

ROM_06: Innovative features into the MDMS system according to the mobility patterns and needs of users' groups

Description of the measure and main outcomes expected

Within the measure ROM_06, Roma Capitale (RC) and Roma Servizi per la Mobilità (RSM) follow the steps for the implementation of the core system of the MaaS in Rome. This measure is connected to the ROM_07, which expects to upgrade the ITS infrastructure of the Mobility Agency RSM. The ROM_06 measure is linked and dependent on the National framework called "Mobility as a Service for Italy (Maas4Italy)", managed by the Ministry for Infrastructures and Transport (MIT) and the Department for Digital Transformation (DTD).

Rules and policies have been established to ensure a regulated environment, and interconnections with the regional platform (RAP – Regional Access Point) and the national platform (NAP – National Access Point) have expanded the range of transport options. The goal is to offer accessible and convenient mobility services for residents, commuters, and tourists in Rome.

An open platform called "Data Sharing & Service Repository for MaaS" (DSRM) was developed in the framework of the MaaS for Italy project to ensure the sharing of standardised mobility data and interoperability between Local Authorities, Transport Operators and MaaS Operators.

The measure delivered the following outputs:

- Involvement of at least 1.000 users for the first phase trial (initially at national level the expectation was to have 10.000 nation-wide, therefore 1.000 was considered a good target for the first phase in Rome);
- Identification of the MaaS Operators providing the apps to be used for the trial;
- Definition and creation of the MaaS Integration Platform of Roma Capitale (that fulfils the role of RAP – Regional Access Point for the Lazio Region);
- Integration of standardized data from the Transport Operators with the NAP and DSRM.

Preparation of the measure

The preparatory phases of the Rome pilot for the MaaS4Italy project followed a structured path that can be divided into several key steps.

1. Creation of the local governance:

Roma Capitale has the role of "policy maker" to approve and enable the incentive schemes for citizens; to safeguard citizens' needs and set guidelines for social inclusion; and to support the principles of fair competition delivered by all mobility operators.

RSM has been appointed as the territorial MaaS Integrator and RAP, responsible for the technological infrastructure and transport data management, to coordinate the technical integration and standardization of data from Transport Operators (e.g., LPT, Sharing Mobility operators) towards the NAP and DSRM and to analyse the data on users' habits and satisfaction levels.



2. Involvement of Transport and MaaS Operators:

Roma Capitale launched a call for expressions of interest and 13 private MaaS Operators in addition to ATAC (the main PTO in Rome) have been selected. Out of the 13 private operators, 8 participated in the MaaS4Italy trial due to technical feasibility. Moreover, collaboration agreements for the MaaS initiative were signed between RSM and 18 mobility operators.

3. Data collection and standardization:

RSM set up the common database (RAP – Regional Access Point) populated with data provided by LPT, sharing mobility etc).

The RAP collects updated data regarding:

- 3 public transport operators (2 local and 1 regional); in the future also the data from Trenitalia will be available;
- 8 sharing mobility operators (electric scooters, cars, bicycles, motor scooters);
- 2 taxi operators.

Data are provided by public transport operators in GTFS (static data standard) and GTFS-RT (dynamic data standard) and in GBFS (dynamic data standard) by sharing mobility operators; then static data are converted to NeTEx L1 and L2 standard and sent to the NAP. Following the brand-new Italian indications for data standardisation, NeTEx L3 and L4 and SIRI data conversion will be made available soon on the RAP. Data are stored on a dedicated PostgreSQL database, part of RSM Platform's Data Lake.

4. MaaS for Italy apps trial – functionalities:

- Integrated apps provided by MaaS Operators for all citizen transportation needs;
- Integrated multimodal travel planner that showcases the best travel options based on client's preferences;
- Real time information regarding the arrival times of public transport vehicles and the position and status of shared mobility vehicles;
- In-app payment for the planned trip and the option to purchase transportation services in bundles.

5. Users' engagement for the trial:

The following activities have been carried out to engage citizens in participating in the MaaS4Italy trial:

- publishing the registration survey on RSM's website, while ensuring GDPR compliance in data collection;
- contacting approximately 12,000 users part of RSM's database;
- informing 389 Mobility Managers via e-mail about the MaaS4Italy pilot and inviting them to promote the participation among their colleagues;
- contacting the main Italian hospitality association, Federalberghi, to ensure higher reach of tourists;

- 1570 users have registered their candidacy and have been selected for the trial.

These preparatory phases helped setting up a solid base for the first trial in Rome (July 1st - November 30th, 2023), involving various stakeholders and ensuring that the technological infrastructure and human resources were ready to support the trial of the MaaS4Italy project.



Figure 1. One of the MaaS Operator travel planner app.

The MaaS trial in Rome (July - November 2023) involved citizens and local transport operators. The trial involved the use of single apps for planning, booking, and paying for journey(s), with the aim of improving the efficiency and sustainability of urban transport. The Capitoline Council (policy maker) defined the governance of the system, with RSM as MaaS Integrator, responsible for the technological infrastructure and transport data management.

6. Incentives for citizens :

Incentives were offered (Table 1) to encourage the use of MaaS services during the trial period, according to the following table. These incentives were intended to stimulate adoption and gather useful feedback to improve the system.

Table 1. Incentives scheme for MaaS trial in Rome.

Incentive types	Method of access	Value
Cashback	MaaS trip involving 2 means of transport	30% of the travel cost
Cashback	MaaS trip involving 3 or more means of transport	40% of the travel cost
No incentives	Trip involving only 1 mean of transport	0 €

During the last month of the trial, an enhancement to the incentives scheme was adopted: MaaS trip + evaluation of the travel experience = 50% cashback. RSM supervised the process, issued, and managed the incentives and handled the communication activities.

The trial phase in Rome ended on 30 November 2023. About 1,500 citizens participated in the trial of the MaaS4Italy project in Rome. This project allowed users to plan and book trips combining various means of transport, such as buses, taxis, and shared mobility services. Participants benefited from incentives, including a 50% cashback on the cost of trips purchased through MaaS Operators' apps, up to a maximum of 50 euros.

Regarding the MaaS4Italy intervention in the year 2024, plans have been outlined for the future, to be included in the proposal for the continuation of the MaaS initiative. These include the strategy to involve a larger audience by making the use of the service more efficient and ensuring further promotional activities.

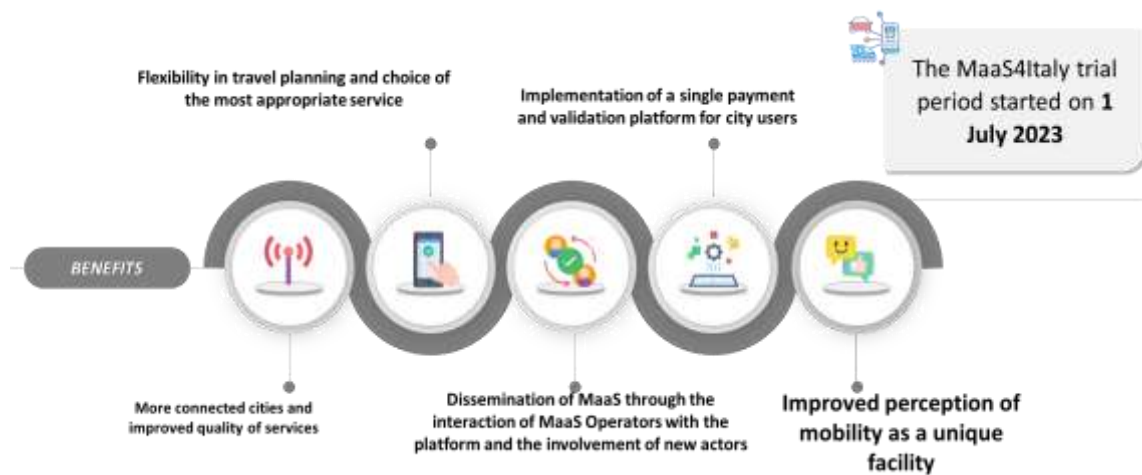


Figure 2. Features of the 1st MaaS trial in Rome.

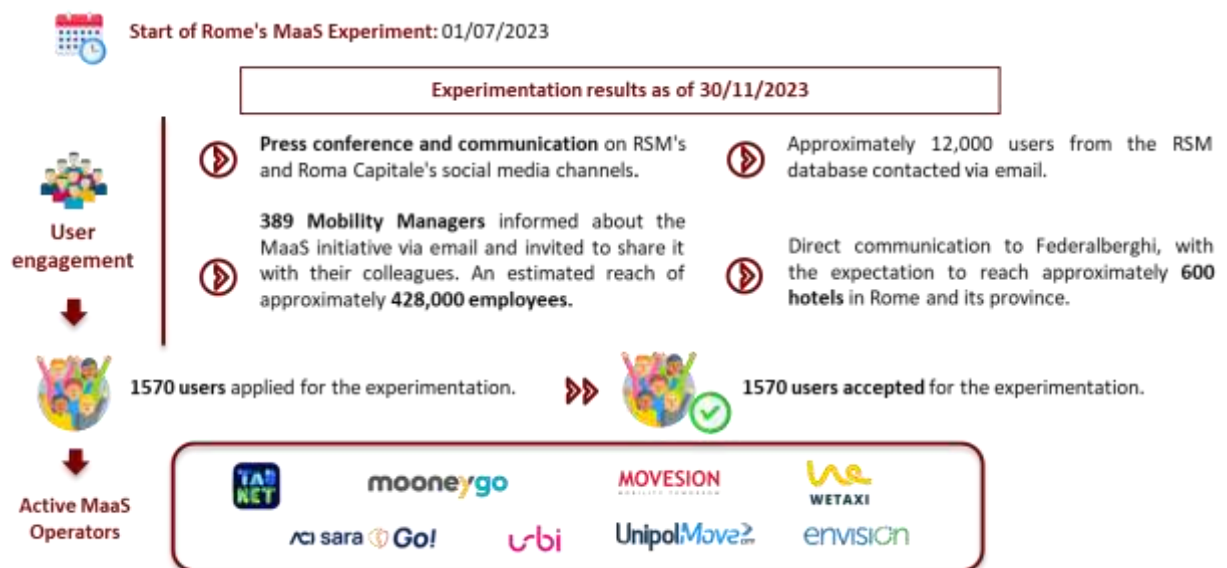


Figure 3. Status of the measure as of November 30, 2023.



Challenges & Mitigations

The MaaS4Italy trial in Rome encountered several challenges that can be divided into three main categories: technological, operational, and socio-cultural.

1. Technological challenges:

- Platform integration: A significant problem was the integration of the different digital platforms used by the various transport operators. The need for a unified infrastructure for data sharing and interoperability between different transport systems has been a complex challenge.
- Data security: Protecting sensitive user data and ensuring privacy were crucial issues. Implementing adequate security systems to prevent breaches and ensure user trust was a challenging task.

2. Operational challenges:

- Coordination between transport operators: Coordinating activities between various public and private transport operators has been complicated, especially in ensuring that all follow uniform standards and adopt compatible technologies.
- Incentive management: Implementing and managing user incentives, such as cashback, required careful management of resources and transactions, as well as ensuring the transparency and efficiency of the process.

3. Socio-cultural challenges:

- User adoption: Convincing citizens to change their mobility habits and adopt new digital tools to plan and pay for their trips required a great deal of educational and promotional effort. Resistance to change from citizens accustomed to using the private car.
- Accessibility and inclusiveness: Ensuring that the MaaS system is accessible to all segments of the population, including the elderly and people with disabilities, was essential to the success of the trial. Ensuring that digital solutions are user-friendly for all was a critical but difficult objective to achieve.

Next steps towards implementation

RC and RSM have drawn up a proposal to continue the experimental phase of MaaS to the national authority managing MaaS for Italy, with a series of initiatives to improve the quality of the service:

- New types of structured and differentiated incentives for different types of users (LPT subscribers with a particular focus on regional commute, participants at events, etc.);
- Active involvement of corporate and university Mobility Managers to facilitate the creation of a Corporate MaaS solution;



- Initiatives aimed at intercepting the travel demand of tourists and participants in major events organised in the city of Rome;
- The use of data made available by Trenitalia that will be sent to the Maas Integration Platform.

This proposal for a second phase of experimentation was incorporated within the new draft of the Operational Plan that RSM, on 30 May 2024, submitted to the Department for Digital Transformation of the Presidency of the Council of Ministers for the relevant assessments.

The expected activities, originally planned in September 2024, are:

- Further development of the available services;
- Integration of all the PT operators on the platform.

These steps will be outlined more precisely after September 2024, following the decision on the proposal submitted to the National decision Bodies, as the MaaS in Rome must be integrated nationwide and more agreements with operators are in the pipeline.