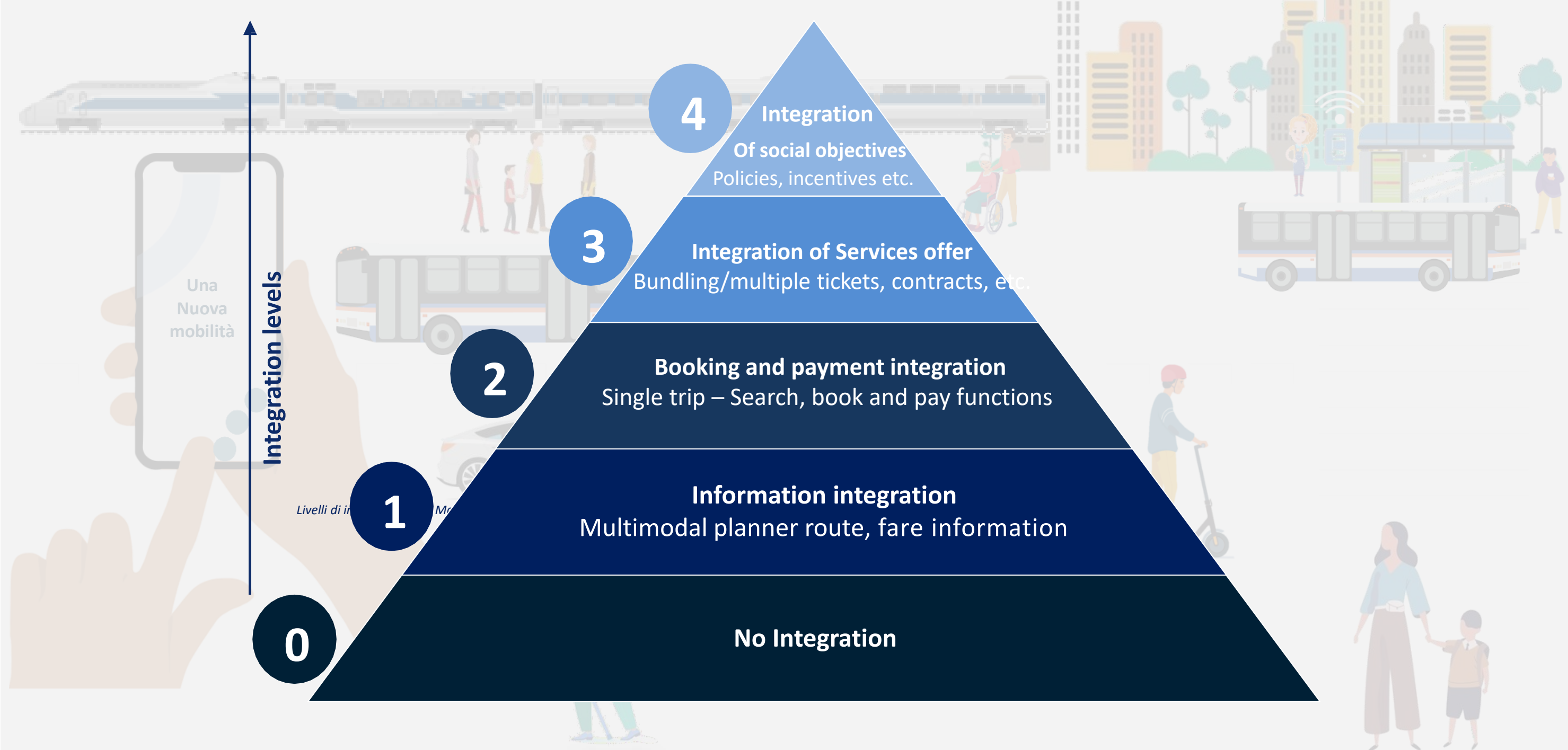
**React EU** is funding the project (10 ML€)

- Monitoring (flows, speeds, vehicle categories) of about 200 road intersections using the latest Radar technology.
- Environmental monitoring of 20 areas





# Mobility as a Service (MaaS) classification





# Mobility as a Service (MaaS) in Rome

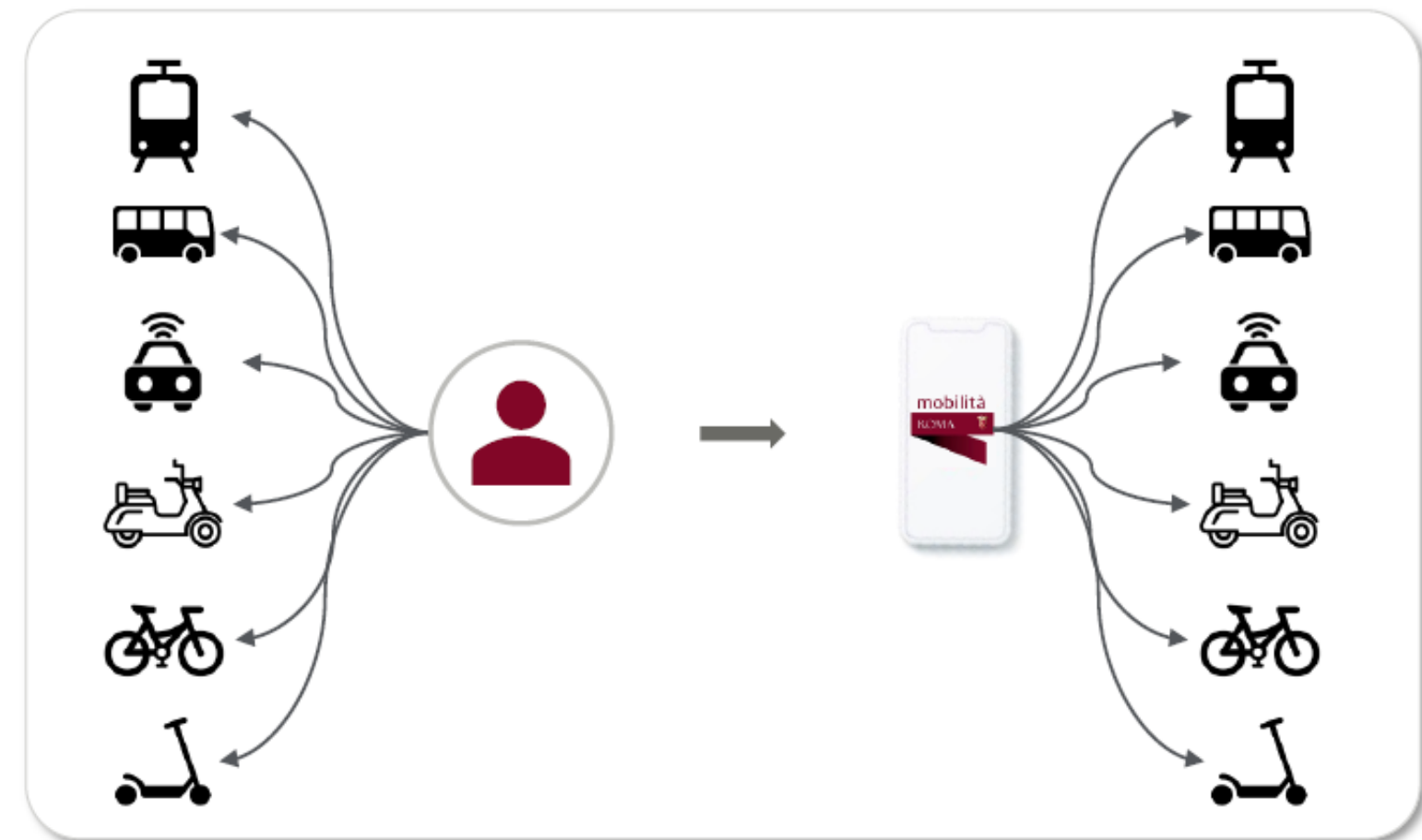
**Rome's goal is to develop a level 4 MaaS** in which all public and private mobility solutions operating in the territory are included with the highest level of integration.

**The active participation of the Municipality** in the provision of the MaaS service guarantees **close alignment with the social objectives of mobility and sustainability**.

## Benefits for the citizens

The key concept behind the MaaS idea is to put users at the center of transport services, offering them solutions for tailor-made mobility that brings a number of benefits:

- Complete overview of all services
- Increased usability of urban spaces and perceived quality of life
- Facilitations in terms of planning, booking and payment
- Less congestion and increase of the air quality
- Single access point via App





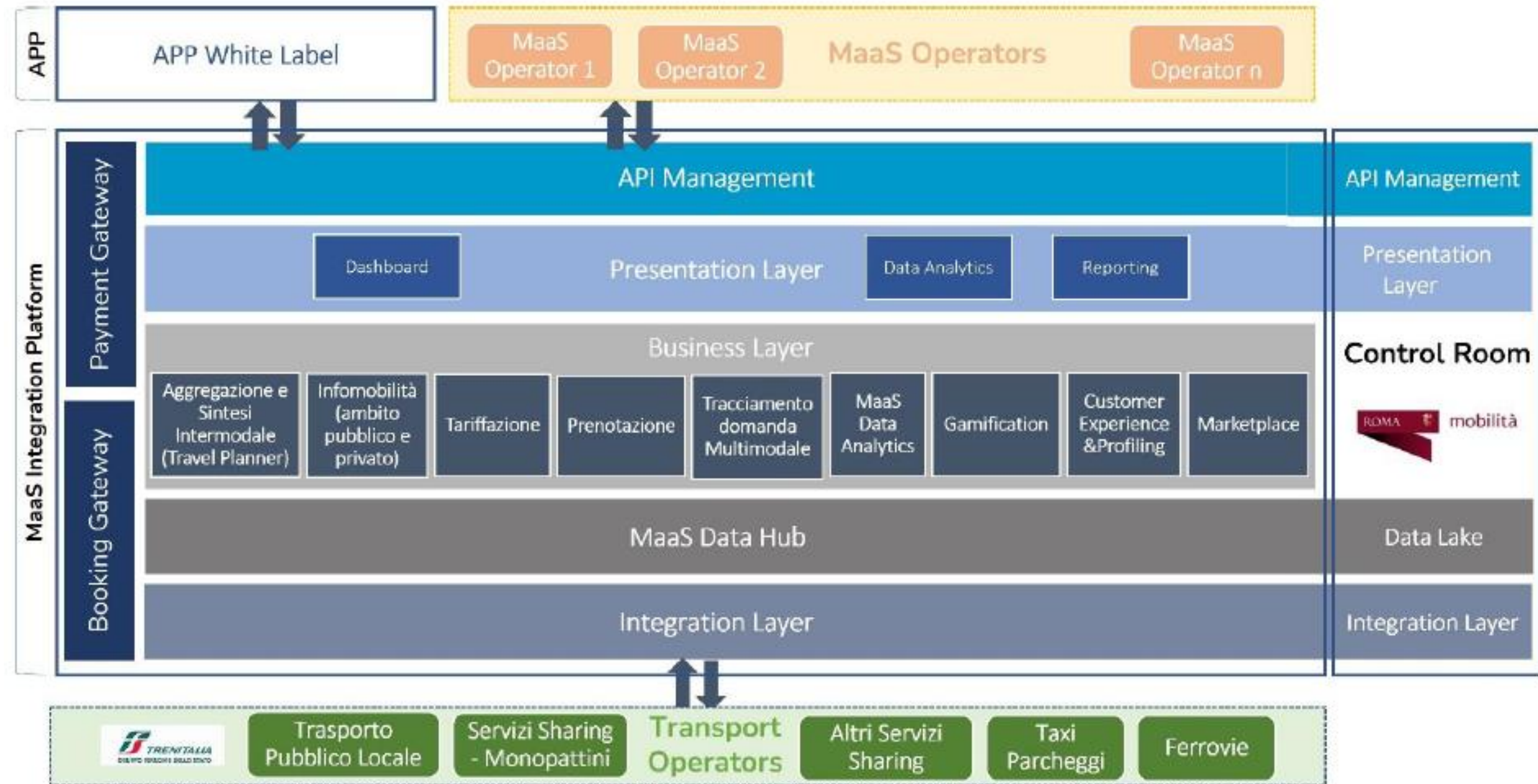
# Mobility as a Service (MaaS) in Rome



MITD

Ministro per l'innovazione tecnologica e la transizione digitale

## PNRR – MaaS for Italy



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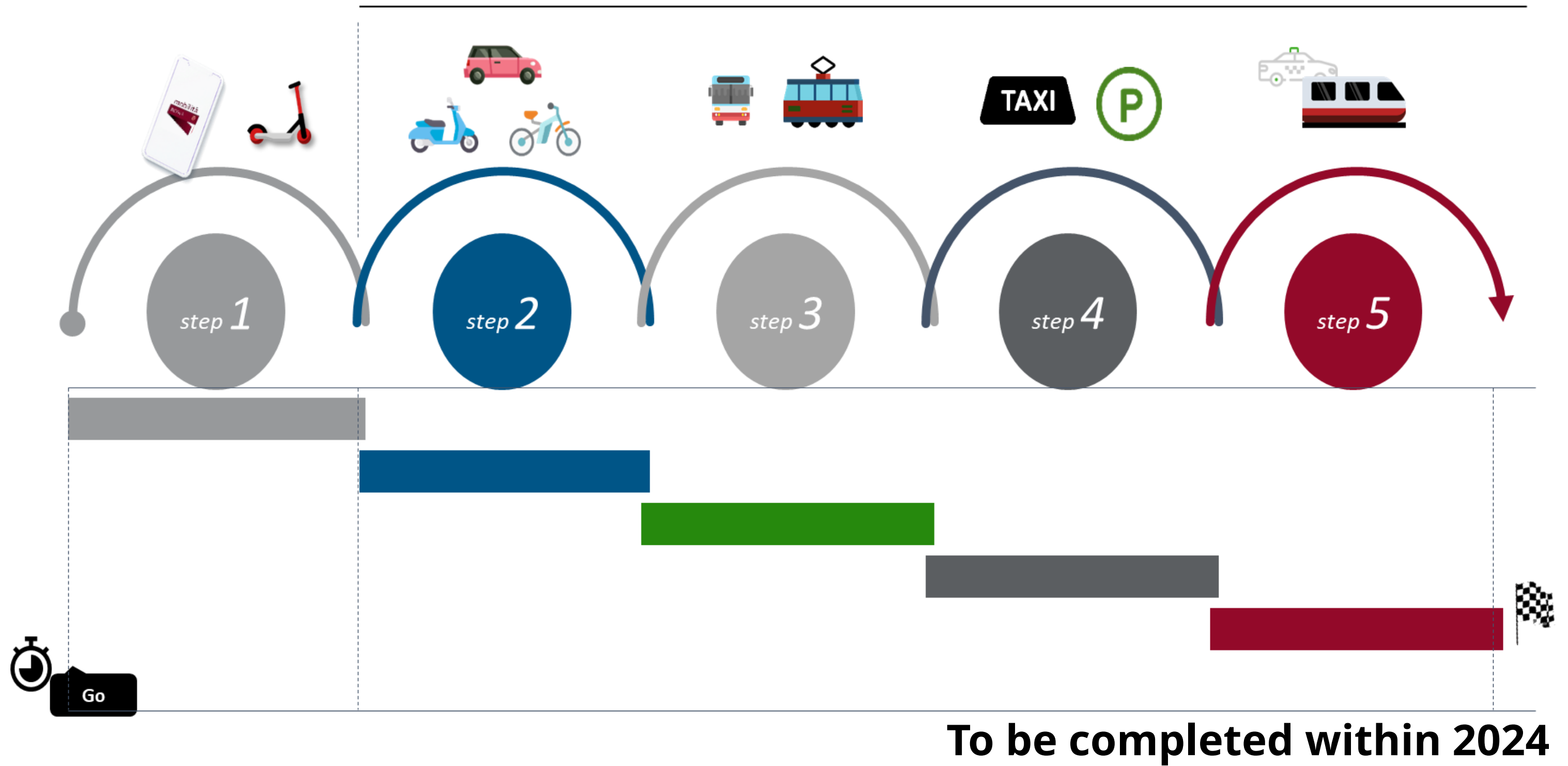


PUMS  
Piano Urbano  
della Mobilità  
Sostenibile





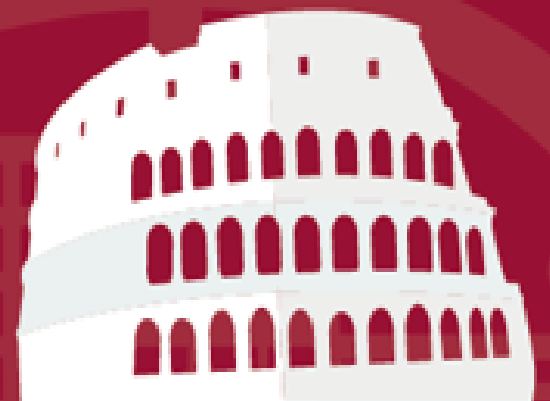
# Mobility as a Service (MaaS) in Rome





# Thank you for your attention!

Roma



For questions:



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