Bolzano, 9. Juni 2020

Preliminary market consultation

Project and CUP: *H36G18000130006- MENTOR – INTERREG ITALIA-SVIZZERA*

Dear supplier,

SASA SpA intends to establish a preliminary market consultation pursuant to Article 20 of LP no. 16/2015 and Article 40 of Directive 2014/24/EC for the design, implementation and execution of an experimental on-demand transport service for the project in question and in accordance with the requirements set out in more detail in the annex.

SASA SpA invites all interested economic operators to participate through the compilation of an expression of interest, including in the form of a **quote/offer**, in the modalities described in the attachment.

OFFER PRESENTATION DEADLINE (09.29.2020):
The offer is to be sent exclusively by e-mail to the following address paolo.mariano@sasabz.it

Best regards
Paolo Mariano

Firmato digitalmente da:
PIFFER PETRA
Firmato il 2020/09/11 10:34
Seriale Certificato:
166850985450783501271487157924379835270
Valido dal 17/02/2020 al 16/02/2023
ArubaPEC S.p.A. NG CA 3

ANNEX: Details of the market survey

1. The MENTOR project

The MENTOR project is a project financed by the **Interreg-V-A Italy-Switzerland** programme, coordinated by the **Municipality of Merano** and carried out in collaboration with **NOI Techpark**, **SASA** the **Municipality** of **Brig-Glis** in the **Canton Valais** and **Postauto**.

The aim of the project is to demonstrate a "**Mobility-as-a-Service**" (MaaS) concept in the two pilot municipalities, representative of the Alpine environment. MaaS is today one of the main drivers in the technological innovation of mobility and is based on the idea of being able to address the use of private cars with integrated packages of sustainable mobility services, which the user can easily use, book and pay for.

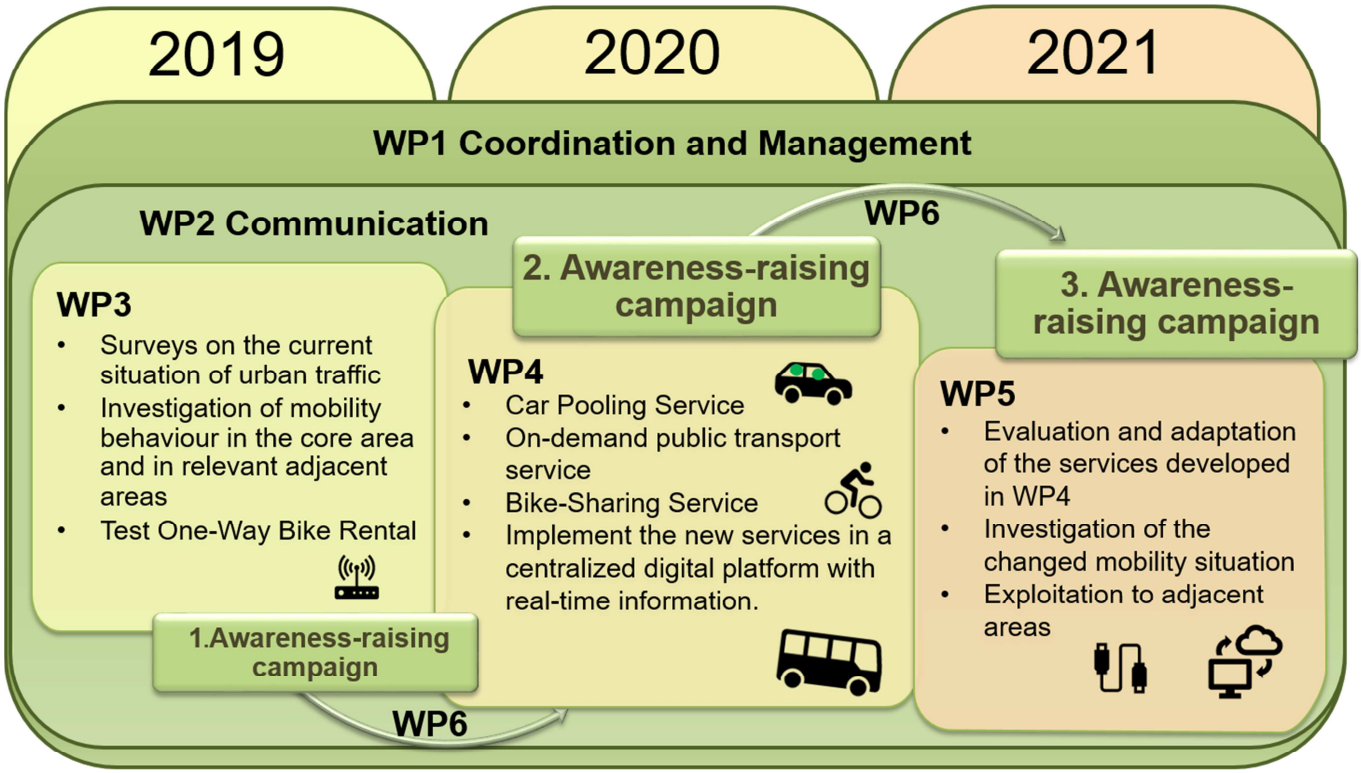
The demonstration is carried out on the base of three main actions:

- **Pilot of new mobility services**, designed to be integrated with local public transport, which in the vision of the project partners must be the backbone of a MaaS ecosystem. Specifically, following services will be tested:
  - **Merano: car pooling, bike sharing, on-demand services**
  - **Brig-Glis: on-demand service**

- **Pilot of MaaS applications**, aimed at making access to these services as simple as possible:
  - **Merano**: evolution of the pilot application **mobility.meran.eu**. In particular, it is intended to develop a **real-time inter-modal routing** functionality, so that people can have a valid travel option for every possible trip from A to B.
  - **Brig-Glis**: pilot of digital solutions (APP) in order to access public transportation services.

- **Demonstration of autonomous mobility services**, aimed at creating a predisposition by local travelers to use this new generation of vehicles. At the end of 2019, demonstration activities were carried out with small self-driving shuttles on predefined routes closed to traffic, both in Merano and Brig-Glis.

The project started in December 2018 with an expected duration of 3 years. An overview of the project activities is summarized in the following illustration.



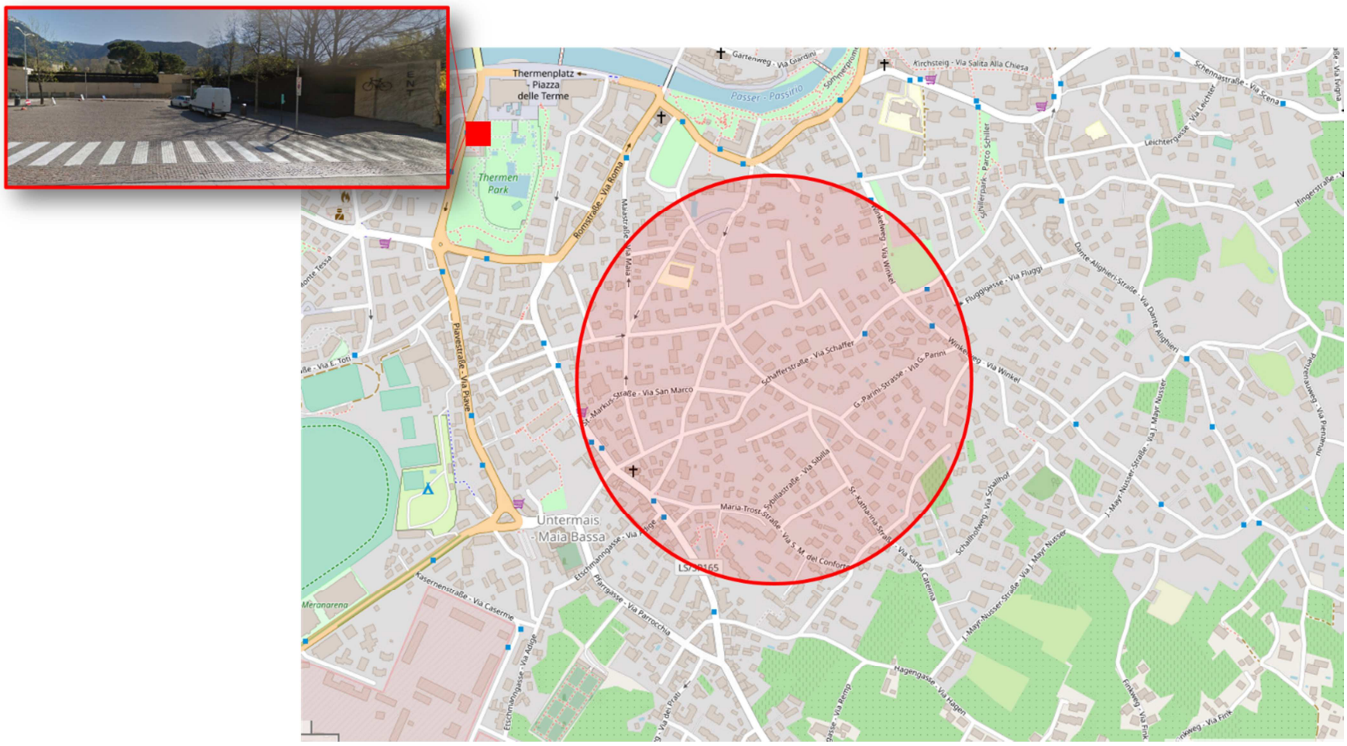
2. The flexible / on-demand transport service

One of the new transport services that will be tested in a MaaS ecosystem within the MENTOR project is a transport service that aims to efficiently complement the "backbone" offer of existing local public transport. In particular, it wants to offer a service in areas of the city where the traditional public transport offer is not so strong, especially for people with limited mobility, and in particular the elderly and people with disabilities.

This transport service is based on the following basic features:

- **Flexibility, both in time and space**. Unlike a traditional transport service, this type of service can be offered in a variable way over time, depending on the real demand of the users, thus overcoming the concept of fixed timetable; moreover, it may not have a fixed route for the transport of people.
- **On-demand**. In order to ensure the objectives of flexibility of the service, it is necessary to provide interaction mechanisms with the users who intend to use it. In particular, the transport service is provided in space and time in order to meet the previously collected transport requests of the users, in the most efficient way possible, both in relation to the provision of the service itself (e.g. reduction of waiting times and travel times) and to the associated costs (e.g. choice of the shorter route that minimizes the vehicle kilometers traveled).

Following preliminary studies and in accordance with the guidelines provided by the new **Urban Traffic Plan** of the Municipality of Merano[1], the intention is to test this type of service between the districts of Maia Bassa and Maia Alta, where there is currently no scheduled public transport service. The starting point of the service would be located at the bus square in the Terme area, near the municipal bike rental point.



The on-demand transport service has to organized as follows:

- **Circular line**: start- and end-points are the same (bus square in the Terme area)
- **"Basic" service frequency**: 1 hour
- **Reference journey duration**: 20 minutes
- **Reference route** (associated to the journey with minimal duration), with the possibility to have a **predefined number of route variations**
- Possibility to **request the service up to one hour in advance**
- **Predefined number** of ***pick-up / drop-off*** (points in which users can start / end the transportation service)
- **Time intervals in which the service is going to be carried out:**
    - 8-12 and 16-19 from Monday to Friday
    - 8-12 and 16-22 on Saturday
- **Usage of a 9-passenger vehicle**, with the possibility to transport people with disabilities. The vehicle should preferably be electrically powered.

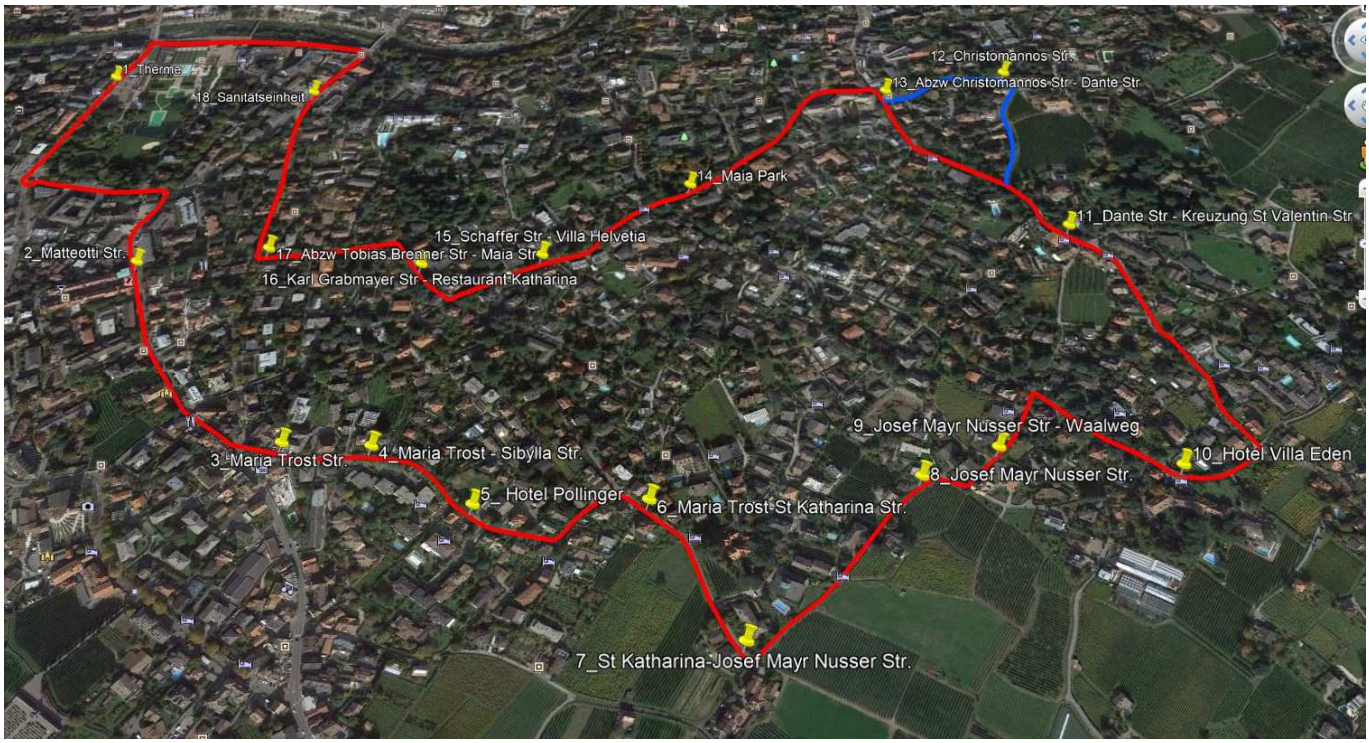
<u>The transportation service is not going to take place if no users' requests have been received for a specific journey</u>.

[1] https://www.comune.merano.bz.it/it/Piano_Urbano_del_Traffico_PUT_

The service should also foresee the possibility to not travel the whole route, but to go back to the start-point by inverting the travel direction in correspondence of a specific bus pick-up point. This could be an added value for users that want to arrive earlier at destination and also for the service provider since less kilometers are travelled. This option should be supported e.g. in the following cases, assuming that all travelers want to arrive at the end-point (bus square in the Terme area):

- All users have selected as pick-up points points from nr. 1 to nr.9
- All users have selected as pick-up points points from nr. 14 to nr.18 (in this case the other travel direction is driven)

A first hypothesis of service, including pick-up / drop-off points, is illustrated in the following map. The final details will then be cleared with the supplier during the initial phase of definition of the executive project.



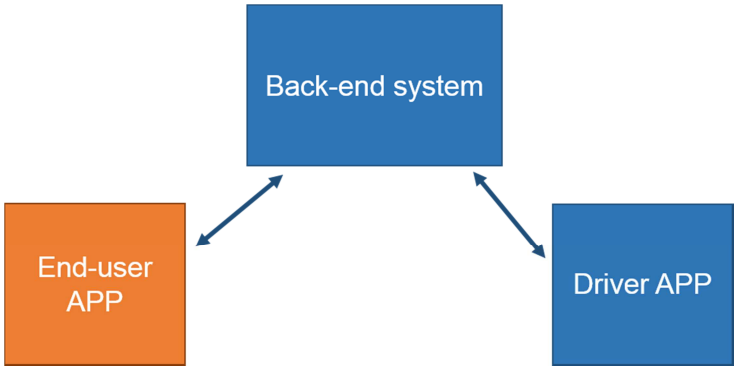
From a regulatory standpoint, in accordance with the **Provincial Law on Public Mobility** (Provincial Law No. 15 of November 23, 2015), the service is to be understood as an **atypical line public transportation service** (Article 2, paragraph 4), and as such, since it is carried out entirely within the territory of the City of Merano, it can be authorized by the municipality concerned (Article 26, paragraph 2). The pick-up/drop-off points will be physically marked with new signs that will be prepared for this purpose by the Municipality of Merano. These points are not to be understood as bus stops in the traditional sense, with related regulatory aspects to be met, but simply as points where passengers are allowed to board / disembark in complete safety.

The service is provided completely free of charge as part of the pilot project activities, therefore no ticketing solution has to be considered.

3. The technological solution

The implementation of the service must be supported by a technological solution capable of collecting users' requests in advance, aggregating them and distributing the necessary instructions to the driver in time for the execution of the service. In particular, three system components are foreseen:

- **a back-end system**
- **an APP (for iOS or Android) specific for the driver**, with which all relevant details of the service to be executed can be visualized;
- **an APP for the end-user**, with which it is possible to request the service in advance. This APP (which is outside the scope of this market survey) also integrates other functionalities and information, implementing the MaaS approach pursued. This is specifically the SASAbus APP[2]



The following process has to be implemented:

- the user sends his booking request to the back-end system via the end-user APP, which must contain at least the following details
  - **pick-up point** (choice from predefined menu)
  - **drop-off point** (choice from predefined menu)
  - **desired arrival time at drop-off point** (based on reference schedule)
  - **nr. of passengers**, with indication of those with **motor disabilities** (if applicable)
- the back-end system receives all booking requests, and processes the exact route the driver has to make. Each user receives a confirmation and the details of the transport service, in particular:
  - **pick-up point**
  - **departure time from the pick-up point**
  - **drop-off point**
  - **arrival time at the pick-up point**
  - **detailed route from the pick-up point to the drop-off** (optional).

  This confirmation must be sent to the user as soon as possible so that he / she can get a confirmation that the transport service is being provided. A verifiable booking confirmation (e.g. in the form of a QR-code) should be also be implemented, so to simplify and speed up boarding operations. On the other side, the driver will receive the following information, in particular:
  - the **detailed route** to be driven

[2] It is not excluded that in the execution of work, an integration into an existing APP other than SASAbus, e.g. the recently launched suedtirolmobil APP, may be chosen.

- the **details of the people to be transported**, with related **pick-up and drop-off points / times.**

The driver analyses this information in advance before executing the service, ideally at the end of the journey previously carried out.

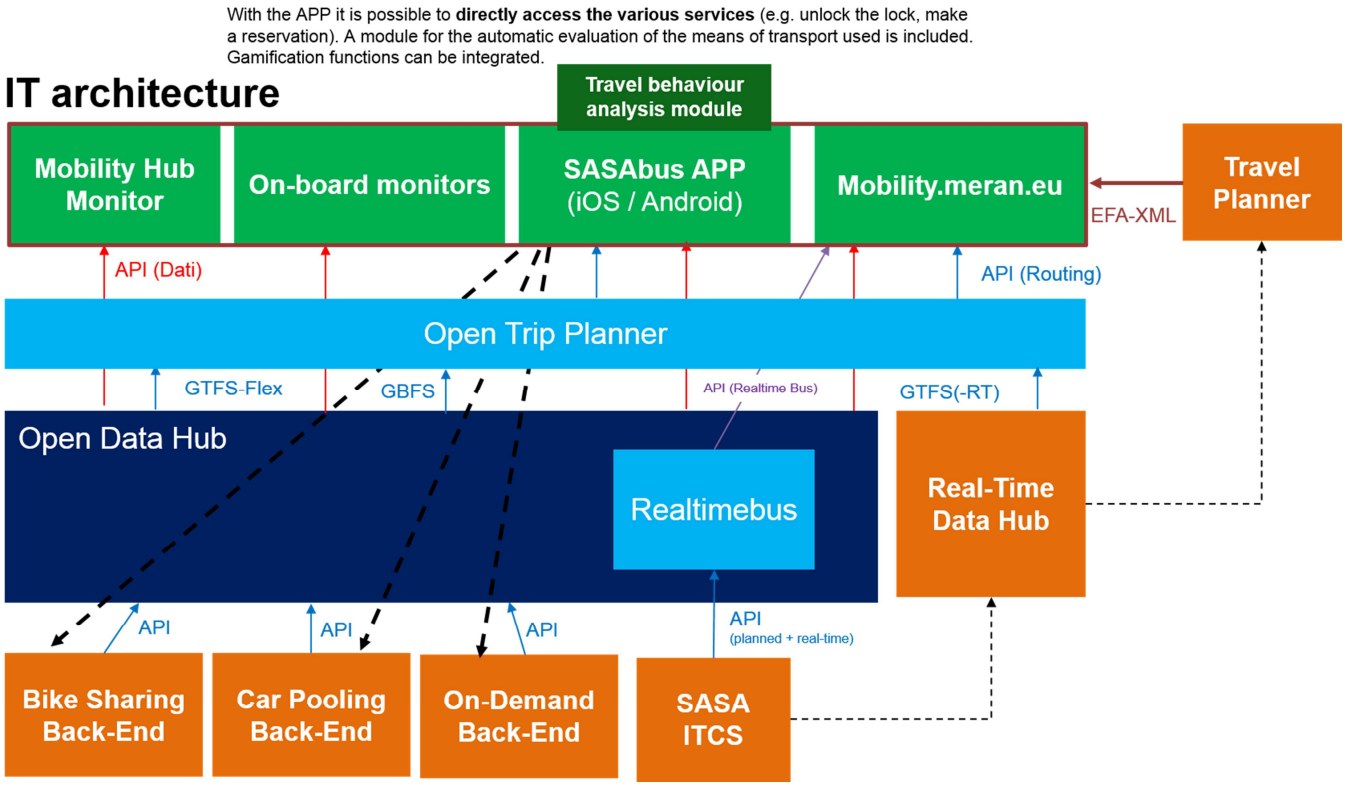
- during the **service start up phase**, the **driver confirms the departure** to the back-end system through an appropriate driver APP functionality;
- after confirmation of the departure, the driver APP shall periodically (at least once every 30 seconds) inform the back-end system of his **position**. This information is made available to the user APP so that the user is informed in **real time** about the actual execution of the service;
- when the driver reaches a **pick-up point**, he / she verifies the identity and booking confirmation on the end-user APP of each individual person, and confirms the pick-up to the back-end system through an appropriate feature of the driver APP;
- in the **drop-off phase**, the driver is only required to record the drop-off of the people on board, with a functionality similar to the previous point;
- at the **end of the service**, the driver confirms the arrival to the back-end system, in the same way as on departure. From this moment on, the driver APP shall terminate the period communication of the position to the back-end system.

It is also possible to provide additional ways in which users can make reservation requests, e.g. by phone calls. In this case, the back-end system must be able to support this type of functionality, not only in technological terms of but also in organizational processes terms (e.g. the back-end system must be supervised by an operator).

A user can decide during the journey to choose a different drop-off point. This possibility must be foreseen and supported by the system; specifically, the driver can change the drop-off point associated with a passenger.

4. Integration in the IT architecture of the MENTOR project

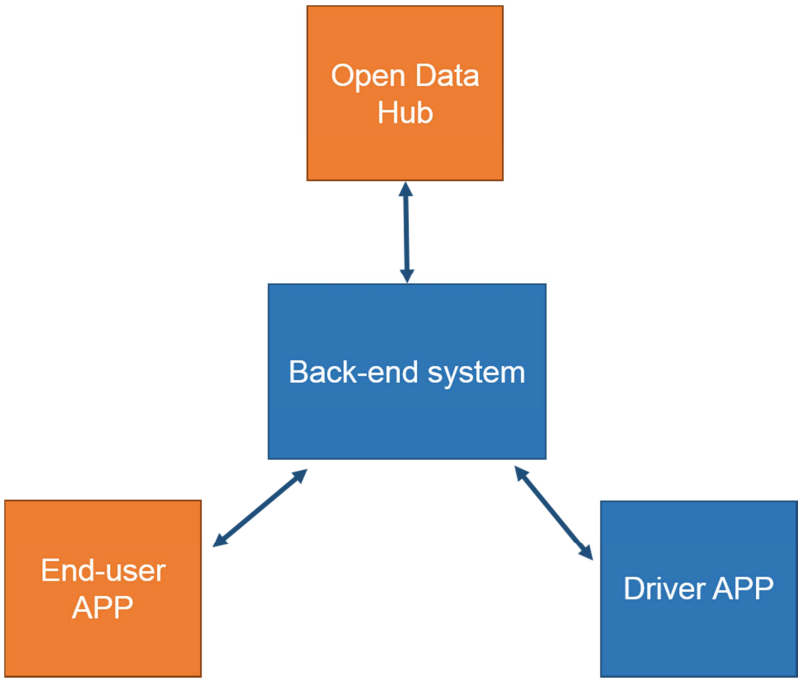
The system for the management of the flexible / on-demand transport service must be integrated into a more complex system architecture, reported for completeness sake in the following figure.



In addition to the planned integration with the SASAbus user APP, which must be guaranteed by providing an appropriate API suite for all the features described in the previous chapter, the back-end system must provide an API so as to allow integration with the Open Data Hub of NOI, in order to ensure that the service data are integrated into the various pilot information channels foreseen in the project. A first proposal of methods to be made available is summarized in the following table.

Method	Description
GetPathsDetails	Provides the geometries of all possible routes managed by the service
GetActualPlannedData	Provides the planned time of the service, possibly planned according to users' requests (e.g. journey not made in case of lack of requests from users, confirmed route)
GetRealTimeData	Provides the real-time location of the vehicle

The final and detailed version of the interface will be agreed upon during the definition of the executive project.



5. List of required activities

The activities that are covered by this market survey are the following:

A. **Support in the executive design of the service**, in close collaboration with SASA and the other project partners. The functional requirements presented in this market survey will be finalized and verified in a detailed way with the service provider before the start of the service and in order to address the necessary preliminary implementation work in a clear and unambiguous manner.
B. **Implementation of the technological solution required for the service execution**
C. **Operational preparation of the service**, e.g. training of the personnel involved, preparation of the vehicle, etc. The vehicle will be temporarily branded with communication material produced by the project. The service provider is required to apply the graphics received from SASA and the other project partners.
D. **Execution of the service**. The presence in service, in addition to the vehicle and the driver, of one or more remote operators who manage the contacts with the users and the driver through the back-end system must be guaranteed.
E. **Service monitoring and reporting**. In particular, a detailed report of the executed journeys is required on a weekly basis. Each journey must be characterized by at least the following information:

- **Actual departure time from the service starting point**
- **Actual arrival time at the service arrival point**
- **Total number of transported passengers** (with detail of the passengers with disability, if applicable)
- **Anonymous detail of the mobility patterns of each transported passenger**, expressed in terms of pick-up / drop-off point

6. Bindings and conditions

It is furthermore not excluded that during the execution of the pilot there may be slight changes in the way the service will be provided. The service provider is considered compensated for "minor" changes, which only require a quick reconfiguration of the system parameters (e.g. transmission frequency of the vehicle position). On the other hand, more structural changes that require significant implementations may be subject to additional contract, subject to prior assessment of the effort and costs required.

SASA and the other project partners are entitled to carry out sample checks on the actual execution of the service, in compliance with the agreed functional requirements. In case of serious non-compliance and / or inconsistencies with respect to what is reported in the weekly reports, SASA reserves the right to immediately terminate the collaboration with the service provider.

In case in the scope of this commitment the creation of material subject to rights, including copyright, sui generis right on data, related rights, including that on photographs, industrial design, is foreseen, all the rights of economic exploitation of what will be realized are attributed to SASA S.p.a., except those expressly excluded in the offer.

If the material consists of data, creative works (drawings, literary works, cinematographic works, figurative art, photographs), industrial design or other material subject in whole or in part to rights held by third parties, it will be permitted to use such material provided that it is licensed under conditions compatible with the license under which such material is to be published, if indicated. If no license is indicated, the material must be subject to conditions compatible with the Creative Commons CC0 license.

7. Timing and implementation modalities

The milestone plan is the following:

- **M0**: Project kick-off (August 2020)
- **M1**: Service executive design completed (September 2020)
- **M2**: Completion of the technological solution and of the operational preparation of the service (December 2020)
- **M3**: Service kick-off (January 2021)
- **M4**: Service completion (November 2021)

The milestones plan is subject to change by SASA and the other project partners, especially due to the ongoing coronavirus emergency which could lead to a delay in the planned trials. Modifications to this plan caused by delays caused by clear responsibilities by the service provider are not acceptable.