



INCLUSION Project

Deliverable D4.3

Innovation Pilot Lab Florence: implementation and results intermediate version

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Abstract	<p>This Deliverable reports on the intermediate results of Task 4.3 related to the implementation of the Pilot Lab in Florence metropolitan area. This deliverable is the intermediate version and aims to provide all details about the design phase. D4.3 in particular provides information on the two pilots area identified by Busitalia, analysing the mobility demand and existing offers in both areas, the involved stakeholders and selected target users. The design phase is also described in detail and the deliverable finally outlines a timeplan of the next activities to be performed during the implementation phase.</p>		
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1 Introduction

The aim of this deliverable is to provide detailed information about the design of the Florence Pilot Lab, as a first result of Task 4.3 "Innovation Pilot Lab Florence Metropolitan Area" and following the methodology established in the Deliverable D4.1 "Innovation Pilot Lab coordination handbook".

The Florence Pilot Lab is led by Busitalia – Sita Nord with the involvement of its controlled company, Ataf Gestioni. The main objective is the improvement of the accessibility to public transport service through different actions that are being carried out in two different pilot areas in the metropolitan conurbation of Florence. These actions are focusing on different target users groups.

The first pilot action is focused on the area covered by two conventional PT lines managed and operated by ATAF Gestioni, i.e. urban lines no. 30 and 35, that connect the centre of Florence with the Municipality of Campi Bisenzio along two different directions. Both lines are characterised by a large presence of migrants and low-income residents. The main aim of this pilot is to improve the service provision in this area, first of all by reorganizing the route of the line 30 in order to guarantee the interconnection with the tramway T2, secondly by getting a comprehensive understanding of the mobility needs and requirements of the users, mainly migrants, of the two indicated lines, thirdly, by improving the users information with the upgrading of the existing ATAF App 2.0 with new crowdsourcing functionalities aiming to collect users' feedback on the two lines. Moreover, a number of sustainable and "new generation" buses will be introduced in the whole fleet, and some of them will be equipped with on-board info-panels that will provide useful info in different languages on PT service and on the correct behaviour on board the bus.

The second pilot action is focused on the rural area of San Piero a Sieve, located in the centre of Mugello, on the northern boundaries of the metropolitan conurbation. The objective in this case is to improve multimodality information in order to encourage commuters to use the bus service operated in the area for going to the train station. For this reason, the PT services reaching S. Piero a Sieve has been reorganised, a smart pole providing real time info on the PT operated services will be installed at the railway station and the company, through the upgrade of the existing App Ataf 2.0., will provide info on the rail timetable linked with the bus timetable. Also in this pilot area the new crowdsourcing functionalities to be implemented by upgrading the existing App Ataf 2.0. will be launched.

The Deliverable provides an insight of all the activities performed so far and a plan of future activities, highlighting also the main actors and stakeholders involved in the different steps of the pilot development. D4.3 is structured as follows:

- Chapter 2, 3 and 4 describe the site, the mobility demand and the PT services operated in the areas, highlighting which are the main problems to be tackled;
- Chapter 5 and 6 describe the different target users groups and needs of the Florence target areas and explain the main pilot actions to be demonstrated.
- Chapter 7, 8 and 9 provides detailed information about the pre-feasibility, design and implementation activities that have been carried out so far, highlighting the main actors involved, and indicating a time-plan of the future activities;

-
- Chapter 10 provides an analysis and assessment of the risks that have been and could be encountered during the development of the project and indicates also possible solutions to be taken.

2 Site description

Both Pilot areas are included in Metropolitan City of Florence, which covers 3 514 km² with around 1 million of inhabitants (of which about 37% corresponds to the city of Florence).

The first pilot area is the one covered by the two conventional PT lines no. 30 and 35 which connect the centre of Florence (i.e. the "Stazione Leopolda", 700 m from the central railway station of Santa Maria Novella) with the municipality of Campi Bisenzio (located about 10 kms northwest of Florence) along two different directions.

The Municipality of Campi Bisenzio counts a population of around 47.094 inhabitants with a density of 1.600 inhabitants/km² and is the second municipality in Florence metropolitan area with the highest number of foreign residents (20% of the total resident population ¹). The two PT lines cover an area between 40 and 80 Km² with more than 500 inhabitants/Km² as population density.



Figure 2.1 Map of Campi Bisenzio Municipality.

(Source: Google Maps)

Low-income families and migrants represent the main part of the population living in this area. The Piagge area for example, served by line 35, became topical at the beginning of the eighties, when the municipality of Florence (and in part the neighbouring ones) found themselves faced with a sudden housing emergency. The hasty subdivision gave rise to a neighbourhood divorced from the

¹ <https://www.tuttitalia.it/toscana/29-campi-bisenzio/statistiche/cittadini-stranieri-2018/>

historical neighbours, of dubious aesthetic taste (some condominiums are commonly called "the ships" because of their unusual shape), from the anomalous viability and without services of any kind. The new district soon jumped to the headlines of the city for some phenomena of crime and social emergency. The Municipality decided to face the so-called "Piagge emergency" only in the Nineties, also due to the push of the resident population. Since then, even if the problems deriving from a bad management of the district have not been all eliminated, the quality of the Piagge has improved considerably with the downsizing of crime, the construction of various social and welfare services, the birth of a large shopping centre, the construction of a railway station and the implementation of a local public transport service more and more fitting with respect to the needs that from time to time were emerging.

The population of this area mainly move for home-work travel or to go to social facilities located along the two lines routes. Although migrants represent the largest users of public transport services in this area, there has not been so far any specific attention to this user segment. The service therefore is structured as usual. One of the reason has been the lack of detailed statistics about the transported passengers, their habits and PT usage level; in this sense one of the preliminary activity of Florence pilot lab in Campi Bisenzio is in fact an analysis of the mobility requirements and users' needs, through specific surveys, dedicated co-design laboratories and involvement of the relevant stakeholders representing the foreign communities in the area (further details are provided in Chapter 7).

The second pilot area is located in San Piero a Sieve, in the centre of Mugello area, on the northern boundaries of the metropolitan conurbation. It is a residential area between 20 and 40 Km² with a density between 50 and 100 inhabitants/Km² and a total population of around 4.300 inhabitants.

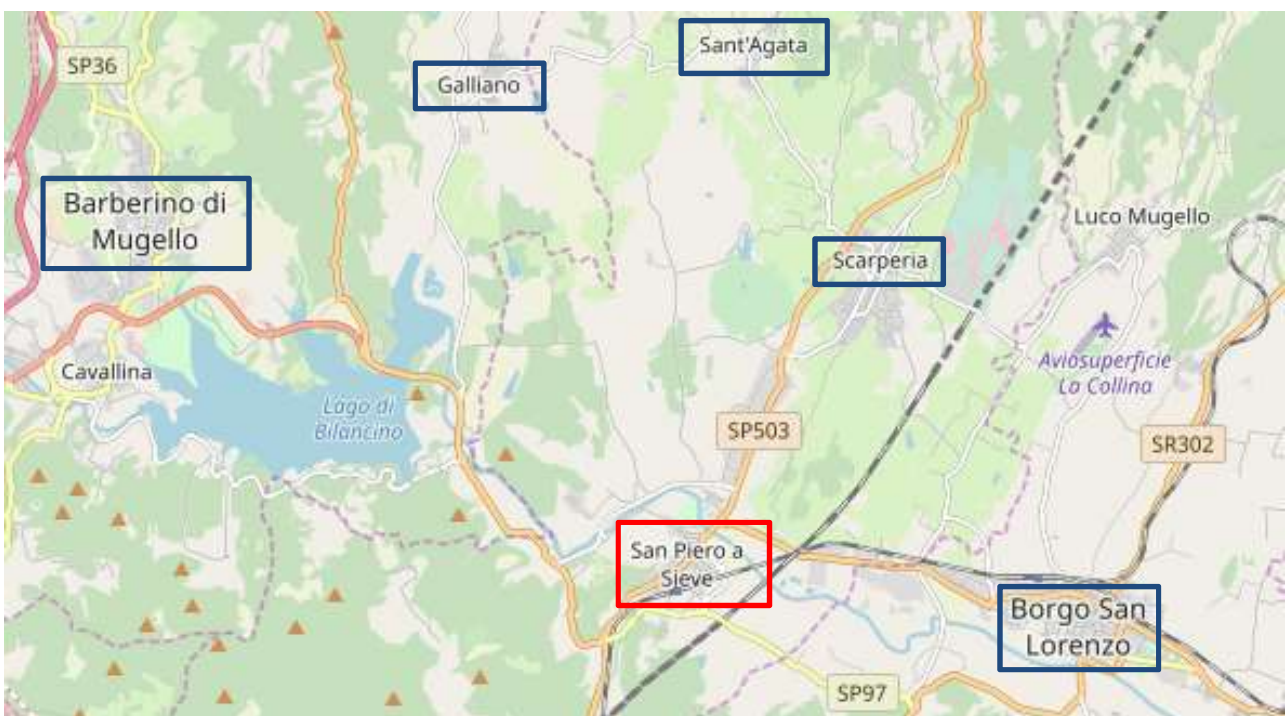


Figure 2.2 Mugello area.

(Source: OpenStreetMap)

The railway station of San Piero a Sieve plays a role of fundamental importance for the mobility of the whole Mugello area. In fact, San Piero a Sieve is located in a central position, not far from the other major places of this territory such as Borgo San Lorenzo, Scarperia, Sant'Agata, Galliano and Barberino as indicated in the above Figure 2.22.



Figure 2.3 San Piero a Sieve railway station

3 Mobility Demand (ATAF)

3.1 Florence Pilot Lab 1 - Lines n° 30-35

The analysis of the data available for the two lines n.30 and n. 35 have highlighted that the direction of the forward journey is usually from the central railway station to the north of Florence in one direction and from the North of Florence to the railway station in the other direction. Probably some migrants go to reception centers during the day, especially at lunch time.

So, there are no prevalent directions in one way or in the other but few relevant points of attraction along the lines.

Since the main reason for travelling is going to work, the peak hours are those corresponding to the entry and exit from work, and they are probably more concentrated from Monday to Friday and fewer in the weekend.

In figure 3.1, the number of get on/ get off passengers on the main bus stops of lines 30 and 35 are presented (the total number of get on passengers is different from the get off due that the diagram does not report all the bus stops).

(Data sources: Ataf survey about *get on get off*, 2018)

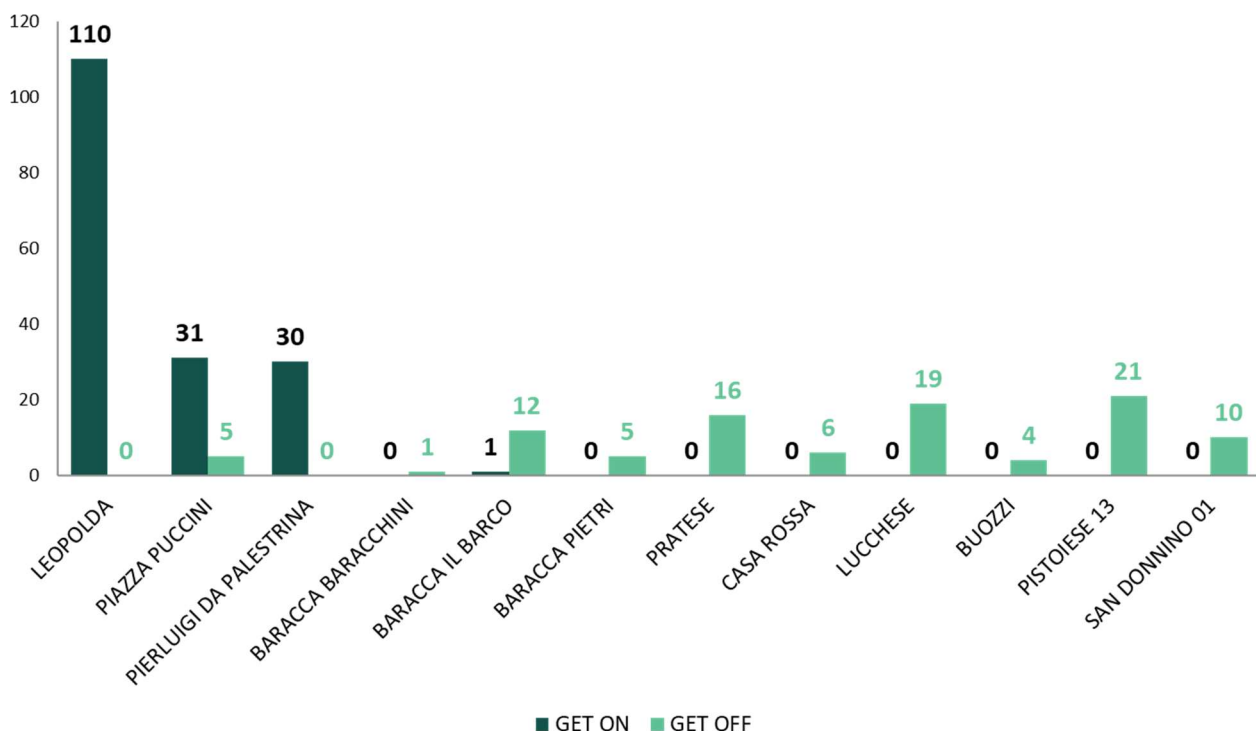


Figure 3.1 Total number of get on/get off passengers on lines 30 and 35 in a typical weekday towards Campi Bisenzio / Indicatore

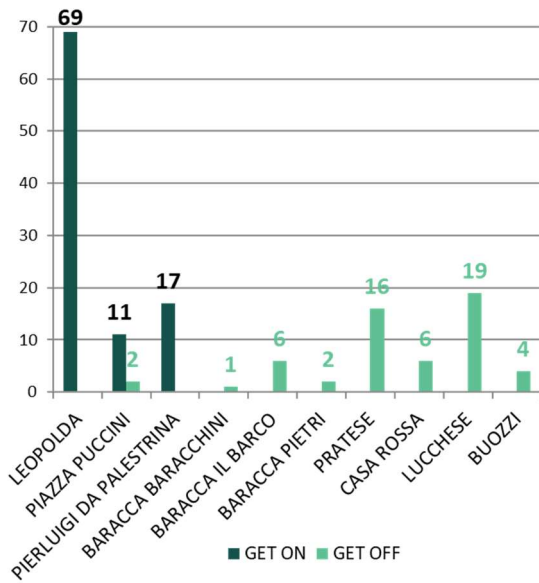


Figure 3.2 Get on/get off passengers on line 30 in a typical weekday towards Campi Bisenzio/Indicatore

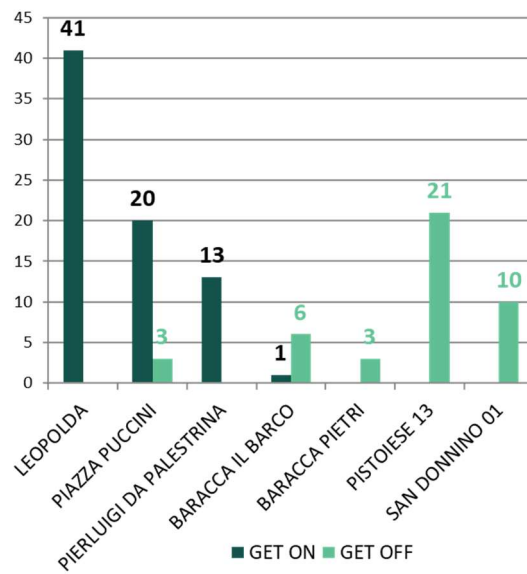


Figure 3.3 Get on/get off passengers on line 35 in a typical weekday towards Campi Bisenzio/Indicatore

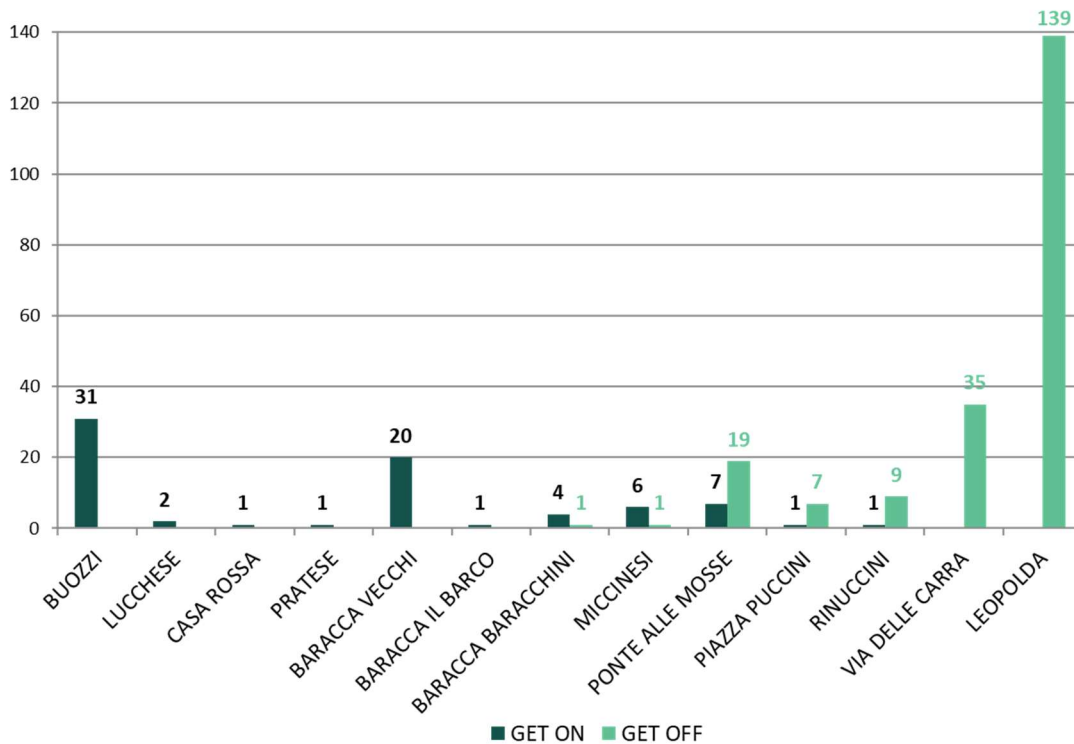


Figure 3.4 Total number of get on/get off passengers on lines 30 and 35 in a typical weekday towards Leopolda Station

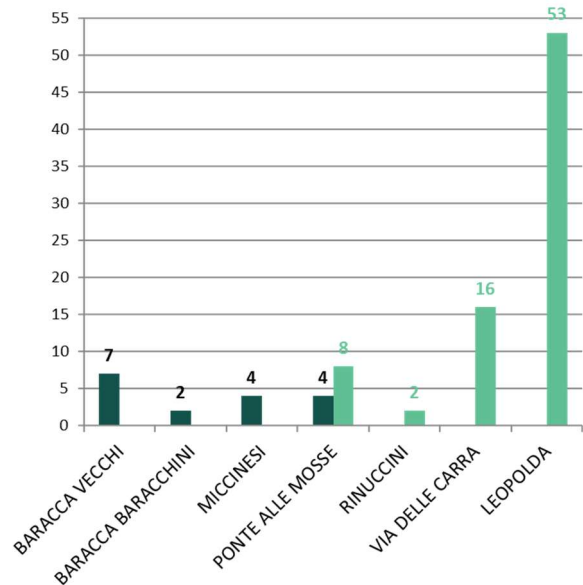
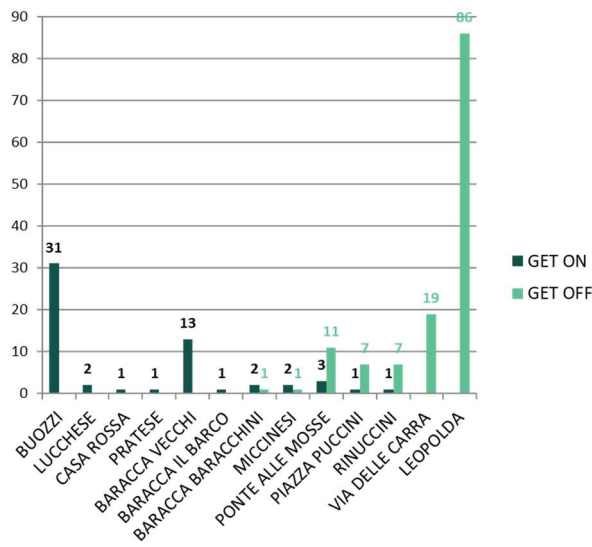


Figure 3.5 Get on/get off passengers on line 30 in a typical weekday towards Leopolda Station

Figure 3.6 Get on/get off passengers on line 35 in a typical weekday towards Leopolda Station

3.2 Florence Pilot Lab 2 - S. Piero a Sieve

The mobility demand in the rural area of S. Piero a Sieve is mainly characterised by students and workers, thus the major journeys are home – school and home-work. It’s possible to see different trend in the morning and in the afternoon.

In the morning most of the users coming from S. Piero are headed to Florence and to Borgo S. Lorenzo, as shown in Figure 3.7. In particular the mobility demand to Borgo S. Lorenzo is especially due to students going to schools. In fact, in S. Piero there aren’t high schools, while in the near municipality of Borgo S. Lorenzo there are the two most important high schools of the area. In comparison there are few users who come from Florence or Borgo to S. Piero. Some users come from S. Agata and Galliano probably to reach S. Piero station or to get buses to Florence or Borgo S. Lorenzo.

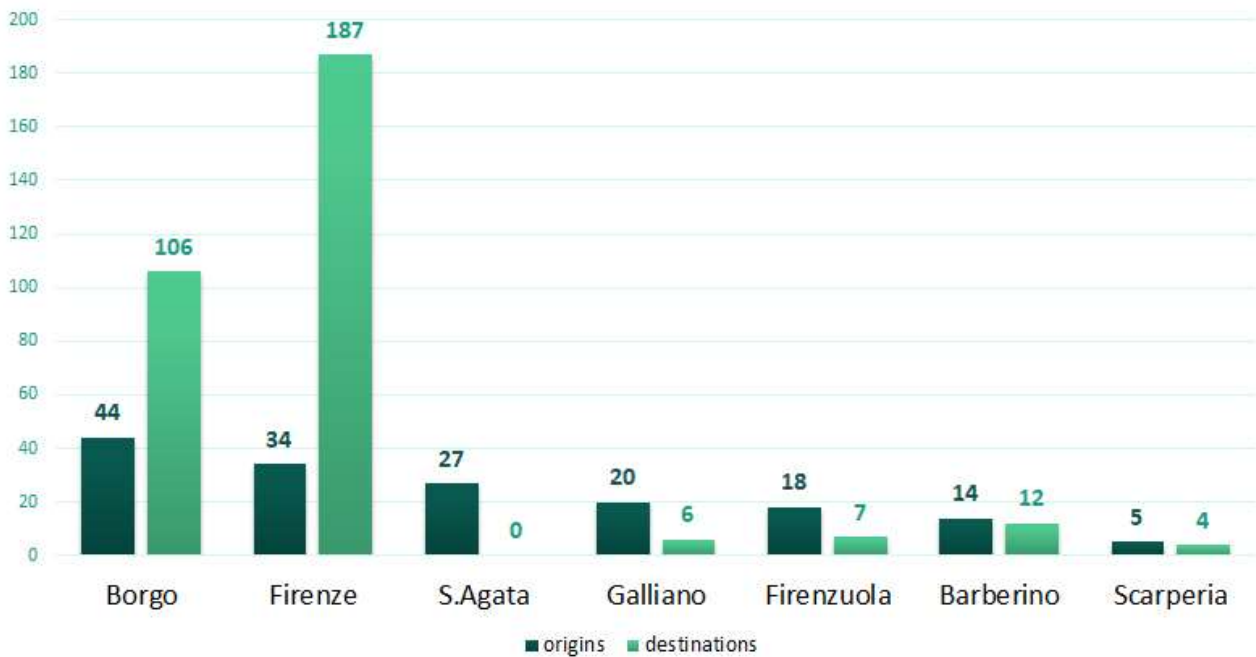


Figure 3.7 Get on/Get off in San Piero a Sieve during the morning until 12 pm

In the afternoon the trend is opposite with most of the users coming from Florence and Borgo and less users going to these destinations. It is likely that these users coming from Borgo and Florence are those who came in the morning.

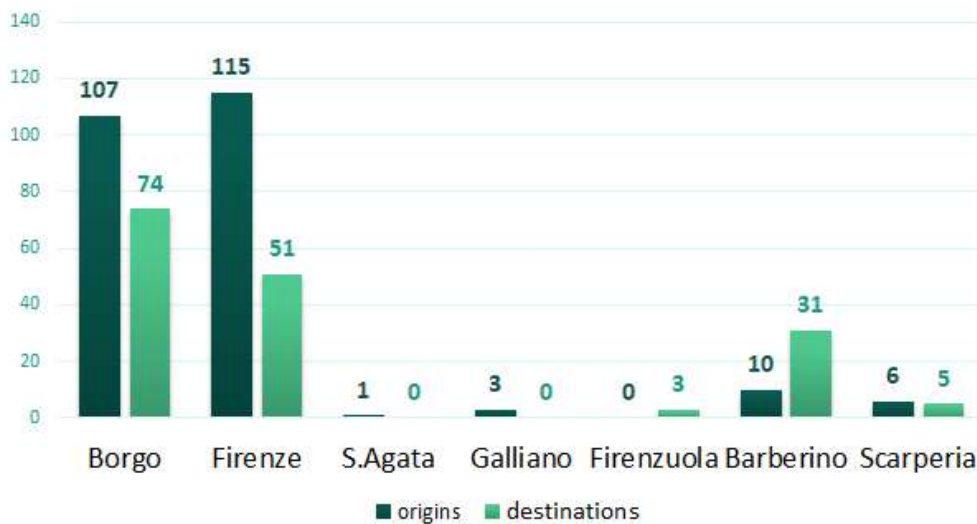


Figure 3.8 Get on/Get off in San Piero a Sieve during the afternoon (12 pm – 17 pm)

Finally, in the late afternoon and in the evening the same trend continues with principal origin from Florence, Borgo S.L. and Firenzuola. The main destination are to S.Agata and Firenzuola, to indicate a return trip from work.

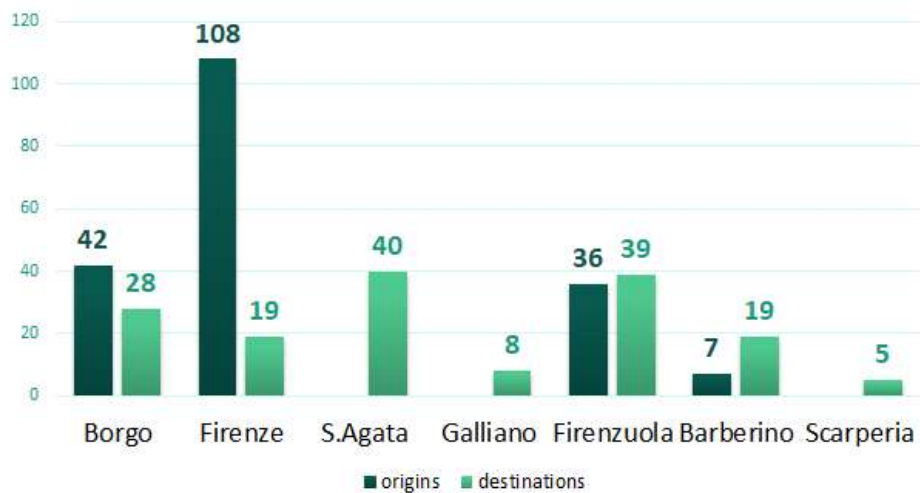


Figure 3.9 Get on/off in San Piero a Sieve during the late afternoon and evening (17 pm – 23 pm)

In summary, the mobility demand reflects the general trend of home-school and home-work journeys. In fact the main direction of trips is “from inside out” in the morning with a direction from S. Piero to Florence and to Borgo S.L. rather in the afternoon the trend is opposite “from out to inside” and it indicates a return from the main municipality to S. Piero. In the evening it can also be noticed a big demand to S. Agata and Firenzuola (small municipality in the North of S. Piero a Sieve area) which indicates a return from work to home.

The trips are more concentrated from Monday to Friday and fewer in the weekend. The average time of trip is about 40-60 minutes for the most of users (61%) about 15-30 minutes (12%), 30-40 minutes (13%) more than 60 minutes (13%).

4 Mobility Service Operated in the Site and Stakeholders Involved

First of all, the mobility offer in the Florence Metropolitan Area is described as a whole. Secondly, a specific focus is dedicated to the two target areas of INCLUSION: the Municipality of Campi Bisenzio and the rural area of San Piero a Sieve.

4.1 Florence Metropolitan Area

The transport system of Florence is composed by **tram, bus and train network** with 10 railway stations. The urban transport network offer is typical urban service with high/medium frequency lines. Around the city centre, a network of suburban and peripheral connections operates in the suburbs and rural surrounding areas. Conventional services are provided by ATAF and Busitalia within the contract subsidized by Regional Government (for the metropolitan area) and the Metropolitan Authority (for the "weak" peripheral services).

The **conventional public transport** is composed of:

- Bus network: operated by Busitalia through its controlled company Ataf Gestioni in urban district. Ataf manages the Local Public Transport with a fleet of 360 buses, 41 lines and 15.5 million bus km per year. The service structure is typically urban service with high, medium frequency lines. ITS systems in operation are AVM – Automated Vehicle Monitoring, an e-ticketing system (through SMS, smart card, chip-on-paper) and info-user system (ATAF2.0 APP, on-road info-panels)

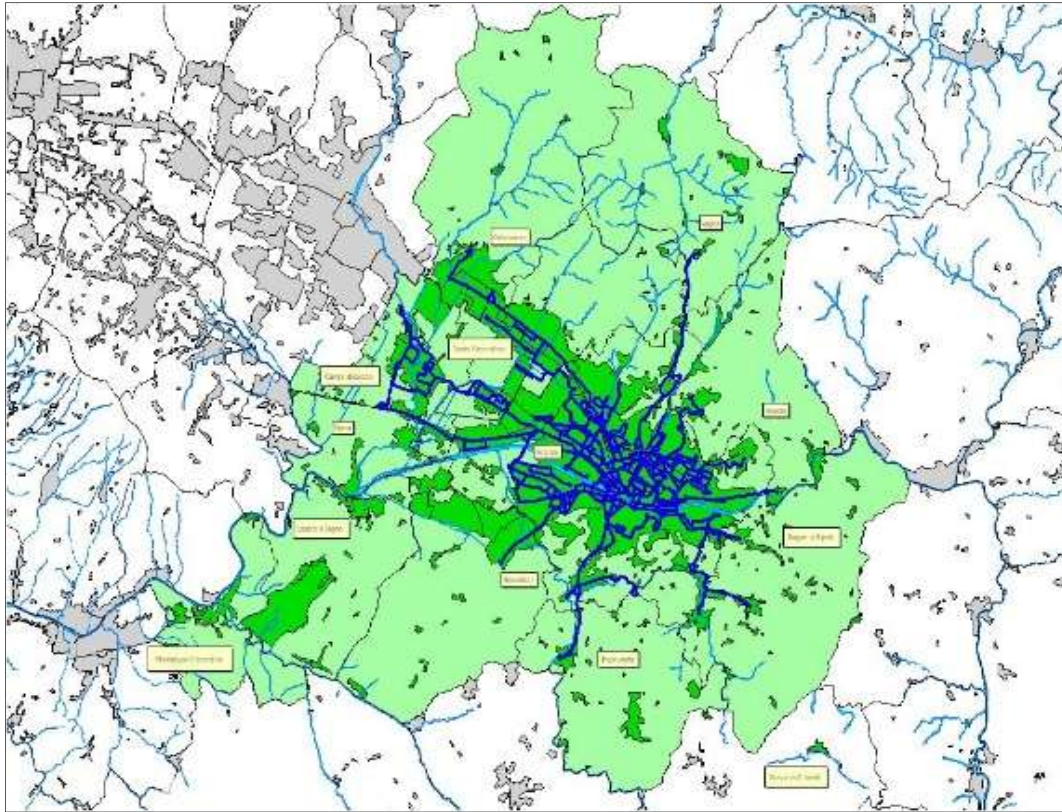


Figure 4.1 Urban network in Florence.

(Source: Ataf)

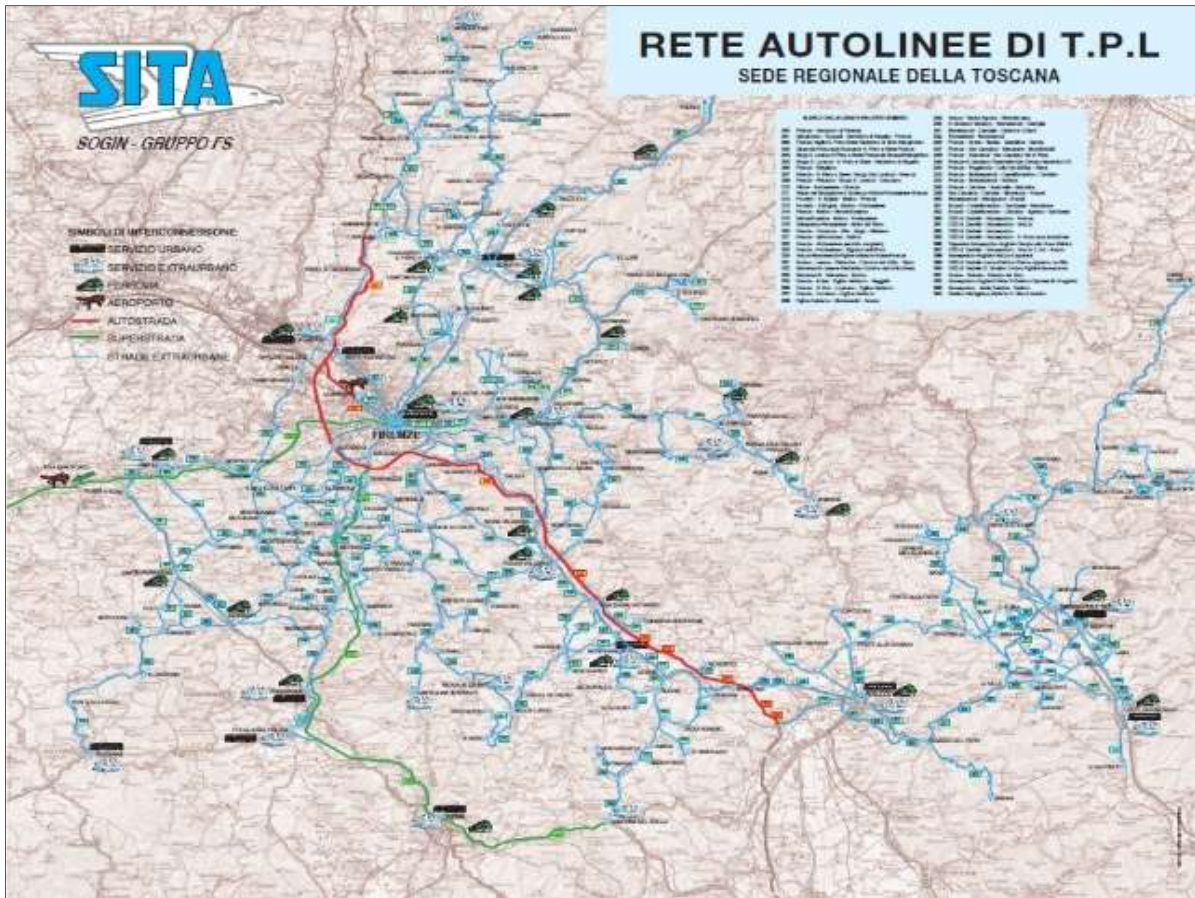


Figure 4.2 Suburban and rural network in the Florence Shire.

(Source: Busitalia)

- Tram network: the tramway service, managed and operated by GEST (RATP Group) of the Florence Metropolitan Area is composed of 2 lines:
 - o T1.3: connection between Scandicci (a municipality in southwest of Florence), the Florence Station and the Careggi Hospital
 - o T2: connection between The Florence station and the Airport. The T2 line has been opened in February 2019.

The frequency of each line is about every 4 minutes in the peak hours and every 10 minutes in the soft area.

The ATAF & Li-nea travel tickets allow passengers to travel on all the Ataf & li-nea bus services and on the Tram services interchangeably within the limits of their time duration.

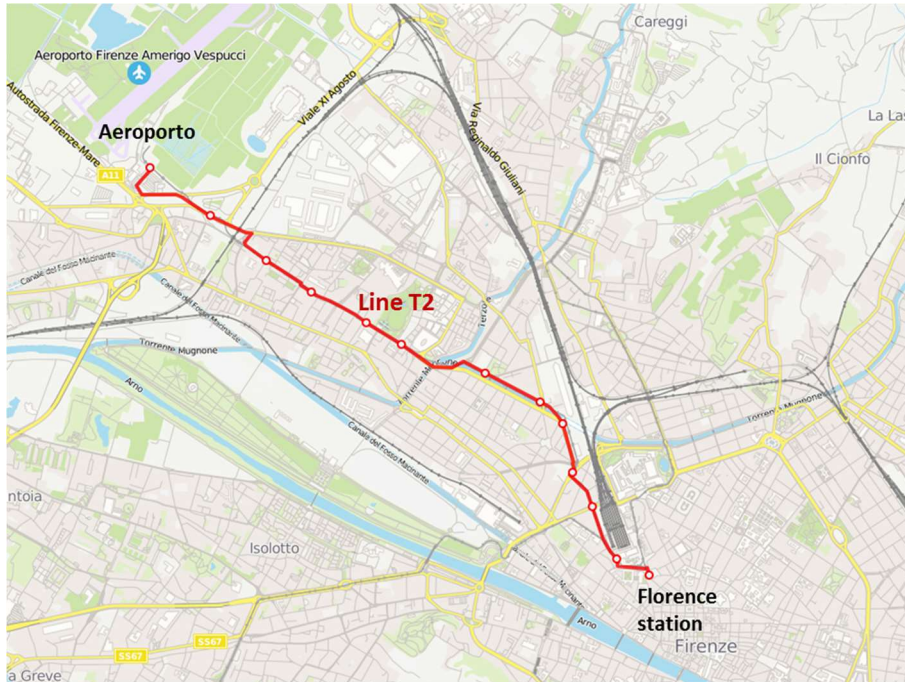


Figure 4.3 Tram line T2 connecting Florence Railway Station to the Airport
(map source: OpenStreetMap)



Figure 4.4 – Tram line T1.3 connecting Scandicci to Florence Railway station and Careggi Hospital
(map source: OpenStreetMap)

Flexible and special services are contracted by the Municipality of Florence to ATAF:

- DRTs: Nottetempo is a DRT service active during the night from 10.00 to 3.00. The reservation is made by calling a phone number. The service is operated by Ataf Gestioni, with seven buses that operated on the south and east part of metropolitan area
- Special services for students, operated by ATAF with 4 buses for a minimum of 50 passengers. The cost of the trip corresponds to the fare of a single ticket for each passenger.
- Taxis are operated by 2 company So.co.ta and Co.ta.fi which cover all the Florence metropolitan area. Recently 70 licences were granted for fully electric vehicles.



Car sharing and Bike Sharing are operated by the Municipality of Florence:

Car sharing: there are 3 operators: Car2go with a fleet of 250 vehicles, Enjoy with 73 vehicles and the most recent Share n' go, with an electric fleet of around 120 vehicles



- Bike sharing: 1 bike sharing operator, Mobike, with 4.000 bikes.

4.2 Municipality of Campi Bisenzio

In the Municipality of Campi Bisenzio, located in the North of Florence, the service offer is characterised by conventional bus lines operated by Ataf. In particular the area covered by the bus network is represented in the figure below. Lines 30 and 35 have been highlighted in blue colour.

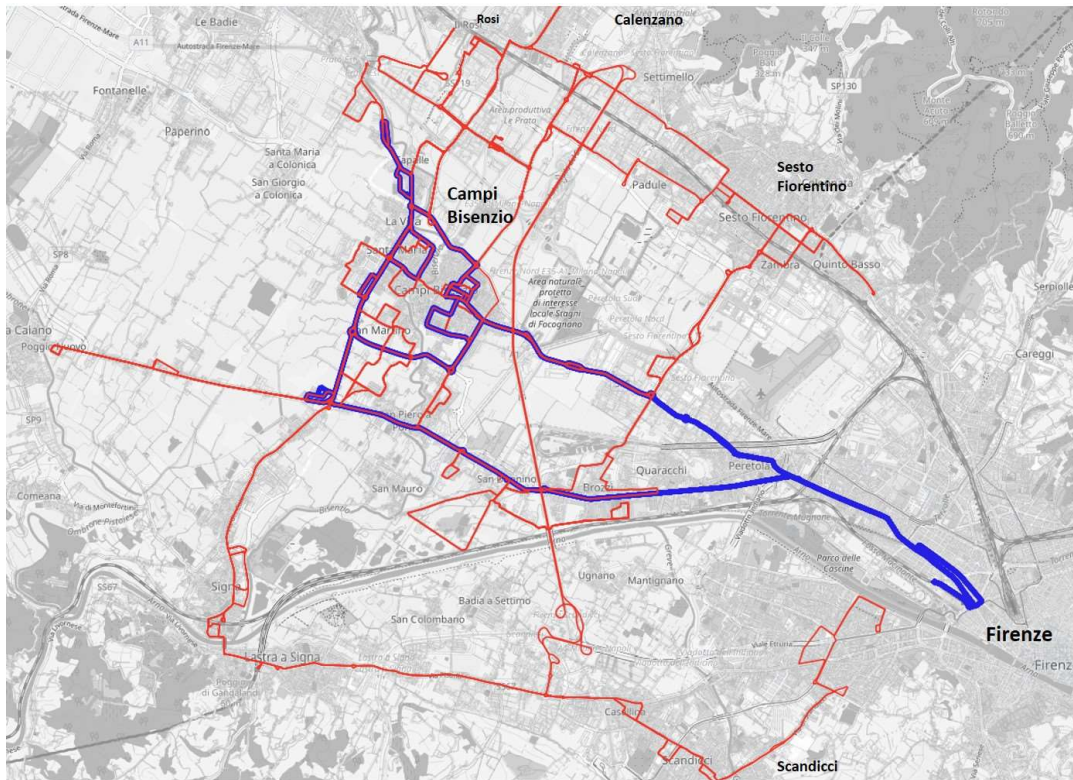


Figure 4.5 Bus network in Campi Bisenzio at December 2018

(data source: DB Ataf; map source: OpenStreetMap)

In particular, the bus network is represented by the following lines:

Line 75: connects Campi Bisenzio with near neighbouring areas Rosi and Sant’Angelo a Lecore

Line 86S: a school line which connects Campi Bisenzio with Sesto Fiorentino in the North-East of Florence

Line 303: connects Piagge area (near Campi Bisenzio) with Calenzano in the North-East of Florence

Lines 90,91,92: served an area around Campi Bisenzio and Sesto Fiorentino

Lines 93,94: connect the area of Campi Bisenzio to Scandicci in the south of Florence

Lines 30-35: the two lines reaching Florence city center, target of the pilot lab.

Figures 4.6 and 4.7 present respectively the lines 30 and 35 as they stood at December 2018. The route of the line 30 has been modified in order to improve the connectivity with the tramway T2 (see section 7 below).

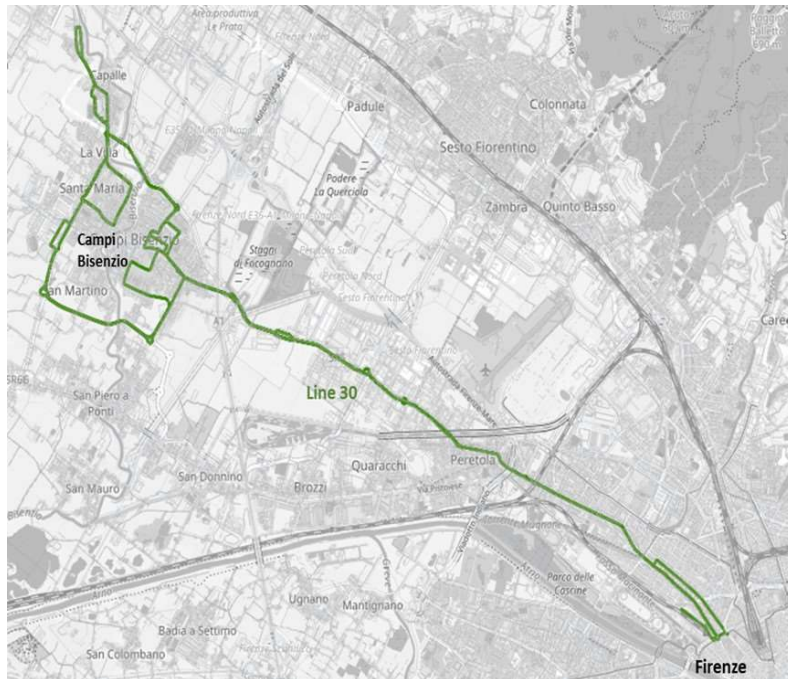


Figure 4.6 Bus line n° 30 – Original Route
 (data source: DB Ataf; map source: OpenStreetMap)

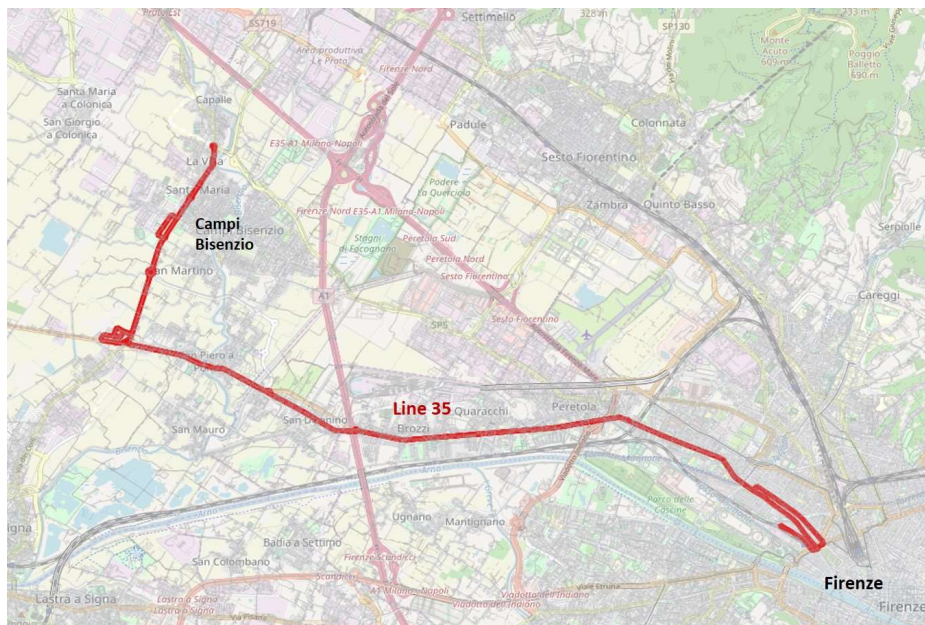


Figure 4.7 - Line n° 35
 (data source: DB Ataf; map source: OpenStreetMap)

4.3 Municipality of San Piero a Sieve

The municipality of San Piero a Sieve plays a fundamental role for the mobility of the whole Mugello's area, because of its central position, not far from the other major places of this territory such as Borgo San Lorenzo, Scarperia, Sant'Agata, Galliano and Barberino. It is therefore appropriate to be able to provide a good number of services from all the directions that can be used both for road and rail services.

- **Train:** Operated by the Italian State Railway; the railway line in transit from San Piero a Sieve has a frequency of about 3 trains per hour that allow the connection with both Borgo and Florence so reaching the area of the station means ensuring the transport intermodality to reach the main destinations (especially Florence).

Conventional Public Transport: operated by Busitalia with 6 lines (302A, 303B, 304B, 305A, 307A, 319A) which connect S.Piero to the main destinations, with 191 trips per day. In particular of these: 85 connection to Firenze, 114 connection to Borgo S.L., 62 to Barberino M.Ilo, 72 to Scarperia, 42 to S.Agata and 47 to Galliano.

line	line description	travel/day
302A	Firenze - Vaglia - S.Piero a Sieve - Scarperia - Barberino M.Ilo	56
303B	- S. Piero a Sieve - Scarperia - Firenzuola -	21
304B	Borgo S.L. - S.Piero a Sieve - Firenzuola -	6
305A	Galliano - Barberino di Mugello - S.Piero a Sieve - Borgo S.L. - Vicchio	193
307A	Firenze - S.Piero a Sieve - Borgo S.L. - Dicomano	121
319A	Firenze – Polcanto - S.Piero a Sieve - Borgo S.L. - Luco - Grezzano	2
Total		399

Table 1 – PT Lines passing through S. Piero a Sieve

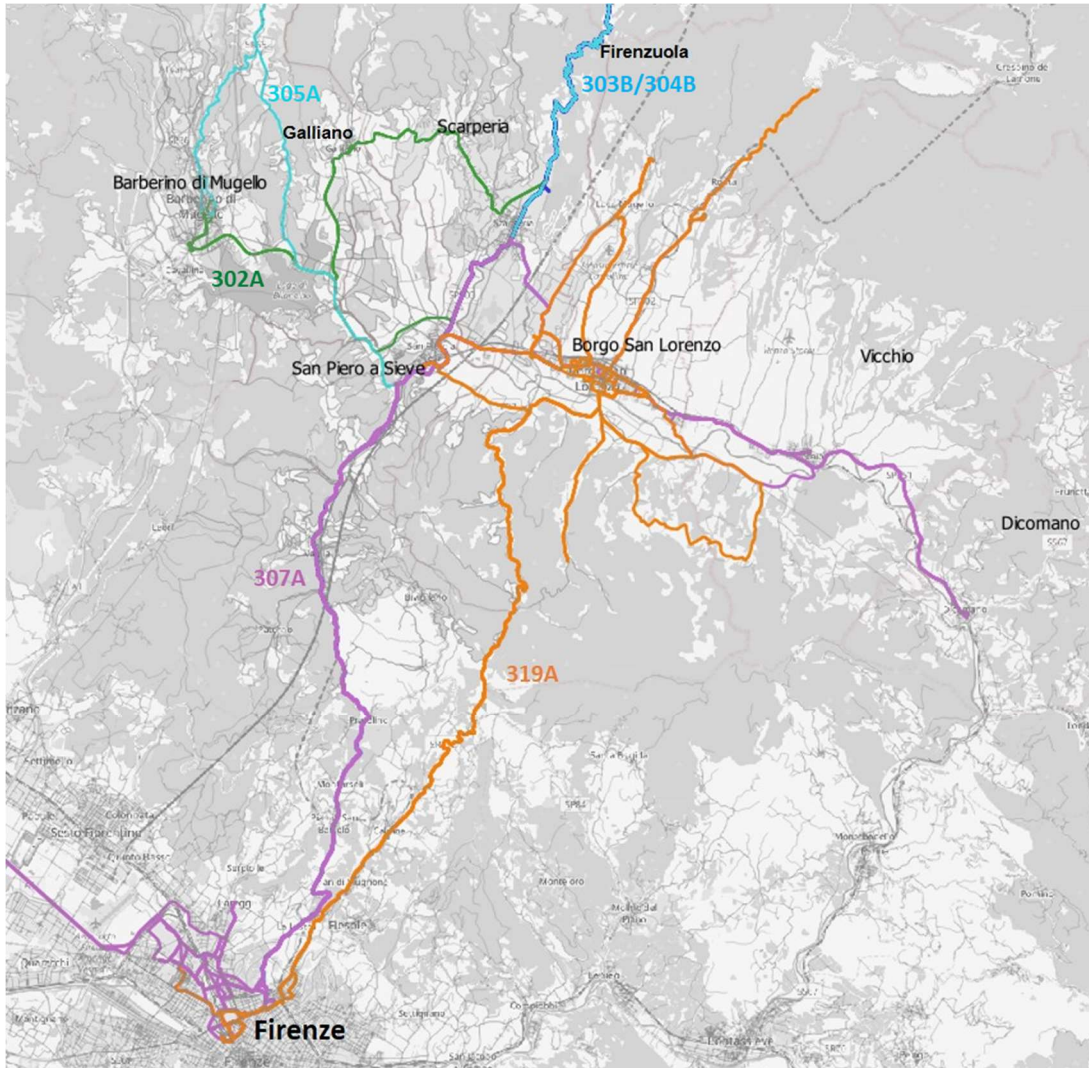


Figure 4.8 – Lines related to S. Piero a Sieve

(data source: DB Busitalia; map source: OpenStreetMap)

The service structure is the typical Suburban service with frequency concentrated on the peak hours in order to guarantee the home-to-work and home-to-school journeys. The service operates under service contract with the Tuscany Region Administration, in which is defined the operation of the service, and the revenue (euro/km) from kilometers done. Moreover the service obtains revenue also from the ticket sale.

5 Target group (ATAF)

5.1 Target groups for Lines 30 -35

The analysis of the data collected during the first survey on the lines n° 30 and n° 35 underlined that most users were young adults and working age people, rather than youngsters or elderly. It is therefore reasonable to think that most of the users are travelling for reaching their workplace and this is confirmed by the fact that most of the trips are concentrated during hours corresponding to the entry time and exit time from work. These trips would be probably more concentrated from Monday to Friday and less in the weekend. The mobility demand of students is concentrated towards the centre of Florence, where primary and secondary schools are located.

It could also be worth mentioning that a slightly higher percentage of women rather than men used these bus lines.

The results of the survey on bus lines n° 30 and n° 35 are presented in figures 5.1 and 5.2 below. In addition, the survey highlighted an high presence of migrants and low income people.

- Gender (male/female) and Age

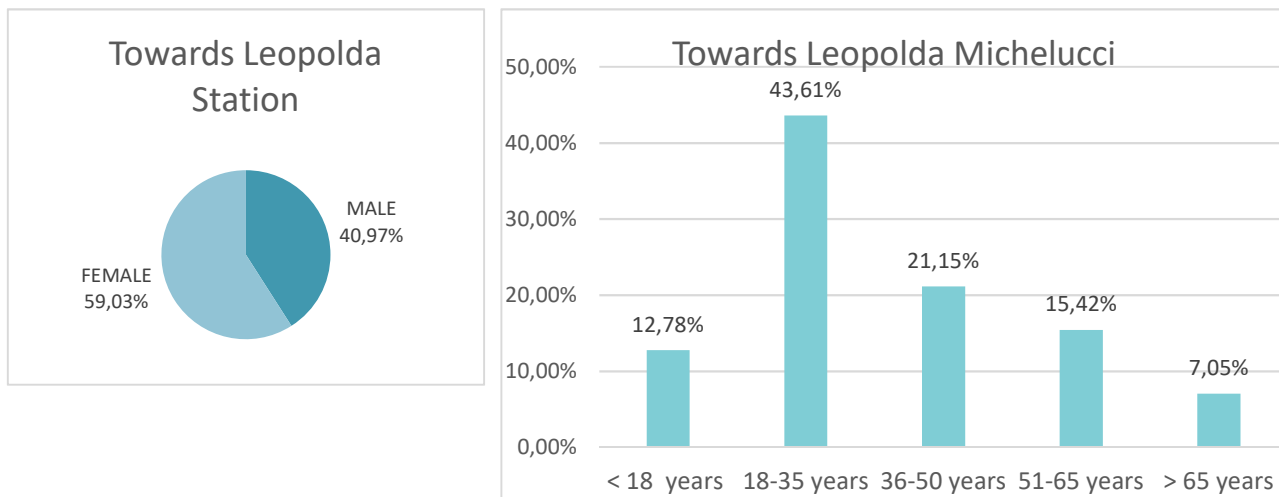


Figure 5.1 - 1st survey Gender and age analysis of both lines users towards Florence city centre

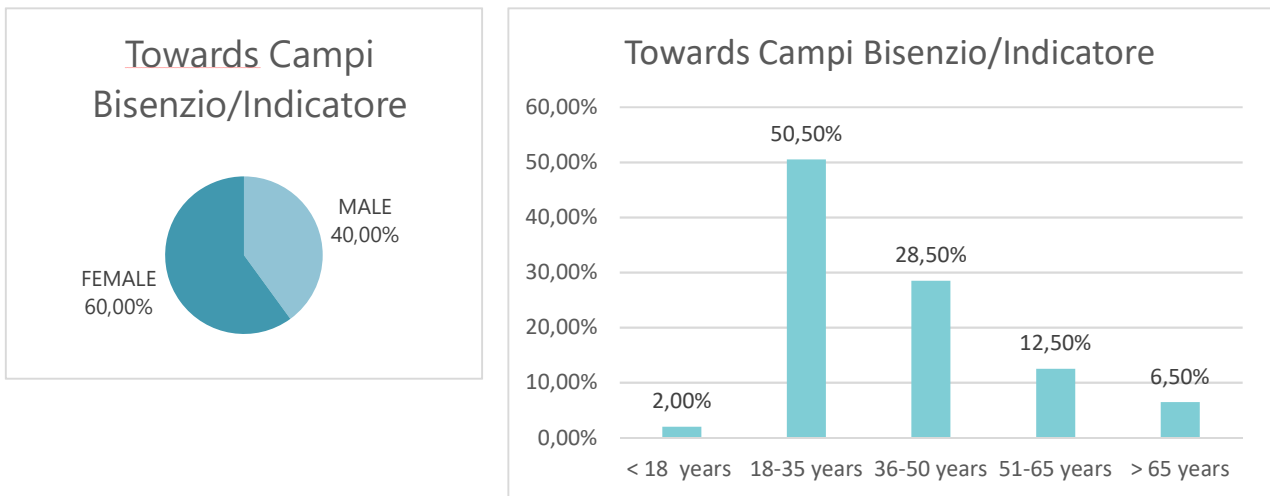


Figure 5.2 - 1st survey Gender and age analysis of both lines users towards Campi Bisenzio

- Nationality

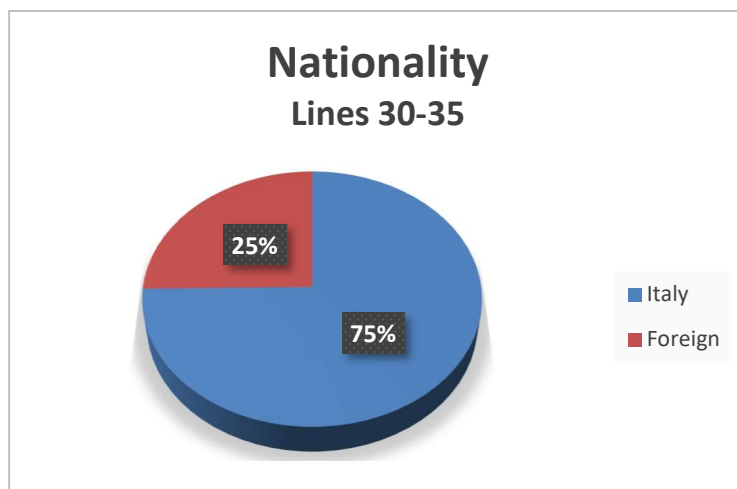


Figure 5.3 – 1st Survey - analysis on lines 30 and 35 users' nationality

Considering the total number of users of both lines n°30 and n°35, 75% are Italians while 25% come from other countries.

Many foreign nationalities are represented in this 25%, though most of them have a very low percentage of users as indicated in the following diagram:

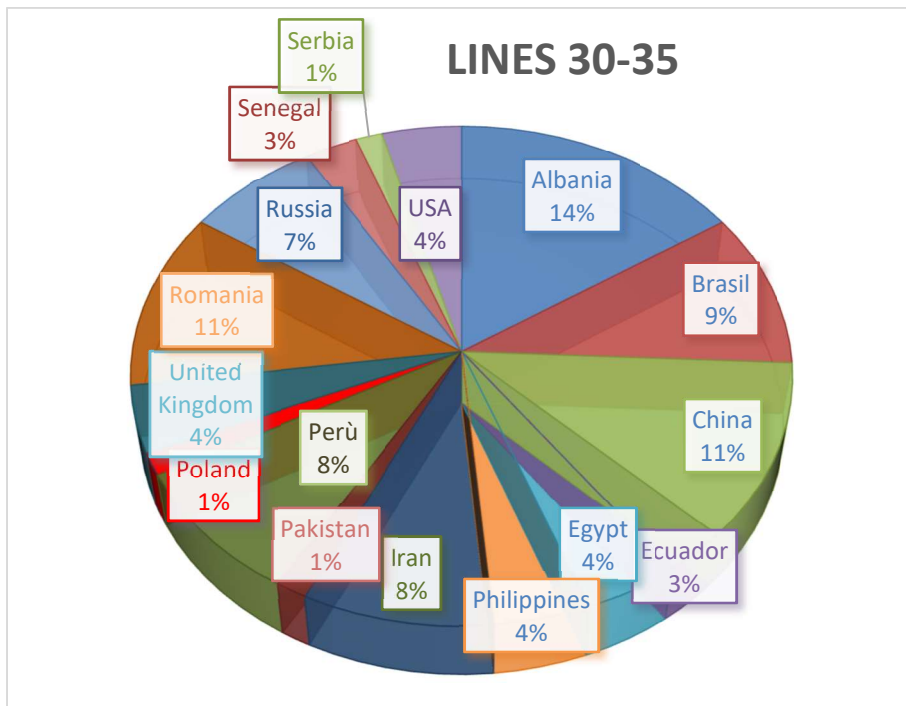


Figure 5.4 Foreign Nationalities in lines n° 30 and n° 35

The most represented foreign countries are Albania (14%), Romania and China (11%), Brazil (9%) and Peru (8%).

Analyzing each single line, it is worth mentioning that most of the foreigners use line n° 35 as shown in the figure below, where the percentage is equally divided (50-50). Line n° 30 is instead mainly used by Italians with only a very low percentage (9%) of foreign users.

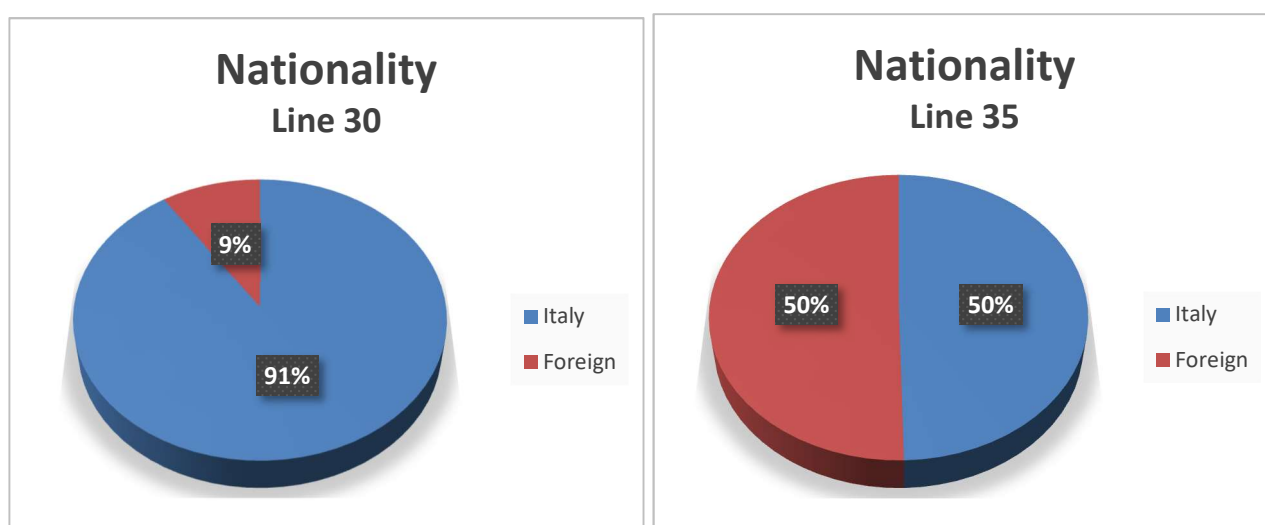


Figure 5.5 – Nationality for each line

This 9% on line 30, is mainly represented by Romania, Iran and China (21%), followed by Egypt (16%)

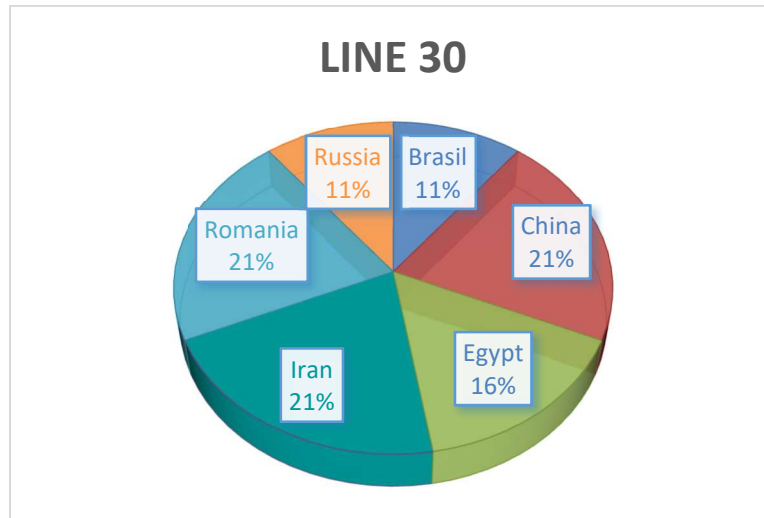


Figure 5.6 Foreign nationalities in line n° 30

Instead on line 35 the 50% of foreign users mainly come from Albania (19%), Peru (11%) and Brazil (9%), as shown in Figure 5-7.

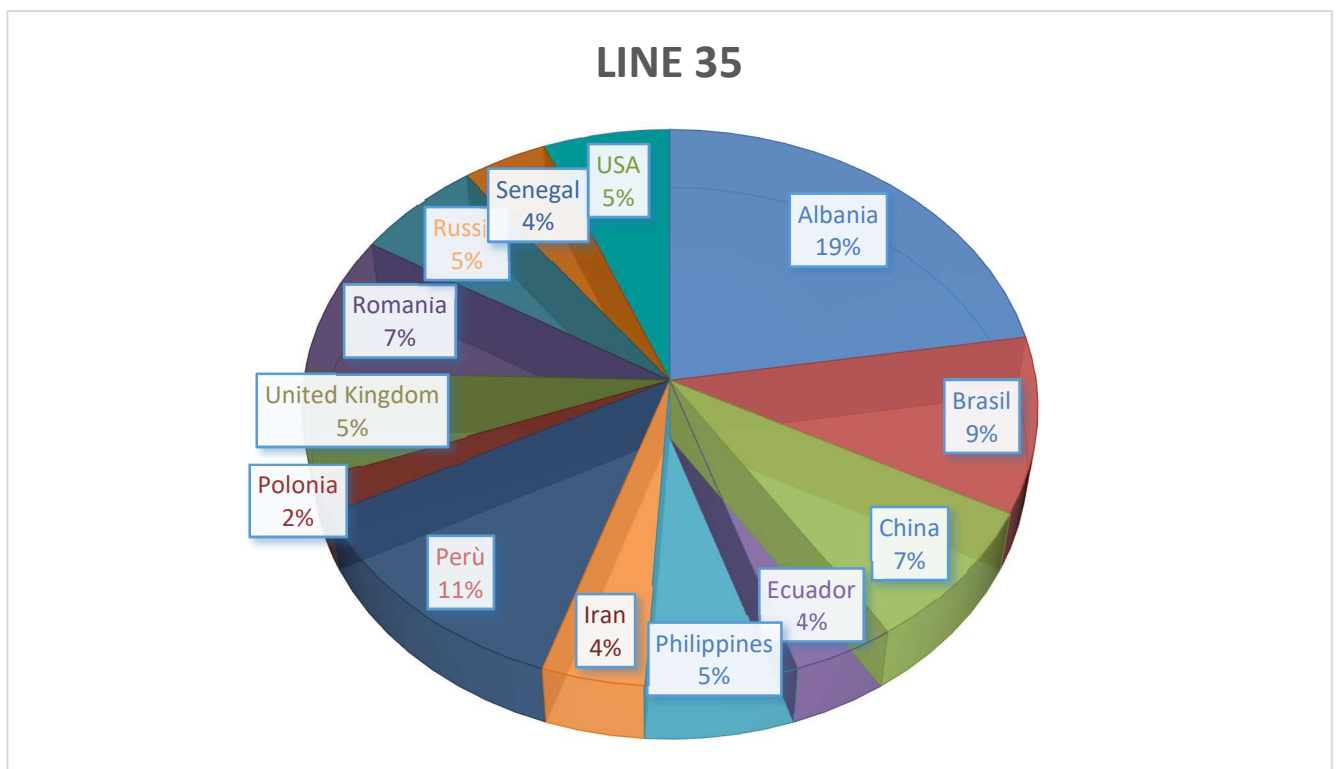


Figure 5.7 Foreign Nationalities in line n° 35

5.2 Target groups for San Piero a Sieve

The main target group in the Municipality of San Piero a Sieve is represented by rural commuters living in the municipal area and in its boundaries.

Target user characteristics

- Nationality

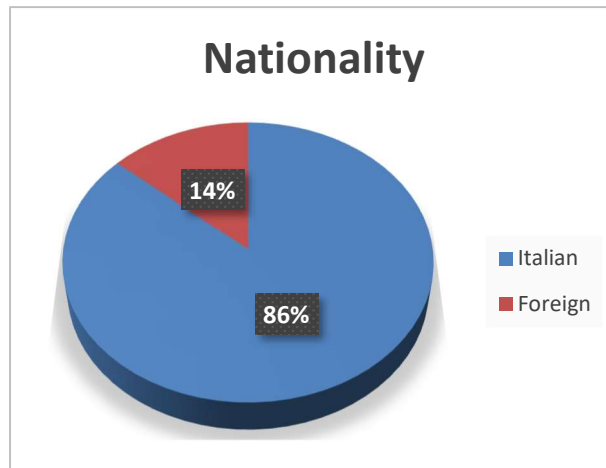


Figure 5.8 – Survey on users nationality in San Piero

Most of the target users in San Piero are Italians (86%) while only 14% come from other countries, mainly from Senegal and Romania as shown in Figure 5-9.

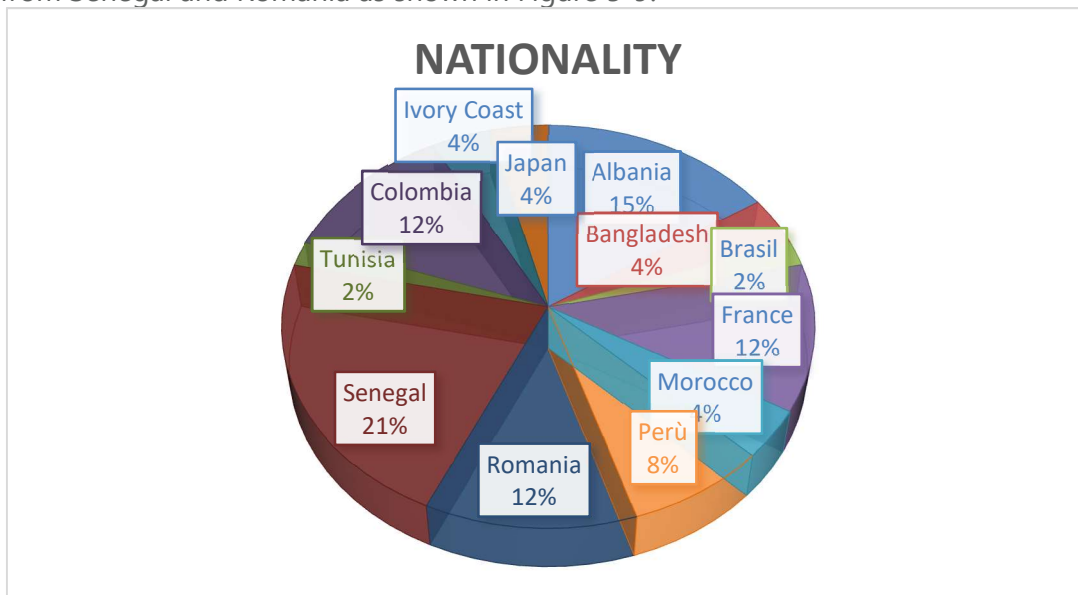


Figure 5.9 – Survey on users nationality (by country) in San Piero

- Gender (male/female) and Age

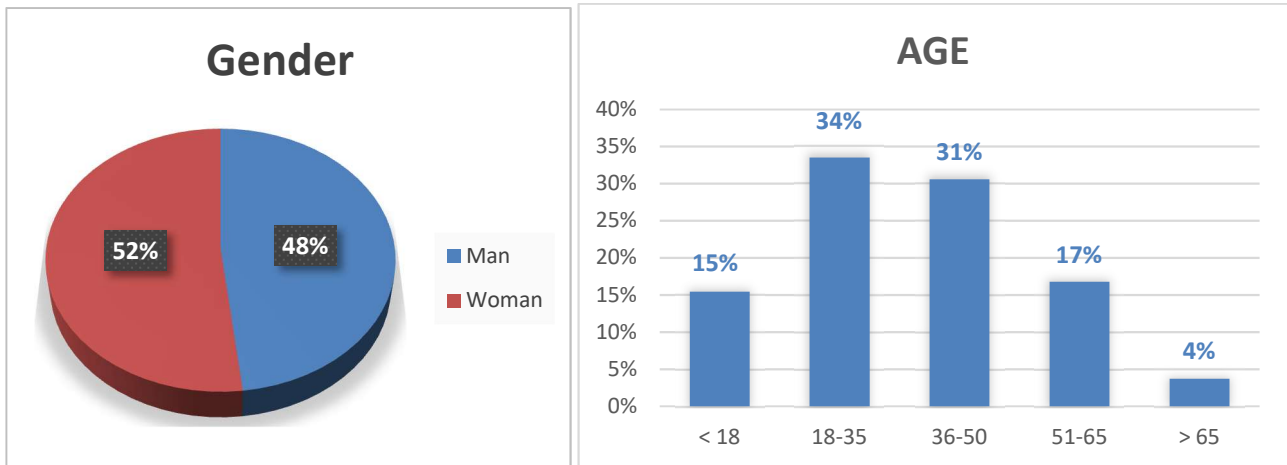


Figure 5.10 – Surveys on users' gender and age in San Piero

A very important characteristic of the target group in San Piero is represented by their age. In fact, Most of them are adult people from 36 – 45 years old (22%), followed by young adults from 19 – 25 years old (19%) and 46-55 years old (17%). From these data it is reasonable to think that the highest percentage of trips from San Piero are due to working reasons.

As for the gender instead, there is only a slight prevalence of women (52%).

- Trip motivation of target group

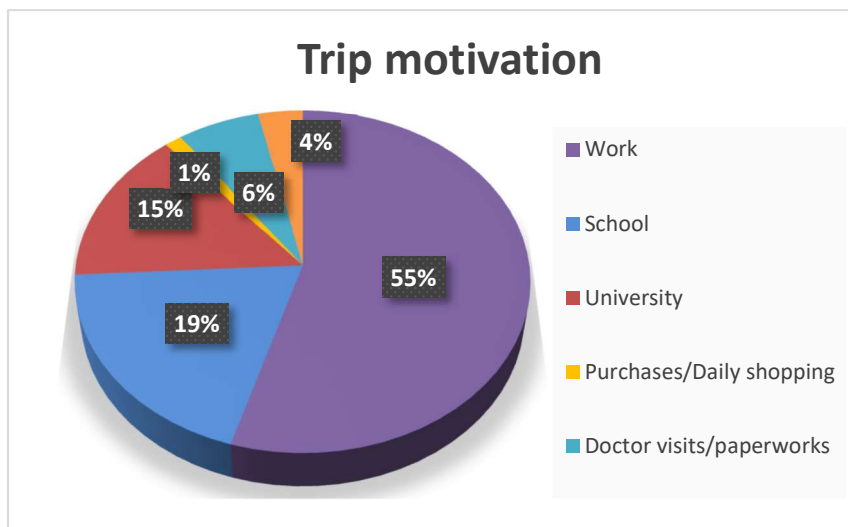


Figure 5.11 – Surveys on trip purposes (San Piero)

Figure 5-11 confirms that the highest percentage of trip motivation is for going to work (55%), followed by a 19% of the target group who move for going to school and a 15% to University. In fact students and employees are the main users of the service in San Piero rural area.

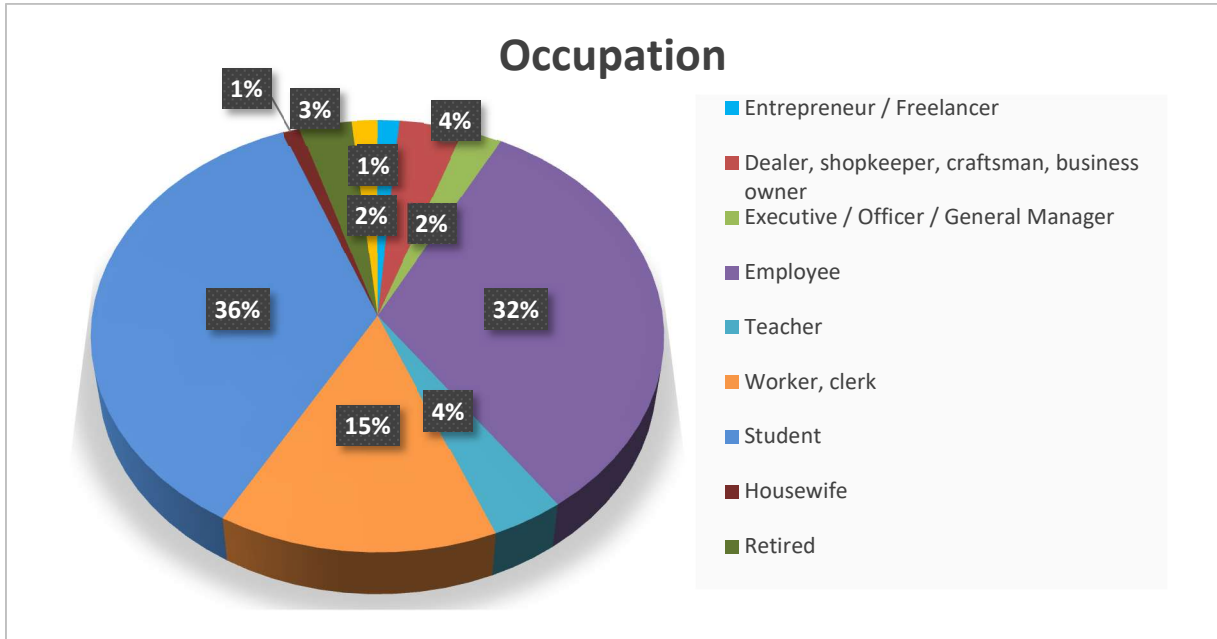


Figure 5.12 – Survey on users' occupation (San Piero)

6 Identification of the Pilot Lab actions

The Florence Pilot Lab actions consist of two strands of activities. The first pilot action is focused on the urban PT lines no. 30 and 35 and aims to 1) improve the accessibility and connectivity to the new tramway T2 (opened in February 2019) and 2) to enhance the inclusion and integration of the vulnerable end-users (i.e. migrants and low income) for identifying the main issues related to the public transport, proposing solutions for tackle them and increasing the accessibility and use of the service operated with these two lines. The second Pilot Lab action targeted to the rural area of San Piero a Sieve, aims to encourage the rural commuters (students and workers) to use more the bus and rail transport services.

6.1 Conventional PT lines 30 and 35

In order to improve the accessibility of the tramway T2, Ataf (the company which operates the public transport services by bus in the Florence Metropolitan Area), in close cooperation with Busitalia, Municipality of Campi Bisenzio and the Florence Metropolitan City Authority, has reorganised the route of the line 30. In particular, the reorganisation consisted in foreseeing new path with two new stops ("Santoni T2 Guidoni" and "Geminiani Poste") close to the tramway stop and, consequently, in the development of new timetables. The main steps related to this activity have been 1) the identification of the 2 new routes (from Leopolda Station to Campi Bisenzio and in the opposite direction) of the line 30; 2) the design, development and installation of two new bus stops and 3) the design and development of new timetables of line 30.

As regards the inclusion and integration of the vulnerable end-users, Busitalia is currently developing a collaborative and participatory co-design path to identify and solve together with the end users some critical issues of access and use of public transport concerning the bus lines 30 and 35. This will be done through the involvement of local voluntary and user's associations and cooperatives. More in depth, this pilot action consists of the following:

- Deep investigation on users' needs and mobility requirements, through:
 - o Interviews and surveys to understand the mobility demand of the area;
 - o Involvement of local stakeholders and activation of a participatory process to understand the main barriers migrants and lower income residents have in accessing the PT service.
- Improvement of the users information, through
 - o Upgrading of the ATAF App 2.0 with new functionalities for collecting users' evaluation and feedback on the service operated in the two mentioned lines;
 - o Installation of on board panels (on the buses) providing relevant information in different languages on PT services and on correct behaviour while using the service.

6.2 Rural area of San Piero a Sieve

The second pilot action is focused on the rural area of San Piero a Sieve and aims to encourage rural commuters (students and workers) to use more the bus and rail service.

In late 2017, Busitalia has made a reorganization of the entire transport services operating close to S. Piero a Sieve train station foreseeing the transit on alternative viability which was the one on the other side of the railway. This reorganisation has been carried out in parallel with the requalification, by the S. Piero Municipality, of the train station area that was in a state of urbanistic and socio-economic deterioration. More details can be found in section 7.2.

Busitalia is now assessing the impacts and results of the above-mentioned reorganisation and, in parallel, is developing a set of measures for improving the user information. In particular, in order to encourage the commuters who live in the Municipality of San Piero a Sieve and in its boundaries to reduce the use of the private car for going to school or job offices, Busitalia has planned to:

- install user information panels in order to improve the quality of the user information and the affordability of the service;
- carry out an assessment of the existing transport services via new functionalities (i.e. specific questionnaires and users feedback) on the existing APP Ataf 2.0, as per the urban lines 30 and 35. These questionnaires will ask about both reactions to the reorganisation as well as inputs for future work to be undertaken; and
- Upgrade the ATAF APP 2.0 with new functionality for providing information on the rail timetable linked with the bus timetable.

This set of measures, besides the ones already implemented, will contribute to improving the accessibility of the area and the shared mobility experience of the rural population living the S. Piero Municipality.

7 Design of pilot lab

The actions of the Florence Pilot Lab are at different stages of progress.

At the date of submission of this document, as regards the reorganisation of PT lines 30 and 35, the design was completed at the end of 2018; the new route, launched in February 2019, is currently in operation (see section 7.1.1 below); the design of the co-participatory process with migrants (section 7.2) and of the new functionalities on the App ATAF 2.0 (section 7.3) is currently ongoing.

As regards the rural area of San Piero a Sieve, the design and implementation of the reorganisation of the extra urban bus services was carried out at the end of 2017. The new services are now regularly operating. The design of the information panel is completed and the design of the new functionalities on the App ATAF 2.0 is currently ongoing (see section 7.2 below).

7.1 Conventional PT lines n. 30 and n.35 (pilot area n.1)

Before dealing with the specific measures of INCLUSION, a description related to other important tasks carried out on these two lines is necessary.

During spring 2018 ATAF introduced 37 new generation buses in its fleet and officially presented them in a ceremony organised in the prioritised area of "Le Piagge" served by the urban line 35. The new buses were purchased by ATAF Gestioni in force of the stipulated contract with the Tuscany Region, with an investment of about 8.5 million euro.



Figure 7.1 *New generation buses included in the Ataf fleet in spring 2018.*

(source: Ataf)

The new buses are of different lengths to better meet the needs of the service and the road network: 22 buses are of 12 meters, 7 of 18 meters, 4 of 8 meters and 4 of 7 meters.

On February 23rd 2019, a presentation of another set of 30 new hybrid buses (eCitaro C2) for increasing sustainable mobility in the Metropolitan City of Florence was held and organised by BUSITALIA. To save energy, the hybrid buses feature acceleration control: whether empty or fully occupied, the bus always accelerates under full load with identical dynamics from the stop or the traffic light. This prevents unnecessary energy consumption and leads to a passenger-friendly driving style. Lithium-ion batteries are used.

Buses are also equipped with an onboard video surveillance system and with monitors that provide information about the transport service connection and the correct behaviour.



Lenght	12.135 m
Width	2.550 m
Engine	Hybrid
Emission class	EURO 6
Seats	26 + 84 standing
Wheelchair ramp	✓

Figure 7-2 23rd February 2019 – presentation of the new buses fleet

(source: Ataf)

The fact that 1) the presentation of the 37 new buses was made in area of “Le Piagge”, served by the urban line 35 and that 2) a number of the new hybrid bus will be used in the lines 30 and 35 certainly confirms the attention of both the local public transport company and the Authorities in improving the service in this area.

Section 7.1.1 below describes the actions related to the reorganisation of the line 30, while section 7.1.2 describes the other measures.

7.1.1 Reorganisation of the line 30

The possibility of modifying the line 30 came from the intent of the Tuscany Region Authority and of Florence Metropolitan City of extending the tram network T2 towards the Airport of Peretola. The extension of the tramway was recognised by Ataf as a good opportunity for reorganising the routes of the line 30 in order to improve the bus and tram transport network accessibility and connectivity. In October 2017 a Technical Committee was established involving the Florence Metropolitan Area Authority, the Ataf company and the Municipality of Campi Bisenzio e the surroundings ones. From

October 2017 until June 2018 the group organised monthly meetings in order to discuss how to reorganise the bus services.

Initially, there was the idea of limiting the line 30 near to the tram stop "Guidoni". This hypothesis would have forced the users to change their mean of transport for reaching the centre of Florence. Onboard analysis (passengers counting and interview) were made by Ataf for checking the potential impacts of this solution. From the analysis, it followed that:

- 53% of the line 30 passengers reaches its destination from its get off stop by feet. Limiting line 30 at Guidoni stop would have forced the passengers to shift to line 35, with a consequent waste of time.
- 37% of line 30 passengers reaches its destination from its get off stop using (at least) one other mean of transport. Limiting the line 30 at Guidoni stop would have forced them to shift to tramway T2 with then changing another time the mean of transport.
- 10% of line 30 passengers deboard in the inner part of Florence and therefore would have an advantage in shifting from the bus to the tram.

In addition, the total number of lines 30 and 35 passengers would not have been carried out only by line 35 at the current conditions.

It was finally decided to not reduce the line 30 and rather to bring the route closer to the tram stop Guidoni in both directions. With this solution, the users would have the possibility to decide if get off at Guidoni and take the tram or to stay in the bus until the end of the line (i.e. at Leopolda station). In the following months, Ataf together with the Florence Metropolitan City, made on field inspections in order to define the new route of the line 30.

In particular, it was agreed to modify the route of the line 30 in a small part where the bus line approaches the T2 tramway route as indicated in the below figure 7-3.

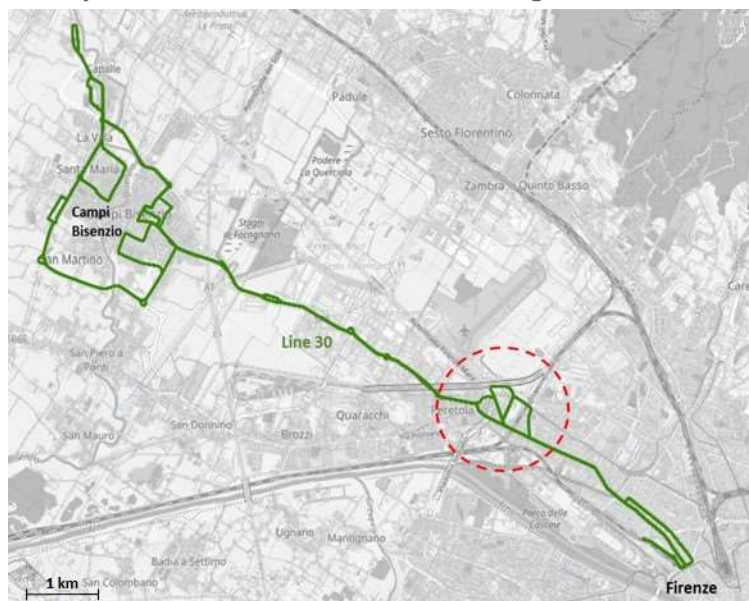


Figure 7.2 New route of the Bus line n° 30 – Area of intervention

(map data: OpenStreetMap)

Before the reorganisation of the route, in the tram line T2 surrounding area, the line 30 main axes passed through Via Baracca – Piazza Puccini – Via del Monte alle Mosse, 250 m south Via Novoli where tram line is located. With the reorganisation, two new bus stops were identified (i.e. “Santoni T2 Guidoni” and “Geminiani Poste”) in order to guarantee easier access to the tram service. With the new route, line 30 can be seen also as a supply line of the tram, thus improving the intermodality and guaranteeing the integration with the tramway through interconnection points, as highlighted in Figure 7-4. The tram line T2 was opened on February 11th 2019; the Technical Committee decided to activate the modifications on the route 30 on Sunday, 24th February.

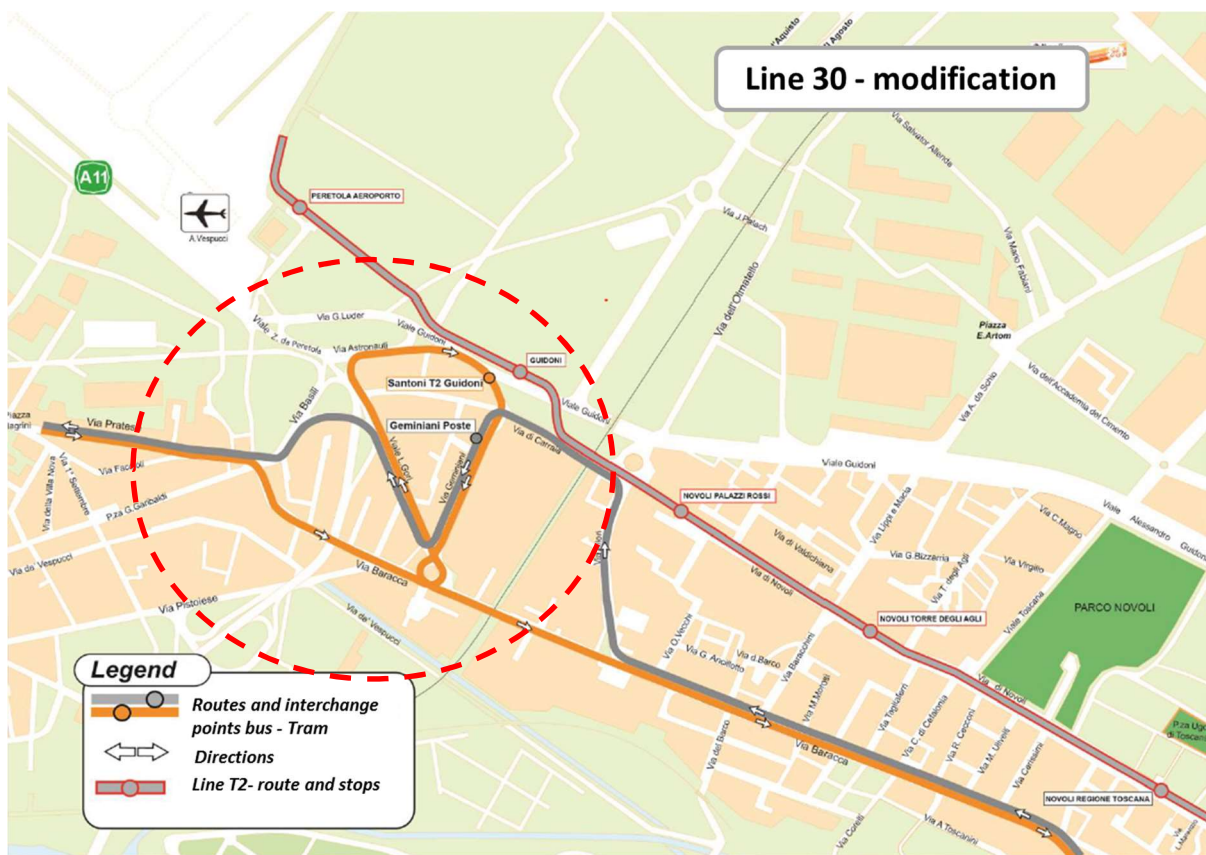


Figure 7.3 New Bus Line n° 30 – Focus on the route variations and interchange points with the Tram line

(map data: Ataf map)

7.1.2 Involvement of the end-users and improvement of the App Ataf 2.0.

In the pilot area n° 1, several activities have already been performed, in particular:

- a) **Pre-feasibility analysis** with users interviews and analysis of O/D travels

Two surveys have been conducted so far, one in 2017 and the second in 2018 in order to:

- classify the type of users using the service (gender, age);

- define the O/D matrix through a count of the number of passengers getting on at bus stops, in order to evaluate the demand and to identify any gaps with the offer;
- analyse and identify possible needs of vulnerable target groups.

The first survey was performed on the 12th December 2017 both on board the bus and at bus stops during a two-hours' time slot running from 7 a.m. to 9 a.m. The ATAF staff involved in the survey was composed of 23 people, so divided:

- 4 teams of 5 people were used on board for interviews and passenger count;
- 3 people for interviews at stops.

The second survey was conducted during December 2018.

The data of the last surveys are currently being analysed and will provide further significant information to understand the demand and users' needs. Another survey will be conducted at the end of 2019, thus providing new elements for the evaluation.

- b) **Further investigation of users' requirements** through the appointment of a social cooperative.

A local social cooperative has been appointed in mid-February 2019 to conduct further analysis on the needs of the vulnerable target users addressed by the pilots, migrants in particular. Relevant stakeholders will be involved in a co-participatory process aiming at defining possible future solutions/interventions for increasing the accessibility to PT services for the identified target group.

The work has been structured in several phases:

- **Phase "0" Coordination, mapping of the actors and target users' observation.** This phase foresees two main activities:
 - o Mapping activities aiming at:
 - contacting the most relevant local stakeholders (e.g. voluntary and social-care associations, NGOs, Caritas, schools, churches, info points, foreign communities, etc.) that can play a role of mediation with the users themselves and support in the identification of the most suitable persons to participate in the planned activities;
 - identifying the main points of interest for migrants along the lines n ° 30 and n ° 35
 - finding already implemented solutions and good practices to improve the accessibility to public transport for the identified target group
 - o Users' Observation. This activity entails the direct observation of the behaviour of n° two users (migrants) before and during a journey on the buses of the lines 30 and 35 in order to understand their habits, difficulties, etc.
- **Phase 1 Focus Group** with the participation of 15/20 stakeholders identified in the previous phase to discuss the outcomes of the observation activity and set the basis for the following co-design phase
- **Phase 2 Service Co-Design** with the organization of 2 laboratories with the direct involvement of about 10/15 target users to understand if and how they understand the

available information on the service (on board the bus, on the shelter or while using other virtual devices)

- **Phase 3 Final meeting with Busitalia managers** to discuss the results and the critical issues emerged in phases 0, 1 and 2 and evaluate any proposals to improve users information.
- **Final Phase: Elaboration of a plan of possible future solutions and interventions** aimed at improving accessibility to the public transport service for migrants

The activities related to the Phase 0 has just started. In the next month (until mid/end of March), all relevant local stakeholders will be contacted to understand their willingness in being involved in the co-design process and to support in the identification of appropriate users for being engaged in the observation activity and in the following laboratories of phase 2.

Two users (migrants) will be chosen and will be asked to take some rides on the buses of the lines n. 30 and 35 (observation activity) to reach their home and/or specific points of interests along the lines. Before and during the journey the users will be asked to provide some feedback on the difficulties encountered in retrieving the information needed to reach the destination point; the behaviour of the users will be also registered and further analysed. A more detailed time-plan with the indication of all the phases is provided in Chapter 9.

- c) **Improvement of the users information** with the preliminary definition of the new functionalities of ATAF APP 2.0

ATAF 2.0, the official ATAF app that provides real-time information on PT services in the metropolitan area of Florence will be upgraded with new "crowdsourcing" functionalities to assess and rate the quality of the operated service and collect information on users' needs and mobility requirements. Specific pre-defined questionnaires will be elaborated by ATAF and will be targeted exclusively to the users of 30 and 35 lines.

To ensure that the service is actually used only by the users of the lines 30 and 35, the first question in the questionnaire will request to select the used PT line, allowing however to choose only between two alternatives: 30 or 35. The questionnaires will only display closed questions that can be answered by selecting either YES/NO or a numerical rate (from 1-10) associated to questions such as: "Do you agree or disagree with ..." or "How useful do you think ..." or "Which judgment do you have on ...". The questionnaires will be configured by an operator on the Database on which the structure of the questionnaires as well as the texts of the questions and possible answers are stored. It will be possible to change the questionnaires over time.

A database table will be dedicated to questions with texts in Italian and English (since the mobile app will be provided in different languages). Each question will have a numerical identifier. A question displayed in Italian will have the same identifier of its English version. The table will have to be completed by the operator in Italian and in English separately. For each question, the type of answer (YES / NO or numeric values from 1 to 10) will have to be entered by the operator on the database. Since it will be possible to create more than one

questionnaire over time, on the database the operator will have to associate each question with an identifier with the following values:

- a) "ACTIVE" (current questionnaire) or
- b) "CLOSED" + DayMonthYear (closed on the date indicated by DayMonthYear)

All questions with the identifier "ACTIVE" will represent the current questionnaire displayed on the mobile application. The questions with the identifier "CLOSED" + DayMonthYear will represent the past questionnaires, grouped by date. Their data will thus be retrieved even if a new questionnaire will have been created and displayed.

Finally, on the database there will be a table with the users' answers provided for each questionnaire. The values in this table will be entered automatically by the system.

The questionnaire function will be available as one of the main menu items in the ATAF2.0 app. The questionnaires will be accessible and completed any time. The application will collect the answers and store them anonymously on a central database. The data collected in the central DB will be suitable for further processing and analysis. It will be possible to implement the display of a popup inviting the user to complete the questionnaires. The technical implementation will be performed as an upgrade of the ATAF2.0 mobile application for Android systems and will therefore be visible / usable to current users who will update (automatically or manually) the app. The new services will initially be available only for internal testing and will later have to be made public on Google Play. The deployment activities on the Google Play market will be carried out by ATAF as an editor of the ATAF 2.0 app. The time schedule of the development takes into account not only the technical development of the interventions but also the need of integrating the new functionalities into the ATAF2.0 production app already widely distributed to public users and for which it is necessary to maintain the continuity of service. The estimated deadlines are the end of March 2019 for the release of the internal test app and the end of April for the release of the final version.

Finally, it has to be noticed that two important features of the new buses (previously described in section 7.1.) are the **on-board video surveillance system**, which increases the travellers and drivers safety, and the **info panels** aiming to present useful information on the service.



Figure 7.4 Info-Panels on board the buses

(Source: Ataf device)

Busitalia, in cooperation with SOCIOLAB, is studying the possibility of elaborating an educational campaign on the correct use of the service (e.g. getting on through the front door, getting off through the rear door, ticket and subscription validation, booking of the following stops, etc.) to be displayed, in different languages, through the info-panels.

The next actions that Busitalia is going to carry out are the following:

- Finalisation of the assessment questionnaires to be displayed on the APP
- Upgrade of the APP with the new crowdsourcing functionality by the sw provider
- Elaboration of an educational campaign to be displayed through the info-panels on board the new buses on the correct use of the service (e.g. getting on through the front door, getting off through the rear door, ticket and subscription validation) to better explain how to properly behave on board the bus.
- Translation of the info-panels information in English and in other foreign languages

7.2 S. Piero a Sieve (pilot area n.2)

7.2.1 Reorganisation of the extra urban services

In the last months of 2017 Busitalia, in agreement with the local Administration, decided to change most of the PT service in San Piero a Sieve with the aim of bringing all the bus lines to the other side of the railway, in order ensure direct access to the area to further reduce the overall travel time.

This reorganisation has been carried out in parallel with the requalification, by the S. Piero Municipality, of the train station area that was in clear state of urbanistic and socio-economic deterioration. In particular, several site inspections reported the presence of:

- narrow and deteriorated sidewalks;
- absence of pedestrian safety paths;
- presence of architectural barriers;
- lack of spaces intended for parking of pedestrians and urban furniture;
- lack of horizontal and vertical markings on the roadway in order to identify the area of traffic from the parking area of the cars;
- insufficient and old lighting system;
- insufficient capacity of sewerage

The same problems had been highlighted also by the complaints of the inhabitants with wished to have better conditions in relation to car traffic and safety.

According to this project, all lines to/from Barberino, Scarperia, Borgo San Lorenzo and Florence have been changed and moved to the new hub near the station, as indicated in the above figure. In particular, lines 302A, 303B, 304B, 305A, 307A, 319A have been modified so that each of them now passes through the new hub.

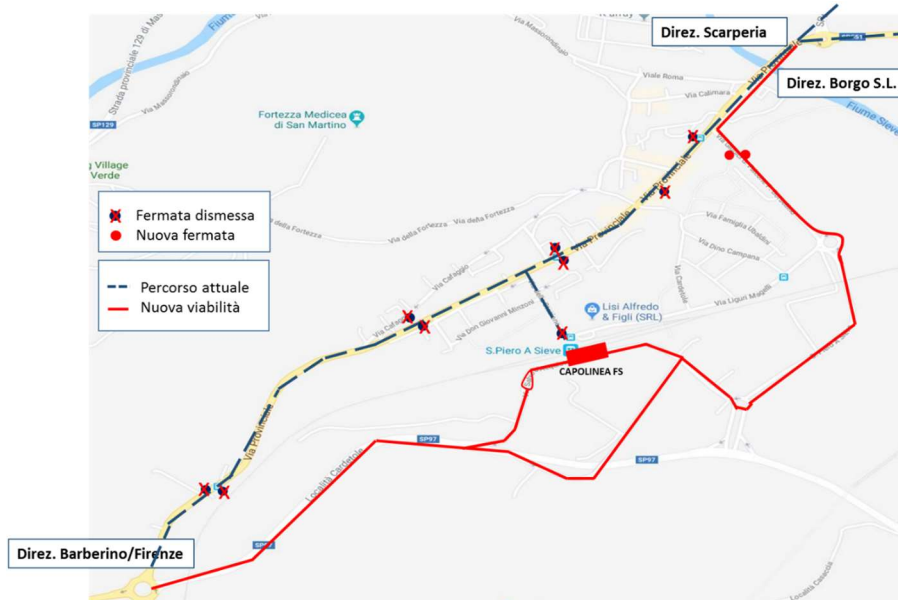


Figure 7.5 Redesign of the PT services in the San Piero a Sieve train station area

(map data: Google maps)

This operation involved an increase of about 50,000 km and a great effort for the administration to cover the costs, and for the operator to reorganize the entire service in this area. At the same time parking for private cars has been enhanced.

7.2.2 Improvement of the user information.

In the first few months of 2018 satisfaction surveys carried out showed a positive response toward the reorganisation of the services. In fact, the connection between the rural areas of Mugello and Florence has been perceived much quicker and more comfortable. Thanks to this type of feedback, the administration and the operator have decided to further improve the hub by installing a smart pole from which people can get the real transit time and other relevant PT information.

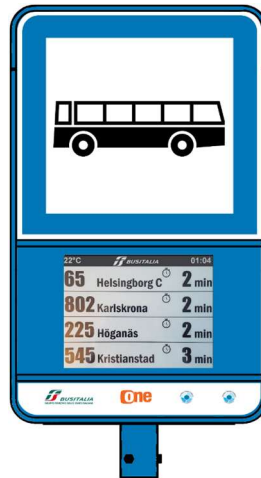


Figure 7.6 Example of Smart Pole to be installed in S.Piero a Sieve Railway Station

(source: Busitalia device)

Moreover, as per the first pilot action (see section 7.1.4), Busitalia is going to upgrade the existing App Ataf 2.0. with new crowdsourcing functionalities for carrying out an assessment of the existing transport services and asking both reactions to the reorganisation of the railway station as well as inputs for future improvement to be undertaken.

In addition, with the new upgrade, the App will provide interactive information about the rail timetable linked with the bus timetable for improving multimodal users information.

8 Actors

Busitalia – Sita Nord and its controlled company Ataf Gestioni, that manages the PT services and tram lines in Florence metropolitan area and in the rural areas of Mugello, are the main actors in charge of carrying out the pilot lab activities. The other main actors involved in the pilot are:

- the social cooperative Sociolab Scarl, founded in Florence in 2006 and expert in social research and co-design services. This cooperative is specialized in particular in the realisation of events and co-participatory processes, communication campaigns, research and learning projects on urban planning, mobility, social innovation, health policies and strategies. Sociolab Scarl will support Busitalia in organising the co-design process with the vulnerable users of lines 30 and 35;
- Softeco Sismat: leading innovation company in the ICT and engineering market and a research oriented SME (about 240 staff, 2016) Softeco Sismat is a supplier of innovative software solutions in several business sectors, including transport and mobility, manufacturing and process industry, telecommunications, energy, finance, security and government. Softeco is currently the software provider of ATAF App 2.0 and is involved in the upgrading of the APP with the new functionalities described in the previous sections.



9 Timeplan

The following tables provide indications on the timeline and milestones for all the implementations activities in the two pilot areas.

9.1 Conventional PT Lines n. 30 and n. 35

9.1.1 Reorganisation of the line 30

	2017			2018												2019			
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	Ma y	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr
	M0 1	M0 2	M03	M0 4	M0 5	M0 6	M0 7	M0 8	M0 9	M1 0	M1 1	M1 2	M1 3	M1 4	M1 5	M1 6	M1 7	M1 8	M1 9
Set up of the Technical Committee for the reorganisation of the route of line 30	M1	M2.1	M2.2	M2. 8										
Approval of the proposition of reorganising the route 30 by the Technical Committee									M3										
Surveys on board the lines n° 30 and 35 (passengers count: get on/get off)															M4				
Design of the new route and bus stops for the line n° 30 connecting it to the Tramway T2																M5			
New network (including line 30) in operation																	M4		

M1 First meeting of the Technical Committee composed by the Metropolitan City of Florence, Tuscany Region, Ataf and the Municipalities of Florence Metropolitan area

M2.1...2.8: Technical Committee Monthly meetings

M3 The idea of reorganising the route 30 is approved by the Technical Committee

M4 Analysis of the results of the on-board surveys

M5 The design of the new route is completed

M4 New routes of line 30 officially inaugurated and operation

9.1.2 Involvement of the vulnerable end-users

	2019										2020					
	Feb	Mar	Apr	Ma y	Jun	Jul	Aug	Set	Oct	Nov	Dec	Jan	Feb	Mar	Apr	Ma y
	M1 7	M1 8	M1 9	M2 0	M2 1	M2 2	M2 3	M2 4	M2 5	M2 6	M2 7	M2 8	M2 9	M3 0	M3 1	M3 2
Phase 0. Mapping activities of the local stakeholders, lines POIs and good practices. First contacts with stakeholders		M1														
Phase 0 Observation of the users		M2														
Phase 1 Definition of the modalities of the Focus Group organisation		M3														
Phase 1 Focus Group Organisation			M4													
Phase 2 Organisation of Service Design																
Phase 2 Co-participatory Laboratories				M5												
Phase 3 Meeting with Technicians									M6							

M1= Database with local stakeholders contact information is completed, including reports on good practices and lines POIs

M2= Reports on the observation of users using the two lines

M3 = Decision on the focus groups modalities and target stakeholders

M4 = Focus Group Report

M5 = Co-Participatory Process reports, describing the main results of the two Co-participatory laboratories

M6 = The Plan for possible future interventions/solutions for improving the inclusivity of line 30 and 35 is released

9.1.3 Improvement of the App Ataf 2.0.

	2019											2020								
	Feb	Mar	Apr	Ma y	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Ma r	Apr	Ma y	Jun	Jul	Au g	Sep
	M1 7	M1 8	M1 9	M2 0	M2 1	M2 2	M2 3	M2 4	M2 5	M2 6	M2 7	M2 8	M2 9	M3 0	M3 1	M3 2	M3 3	M3 4	M3 5	M3 6
New APP functionalities: demo version			M1																	
Operation of the APP						M2					M3									

M1= Acceptance of the verification and testing

M2= First analysis of the n. of download (updated version of the APP) and of the questionnaires filled

M3 = Second analysis of the n. of download (updated version of the APP) and of the questionnaires filled in

9.2 S. Piero a Sieve – Improvement of the user information

	2019										
	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	M17	M18	M19	M20	M21	M22	M23	M24	M25	M26	M27
Action 1 Installation of the panels and operation		M1	M2								
Action 3 New app functionality: questionnaires and feedback: demo version			M3								
Action 2 New app functionality: Bus and Train timetable: demo version				M4							
Operation of the APP						M5				M6	

M1: The user information panels are installed

M2: The user information panels are in operation

M3: Acceptance of the verification and testing

M4: Acceptance of the verification and testing

M5= First analysis of the n. of download (updated version of the APP) and of the questionnaires filled

M6 = Second analysis of the n. of download (updated version of the APP) and of the questionnaires filled in

10 Risk Assessment:

N°	Risk	Risk level	Contingency Plan
1	Delay in the upgrading of the APP that could prevent a proper evaluation	Low	Frequent contact with the sw provider to sort out issues; warranties included in the contract
2	Questionnaires functionality on the APP is not used by users	Medium	Involvement of the communication department of Busitalia in order to elaborate a sound and effective promotion campaign dedicated to the new APP version
3	Difficulty in interacting with migrants	Medium	Involvement of local stakeholders representing the interests and needs of foreign communities and who can act as intermediary with the target users
4	Difficulty in engaging local stakeholders/voluntary associations	Low	Involvement of Sociolab

Table 2 – Risks Assessment

Annex A - Florence Local Pilot Action Plan (LPAP) – Urban lines 30 and 35

Introduction

The Florence Pilot site is included in the area covered by Metropolitan Florence Authority (“Città Metropolitana”) and it consists of two different contexts; the first one is a suburban area in the north-west of Florence. In this area, the Pilot will be focused on two conventional PT lines (no. 30 and 35, characterised by a large presence of migrants and low-income residents) that connect the centre of Florence with the Municipality of Campi Bisenzio along two different directions; the second one is the rural area of San Piero a Sieve, located in the centre of Mugello area, on the northern boundaries of the metropolitan conurbation.

In order to ensure a better understanding of the activities of the Florence Pilot Lab, two different Local Pilot Action Plans have been developed.

This document refers to the activities in the north-west of Florence, focused on the urban bus lines no. 30 and 35

1. Object of the Pilot Lab			
1.0	<p>Introduction: actions already carried out before the time of writing of this document.</p> <p>In late 2018, in order to improve the accessibility of the tramway T2, Ataf in close cooperation with Busitalia, Municipality of Campi Bisenzio and the Florence Metropolitan City Authority, has reorganised the route of the line 30. In particular, the reorganisation consisted in foreseeing new path with two new stops (“Santoni T2 Guidoni” and “Geminiani Poste”) close to the tramway stop and, consequently, in the development of new timetables.</p> <p>For a better understanding of the Florence Pilot Lab activities, see the Deliverable D4.3</p>		
1.1	<table border="1" style="width: 100%;"> <tr> <td style="width: 50%; vertical-align: top;"> <p>Actions (to be) demonstrated in the Pilot Lab – Overview</p> </td> <td style="width: 50%; vertical-align: top;"> <p>In order improve the inclusion and integration of the vulnerable end-users (i.e. migrants and low income), Busitalia decided to develop a collaborative co-design path to identify and solve together with the users some critical issues of access and use of public transport. Sociolab, a cooperative based in Florence with experience in designing and managing participatory processes</p> </td> </tr> </table>	<p>Actions (to be) demonstrated in the Pilot Lab – Overview</p>	<p>In order improve the inclusion and integration of the vulnerable end-users (i.e. migrants and low income), Busitalia decided to develop a collaborative co-design path to identify and solve together with the users some critical issues of access and use of public transport. Sociolab, a cooperative based in Florence with experience in designing and managing participatory processes</p>
<p>Actions (to be) demonstrated in the Pilot Lab – Overview</p>	<p>In order improve the inclusion and integration of the vulnerable end-users (i.e. migrants and low income), Busitalia decided to develop a collaborative co-design path to identify and solve together with the users some critical issues of access and use of public transport. Sociolab, a cooperative based in Florence with experience in designing and managing participatory processes</p>		

		<p>and social research, has been involved to achieve this goal. Through the methodological and operational approach that Busitalia developed with SOCIOLAB, Busitalia will organise and develop a number of focus groups, or better "Service Design Laboratories" or "4-D Labs - Discover, Define, Develop, Deliver", for listening to the specific needs of the target users and developing new proposals for improving the transport services and the users information.</p> <p>In addition, Busitalia is going to carry out an assessment of the existing transport services via another channel, i.e. introducing new functionality (specific questionnaires and users feedback) on the existing APP Ataf 2.0.</p> <p>After the development of the 4D-Labs and the analysis of the questionnaires and feedback, the Pilot will come out with the proposition of a number of ideas and solutions from target user groups for improving the transport service.</p>
1.2	What will be demonstrated in the Pilot Lab?	<input checked="" type="checkbox"/> Improvement of mobility services <input checked="" type="checkbox"/> Provision of new "customers oriented" services <input checked="" type="checkbox"/> Implementation of innovative ITS supporting mobility services operation/offer
1.3 (a)	In case the answer to 1.2) is "improvement of mobility services", please detail which is the change involved in the mobility offer	<input checked="" type="checkbox"/> Enhancement of a mobility service already operated <input type="checkbox"/> Extension in terms of covered area <input type="checkbox"/> Extension in terms of covered time

		<ul style="list-style-type: none"> <input type="checkbox"/> Enforcement of vehicles/fleet (number, typology, performance/quality) <input checked="" type="checkbox"/> Other (please specify) Increase the service KPI (quality, accessibility, reliability, user information, etc.) <input type="checkbox"/> Integration of mobility services already operated <ul style="list-style-type: none"> <input type="checkbox"/> Coordination of services among multiple service providers or funding agencies <input type="checkbox"/> Integration of services targeted to specific target users with general public transport <input type="checkbox"/> Integration of sustainable modes with general public transport <input type="checkbox"/> Integration of ride/(asset) sharing services with general public transport <input type="checkbox"/> Optimization of scheduling/timetable <input type="checkbox"/> Enhancement of interchange points <input type="checkbox"/> Other (please specify)..... <input type="checkbox"/> Other (please specify).....
1.3 (b)	In case the answer to 1.1) is "Provision of new "customers oriented" services", please detail which is the new/enhanced service offered	<ul style="list-style-type: none"> <input type="checkbox"/> New or enhanced access modalities to services (i.e. service registration/membership, booking, etc.) <input type="checkbox"/> New or enhanced payment methods <input type="checkbox"/> New or enhanced passenger information services <input type="checkbox"/> New or enhanced customer handling and support <input type="checkbox"/> Other (please specify).....

1.3 (c)	In case the answer to 1.1) is "optimization of internal processes", please detail which are the processes involved	-
1.3 (d)	In case the answer to 1.1) is "implementation of ITS supporting systems", please detail which is the ITS involved	<input type="checkbox"/> Service planning (matching of demand/offer, scheduling of "on demand" services, etc.) <input type="checkbox"/> Platform for sharing/networking of resources, Transport Operators, etc. <input checked="" type="checkbox"/> Users information systems <input type="checkbox"/> E-ticketing <input type="checkbox"/> Fleet Monitoring system <input type="checkbox"/> Aid driver tools <input type="checkbox"/> Data mining system <input type="checkbox"/> Expert knowledge system <input type="checkbox"/> Back office application, business intelligence <input checked="" type="checkbox"/> Other (please specify) New App functionalities for the assessment of the service
1.3 (e)	In case the answer to 1.1) is "new funding/business models", please specify	

2. Pre-feasibility analysis

2.1	Please describe the current status of needs analysis and the actions already carried out for the identification of requirements the demo actions will comply with. Is the analysis of the requirements completed?	<p>On field Survey in December 2017 focused on the lines 30 and 35.</p> <p>A number of customer satisfaction surveys has been conducted in November 2018.</p> <p>.</p>
2.2	Please resume the main results of the requirements analysis	<p>The direction of the forward journey is usually from the central railway station to the north of Florence and the return trip is usually in the opposite direction.</p>

		<p>Probably some immigrants go to reception centers during the day, especially at the lunch time. (Baracca Pietri and Baracca Vecchi are the two stops that near Caritas Center).</p> <p>Since they are mainly travelling to work, they are concentrated in hours corresponding to the entry and exit from work, and they are probably more concentrated from Monday to Friday and few in the weekend.</p>
2.3	Please describe the actions to be carried out in the future to complete the requirements analysis and the milestones	The analysis of the results related to the target PT lines will be made in February, to set up the ex-ante scenario. In addition, the choice of the languages to be used for the new functionalities will be taken.
3. Design of Pilot Lab		
3.1	Please describe the current status of design activities of Pilot Lab actions. Is the design completed?	The design is completed. Specific requirements definition activities have been held between MemEx and BUSITALIA. Further meetings have been held with SOFTECO for starting the detailed design and realization of the improvement of the App.
3.2	Please resume the main results of the design of the Pilot Lab	<p>Service model: covered area, opening time, service scheme, routing, scheduling, pick up-drop off points, interchange points, etc.</p> <p>Fleet/vehicle description:</p> <p>Booking procedure:.....</p> <p>Payment modalities:.....</p> <p>Integration within mobility offer:</p> <p>Institutional/regulatory issues:.....</p>

		<p>Actors involved, role and responsibilities: Involvement of the SOCIOLAB Company and of users' association (e.g. "Caritas" and "Servizi Sociali")</p> <p>Other (please specify).....</p> <hr/> <p>3.2.2 Design of new customers services</p> <p>Service specifications:.....</p> <p>Management procedure for the operation of the service:.....</p> <p>Data/resources required:.....</p> <p>Institutional/regulatory issues:.....</p> <p>Actors involved, role and responsibilities:.....</p> <p>Other (please specify)</p> <p>Definition of the new functionalities of the APP (questionnaires for the assessment of the service, feedback),</p> <hr/> <p>3.2.3 Specifications of new internal processes</p> <p>---</p> <hr/> <p>3.2.4 Definition of ITS specifications</p> <p>System Architecture:</p> <p>Technical specifications:</p> <p>Functional specifications:</p> <p>Definition of the new functionalities of the APP (questionnaires for the assessment of the service, feedback)</p> <p>Operative specifications:.....</p>
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		3.2.5 Definition of new funding/business models/commercial agreements -----
3.3	Please describe the actions to be carried out in the future to complete the design of the Pilot Lab and the milestones	<ol style="list-style-type: none"> 1) SOFT will draft a detailed design of the identified functionalities for updating the Ataf 2.0 APP. 2) A specific meeting will be held between Ataf and SOCIOLAB in order to define the detailed plan for carrying out the 4-D Labs 3) Busitalia, with the help of SOCIOLAB, will draft the final list of relevant stakeholders and will draft a plan for organising the focus group. 4) SOFTECO will start realizing the new functionalities; App testing and verification by Ataf and MemEx

4. Implementation Plan of the Pilot Lab

4.1	Please fill in the following GANTT with the main actions occurring in the future months for the finalization of requirements analysis and design of the Pilot Lab. Please highlight the milestone to be achieved up to the end of the design phase. In case you have indicated that this phase is already completed in section 2, go to 4.2
-----	---

	M14	M15	M16	M17	M18	M19
Action 1: Analysis of the questionnaires				M1		
Action 2 Draft a detailed design of the identified functionalities				M2		
Action 3: Organisation of a meeting with SOCIOLAB in order to define the detailed time plan for the development of the 4D Labs				M3		
Action 4 Identification of relevant stakeholders and definition of the modalities and organisation of the focus groups					M4	
Action 5: Implementation of the new functionalities						M5

M1 = Definition of the languages to be used for the questionnaires
 M2 = Submission of the detailed design of the identified functionalities to be added to the APP
 M3 = a short summary of the first meeting with SOCIOLAB is produced
 M4 = Definition of focus groups modalities and target stakeholders
 M5 = Acceptance of the verification and testing

4.2 Please fill in the following GANTT with the main actions occurring in the demo months for the **setup of demo actions** included in the Pilot Lab, the **implementation of the preparatory activities and the operation**. Please highlight the milestone to be achieved up to the launch of Pilot Lab and during the operation of the demo.

	M13	M14	M15	M16	M17	M18	M19	M20	M21	M22	M23	M24	M25	M26	M27	M28	M29	M30	M31	M32	M33	M34	
Action 1 Organisation of the first focus group – April 2019							M1																
Action 2 Operation of the APP										M2				M3									
Action 3 Installation of the panels and operation						M4																	
Action 4 Organisation of the second focus group														M5									

M1 = Reporting of the focus group
 M2 = First analysis of the n. of download (updated version of the APP) and of the questionnaires filled in as regards the lines 30 and 35 and the rural area of S. Piero a Sieve
 M3 = Second analysis of the n. of download (updated version of the APP) and of the questionnaires filled in as regards the lines 30 and 35 and the rural area of S. Piero a Sieve
 M4 = The user information panels are in fully operations
 After the meeting with SOCIOLAB, a more precise and detailed time plan will be produced. It is likely to be produced in mid-February

5. Local stakeholders and partnership (to be) involved during the Pilot Lab design, implementation and operation

Name	Typology <i>(e.g. Transport/Mobility Operators, Local Authorities, Service Contracting Authority, Funding Agencies/Bodies, Citizen associations...)</i>	Role
SOCIOLAB	<i>Cooperative</i>	SOCIOLAB, together with BUSITALIA, will be in charge of the organization and development of the 4D LABs
Caritas	Charity Entity	
SOFTECO	Private company	Softeco, together with BUSITALIA, will be in charge of introducing the new functionalities on the existing App Ataf 2.0
6. Contingency plan		
Please list the risk that you envisaged in the implementation/operation of the Pilot Lab	Please indicate the likelihood the risk indicated will occur	Please indicate mitigation measures that you have plan for the risk indicated
Delay in the upgrading of the APP that could prevent a proper evaluation	Low	Frequent contact with the sw provider to sort out issues; warranties included in the contract

Annex B- Florence Local Pilot Action Plan (LPAP) – San Piero a Sieve

Introduction

The Florence Pilot site is included in the area covered by Metropolitan Florence Authority (“Città Metropolitana”) and it consists of two different contexts; the first one is a suburban area in the north-west of Florence. In this area, the Pilot will be focused on two conventional PT lines (no. 30 and 35, characterised by a large presence of migrants and low-income residents) that connect the centre of Florence with the Municipality of Campi Bisenzio along two different directions; the second one is the rural area of San Piero a Sieve, located in the centre of Mugello area, on the northern boundaries of the metropolitan conurbation.

In order to ensure a smooth understanding of the activities of the Florence Pilot Lab, two different Local Pilot Action Plans have been developed.

This document refers to the activities in the rural area of San Piero a Sieve

1. Object of the Pilot Lab

1.0

Introduction: actions already carried out before the time of writing of this document.

In late 2017, in the rural area of San Piero a Sieve, Busitalia has made a reorganization of the entire transport services operating close the train station foreseeing the transit on an alternative viability which was the one on the other side of the railway. This reorganisation has been carried out in parallel with the requalification, by the S. Piero Municipality, of the train station area that was in clear state of urbanistic and socio-economic deterioration.

Busitalia is now focusing on the mobility needs of the rural commuters which live in the Municipality of San Piero a Sieve and in its boundaries.

Currently, for going to work, in the case where they don't move with their car, they mostly use the private car to go to the train station in order to be sure to take the corresponding rail service. This is due to a lack of trust in the reliability of the bus service connecting the rail way. In order to encourage the commuters to use the bus service for going to the train station, Busitalia has planned to install user information panels in order to improve the quality of the user information and the affordability of the service.

In addition, Busitalia is going to carry out an assessment of the existing transport services via new functionality (i.e. specific questionnaires and users feedback) on the existing APP Ataf 2.0. These questionnaires will ask about both reactions to the reorganisation as well as inputs for future work to be undertaken.

	<p>Finally, in order to encourage the population to use the public transport services, Busitalia is also going to upload on the APP the rail timetable linked with the bus timetable.</p> <p>This set of measures, besides the ones already implemented, will contribute to improve the accessibility of the area and the shared mobility experience of rural population living the the S. Piero Municipality.</p> <p>For a better understanding of the Florence Pilot Lab activities, see the Deliverable D4.3.</p>	
1.1	<p>Actions (to be) demonstrated in the Pilot Lab – Overview</p>	<ul style="list-style-type: none"> - Improvement of the user information with the installation of information panels at bus stops - Improvement of existing App by introducing new functionalities for improving multimodal user information and for getting user’s feedback
1.2	<p>What will be demonstrated in the Pilot Lab?</p>	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Improvement of mobility services <input checked="" type="checkbox"/> Implementation of innovative ITS supporting mobility services operation/offer
1.3 (a)	<p>In case the answer to 1.2) is “improvement of mobility services”, please detail which is the change involved in the mobility offer</p>	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Enhancement of a mobility service already operated <ul style="list-style-type: none"> <input type="checkbox"/> Extension in terms of covered area <input type="checkbox"/> Extension in terms of covered time <input type="checkbox"/> Enforcement of vehicles/fleet (number, typology, performance/quality) <input type="checkbox"/> Other (please specify) Increase the service KPI (quality, accessibility, reliability, user information, etc.) <input checked="" type="checkbox"/> Integration of mobility services already operated

		<input checked="" type="checkbox"/> Coordination of services among multiple service providers or funding agencies (Bus and rail service) <input type="checkbox"/> Integration of services targeted to specific target users with general public transport <input type="checkbox"/> Integration of sustainable modes with general public transport <input type="checkbox"/> Integration of ride/(asset) sharing services with general public transport <input type="checkbox"/> Optimization of scheduling/timetable <input type="checkbox"/> Enhancement of interchange points <input type="checkbox"/> Other (please specify)..... <input type="checkbox"/> Other (please specify).....
1.3 (b)	In case the answer to 1.1) is "Provision of new "customers oriented" services", please detail which is the new/enhanced service offered	<input type="checkbox"/> New or enhanced access modalities to services (i.e. service registration/membership, booking, etc.) <input type="checkbox"/> New or enhanced payment methods <input checked="" type="checkbox"/> New or enhanced passenger information services (bus and rail timetable on the APP, user information panels) <input type="checkbox"/> New or enhanced customer handling and support <input type="checkbox"/> Other (please specify).....
1.3 (c)	In case the answer to 1.1) is "optimization of internal processes", please detail which are the processes involved	-
1.3 (d)	In case the answer to 1.1) is "implementation of ITS supporting	<input type="checkbox"/> Service planning (matching of demand/offer, scheduling of "on demand" services, etc.)

	systems”, please detail which is the ITS involved	<input type="checkbox"/> Platform for sharing/networking of resources, Transport Operators, etc. <input checked="" type="checkbox"/> Users information systems <input type="checkbox"/> E-ticketing <input type="checkbox"/> Fleet Monitoring system <input type="checkbox"/> Aid driver tools <input type="checkbox"/> Data mining system <input type="checkbox"/> Expert knowledge system <input type="checkbox"/> Back office application, business intelligence <input checked="" type="checkbox"/> Other (please specify) New App functionalities for the assessment of the service
1.3 (e)	In case the answer to 1.1) is “new funding/business models”, please specify	
2. Pre-feasibility analysis		
2.1	Please describe the current status of needs analysis and the actions already carried out for the identification of requirements the demo actions will comply with. Is the analysis of the requirements completed?	Busitalia has developed a number of customer satisfaction surveys in order to understand the main needs of the rural commuters
2.2	Please resume the main results of the requirements analysis	Currently, the rural commuters living in the San Piero a Sieve area which take the train for going to work mostly use the private car to go to the train station in order to be sure to take the corresponding rail service. There is also a consistent number of people which goes to work directly with the private car. In order to encourage the commuters to use the public bus service for going to the train station, Busitalia has planned to install user

		<p>information panels in order to improve the quality of the user information and, at the same time, the affordability and reliability of the service.</p> <p>In addition, in order to assess the outcomes of the new measures implemented (i.e. the reorganisation of the area and the installation of the panel user information), Busitalia has planned to develop two new functionalities on the existing APP Ataf 2.0:</p> <ul style="list-style-type: none"> - Questionnaires on the transport services - User feedback on the service
2.3	Please describe the actions to be carried out in the future to complete the requirements analysis and the milestones	The requirement analysis has been completed.
3. Design of Pilot Lab		
3.1	Please describe the current status of design activities of Pilot Lab actions. Is the design completed?	The typology of the user information panels has been decided
3.2	Please resume the main results of the design of the Pilot Lab	<p>Service model: covered area, opening time, service scheme, routing, scheduling, pick up-drop off points, interchange points, etc.</p> <p>Fleet/vehicle description:</p> <p>Booking procedure:.....</p> <p>Payment modalities:.....</p> <p>Integration within mobility offer:</p> <p>Institutional/regulatory issues:.....</p> <p>Actors involved, role and responsibilities:</p> <p>Other (please specify).....</p>

		<p>3.2.2 Design of new customers services</p> <p>Service specifications:.....</p> <p>Management procedure for the operation of the service:.....</p> <p>Data/resources required:.....</p> <p>Institutional/regulatory issues:.....</p> <p>Actors involved, role and responsibilities:.....</p> <p>Other (please specify)</p> <p>Definition of the new functionalities of the APP (questionnaires for the assessment of the service, feedback) and definition of the modalities for the integration of the rail and bus timetable on the APP</p>
		<p>3.2.3 Specifications of new internal processes</p> <p>---</p>
		<p>3.2.4 Definition of ITS specifications</p> <p>System Architecture:</p> <p>Design of the info flow between the APP platform and the AVM platform of Ataf</p> <p>Technical specifications:</p> <p>Functional specifications:</p> <p>Definition of the new functionalities of the APP (questionnaires for the assessment of the service, feedback) + Integration of the rail and bus timetable on the APP</p> <p>Operative specifications:.....</p>

		3.2.5 Definition of new funding/business models/commercial agreements -----
3.3	Please describe the actions to be carried out in the future to complete the design of the Pilot Lab and the milestones	<ul style="list-style-type: none"> 5) SOFTECO will draft a detailed design of the identified functionalities for updating the Ataf 2.0 APP. 6) Identification of the detailed location and design of the user's information panels in the rural area and customer satisfaction 7) SOFTECO will start realizing the new functionalities; App testing and verification by Ataf and MemEx

4. Implementation Plan of the Pilot Lab

4.1	Please fill in the following GANTT with the main actions occurring in the future months for the finalization of requirements analysis and design of the Pilot Lab. Please highlight the milestone to be achieved up to the end of the design phase. In case you have indicated that this phase is already completed in section 2, go to 4.2					
	M13	M14	M15	M16	M17	M18
Action 1	Draft a detailed design of the identified functionalities				M1	
Action 2:	Identification of the detailed location of the users information panels				M2	
Action 3:	Implementation of the new functionalities					M3
<p>M1 = Submission of the detailed design of the identified functionalities to be added to the APP</p> <p>M2 = Identified user information panel location and design</p> <p>M3 = Acceptance of the verification and testing</p>						
4.2	Please fill in the following GANTT with the main actions occurring in the demo months for the setup of demo actions included in the Pilot Lab, the implementation of the preparatory activities and the operation . Please highlight the milestone to be achieved up to the launch of Pilot Lab and during the operation of the demo.					

	M13	M14	M15	M16	M17	M18	M19	M20	M21	M22	M23	M24	M25	M26	M27	M28	M29	M30	M31	M32	M33	M34	
Action 1 Operation of the APP										M1				M2									
Action 2 Installation of the panels and operation						M3																	

M1 = First analysis of the n. of download (updated version of the APP) and of the questionnaires filled in as regards the rural area of S. Piero a Sieve
M2 = Second analysis of the n. of download (updated version of the APP) and of the questionnaires filled in as regards the rural area of S. Piero a Sieve
M3 = The user information panels are in fully operations

5. Local stakeholders and partnership (to be) involved during the Pilot Lab design, implementation and operation

Name	Typology <i>(e.g. Transport/Mobility Operators, Local Authorities, Service Contracting Authority, Funding Agencies/Bodies, Citizen associations...)</i>	Role
San Piero a Sieve Municipality	Authority	
Florence Metropolitan Area	Authority	
Trenitalia	Transport operator	

6. Contingency plan

Please list the risk that you envisaged in the implementation/operation of the Pilot Lab	Please indicate the likelihood the risk indicated will occur	Please indicate mitigation measures that you have plan for the risk indicated
Delay in the upgrading of the APP that could prevent a proper evaluation	Low	Frequent contact with the sw provider to sort out issues; warranties included in the contract