



WP.T3 - D.T3.2.3

**State of the Art Report about mobility problems
and policy challenges within ETP follower
regions - Province of Padova**

2021



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1. Introduction

Remote regions in central Europe share the same risks and issues related to the fact that they are located at the periphery of main transport networks. Inadequate and under-used services, excessive costs, lack of last-mile services and proper intermodality, poor communication and information to users and car commuting are some of the challenges that many central European regions face.

The SMACKER project addresses these disparities and promotes public transport and mobility services that are demand-responsive and that connect local and regional systems to main corridors and transport nodes.

Within SMACKER mobility issues related to peripheral and rural areas, main barriers are assessed and addressed and solutions drawn on the best international know-how are provided. SMACKER promotes demand-responsive transport services to connect local and regional systems to the main transport corridors and nodes. Soft measures (e.g. behaviour change campaigns) and hard measures (e.g. mobility service pilots) are used to identify and promote eco-friendly solutions for public transport in rural and peripheral areas, with the aim of achieving more liveable and sustainable environments and better integration of population to the main corridors. SMACKER helps local communities to re-design their transport services according to user needs, through a coordinated co-design process between local/regional partners and stakeholders; SMACKER also encourages the use of new transport services through motivating and incentivizing campaigns. The direct beneficiaries of the actions are residents, commuters and tourists.

Participation reflects the overall integration of citizens and groups in planning processes and policy decision-making and consequently the sharing of power. In particular, transport planning and transport relevant measures are often the subject of controversial discussions within the urban community. The concept of Sustainable Urban Mobility Planning has established the principle that the public should be included from the very beginning of the transport planning process and not only when the plans are largely completed and only minor amendments can be carried out. For that reason, public authorities need to open-up debate on this highly specialised and complex subject area and make participation a part of the planning process. In order to ensure participation throughout the process, the development of an engagement strategy would be necessary.

This deliverable “State of the Art Report” on mobility problems and policy challenges within ETP follower regions is the starting point for a better knowledge of the 10 selected Smacker Enlarged Transfer Programme (ETP) partners’ sustainable mobility challenges. The scope of these analysis is to map the needs, problems and expectations of each ETP follower region in low carbon mobility planning. Moreover, it defines the roles of ETP followers and policy leverages. It paves the way for local Action plans in ETP follower regions.



2. Project's area description

The present deliverable addresses the Province of Padova ETP area of the SMACKER project. The province of Padova is one of the 7 NUTS 3 areas making up the Veneto Region in Northeast Italy. More specifically, the present analysis focuses on the Southern part of the Province belonging to the catchment area of the “Madre Teresa di Calcutta” hospital¹, representing the key reference hub for the whole “Padova Sud” sanitary district. The structure, also known as Schiavonia Hospital, after the name of the nearest settlement, is located on the border between the municipalities of Este and Monselice, which together with the closely located Sant’Elena make up the core area of the present analyses (see municipalities areas with borders in red colour in the following figure). Overall, the catchment area of the hospital (i.e. the Padova Sud district) encompasses (including also the surrounding municipalities with borders in orange colour in the figure) 44 municipalities, with about 180.000 inhabitants and corresponding to approximately the 20% of the population of the province of Padova.

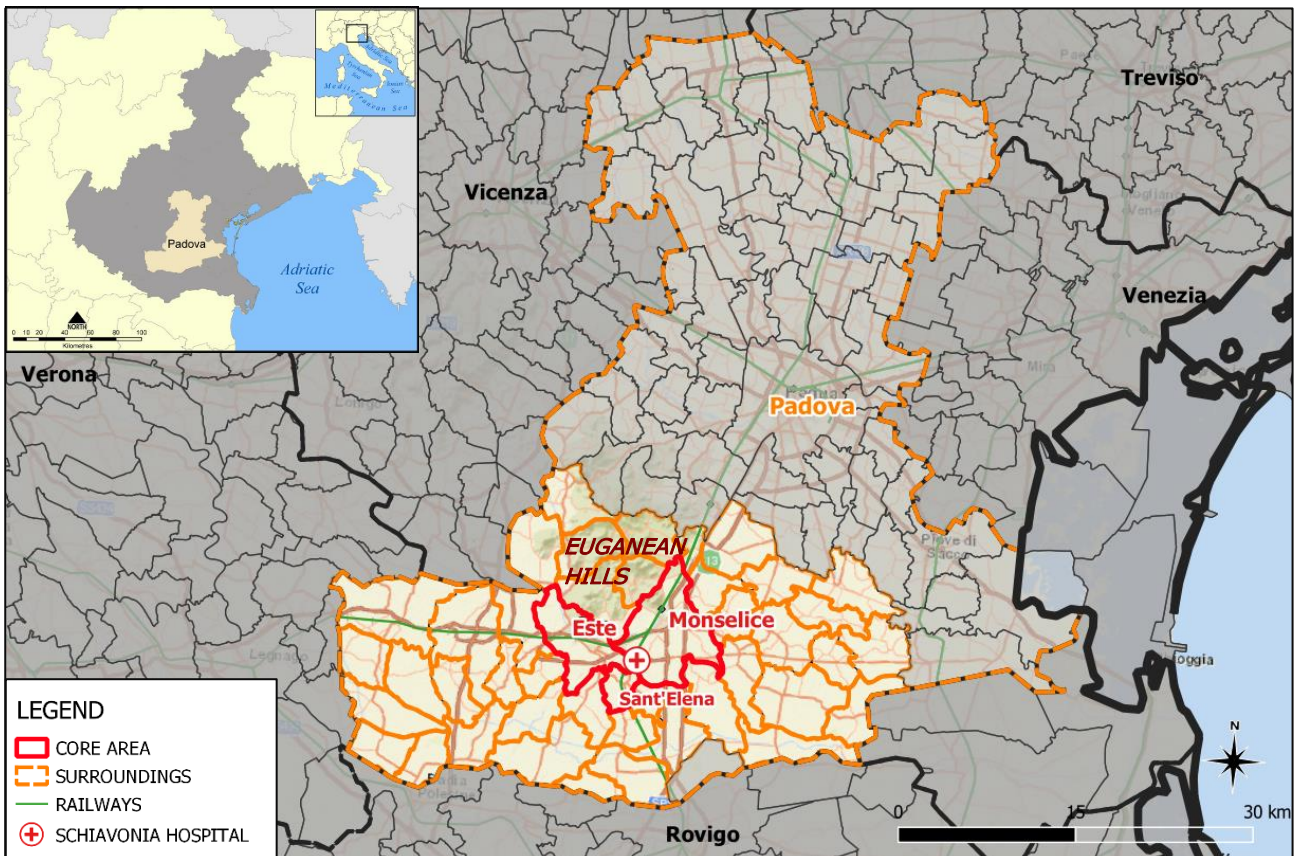


Figure 1. Map representation of the core pilot area as well as the surroundings

From the geo-morphological point of view, the territory mainly consists of a plain area, but it is also affected by the presence of the Euganean Hills (whose southern offshoots reach the main centres of Este and Monselice).

The area has a predominantly rural characterisation with the two bigger centres of more or less 17,000 inhabitants and a total number only five municipalities above 8,000 inhabitants (Monselice, Este, Conselve, Due Carrare and Montagnana).

¹ The “Madre Teresa di Calcutta” hospital (opened in 2014) is also named “Joint Hospitals Padova Sud” (“Ospedali Riuniti Padova Sud”) given the fact it was realised as to provide a sole structure where to concentrate the key services previously provided by different (older) ones located in the main centres (Monselice, Este and also Montagnana) of the district (“Distretto Padova Sud”) of the Local Health Authority (“Azienda - Unità Locale Socio Sanitaria”, AULSS).

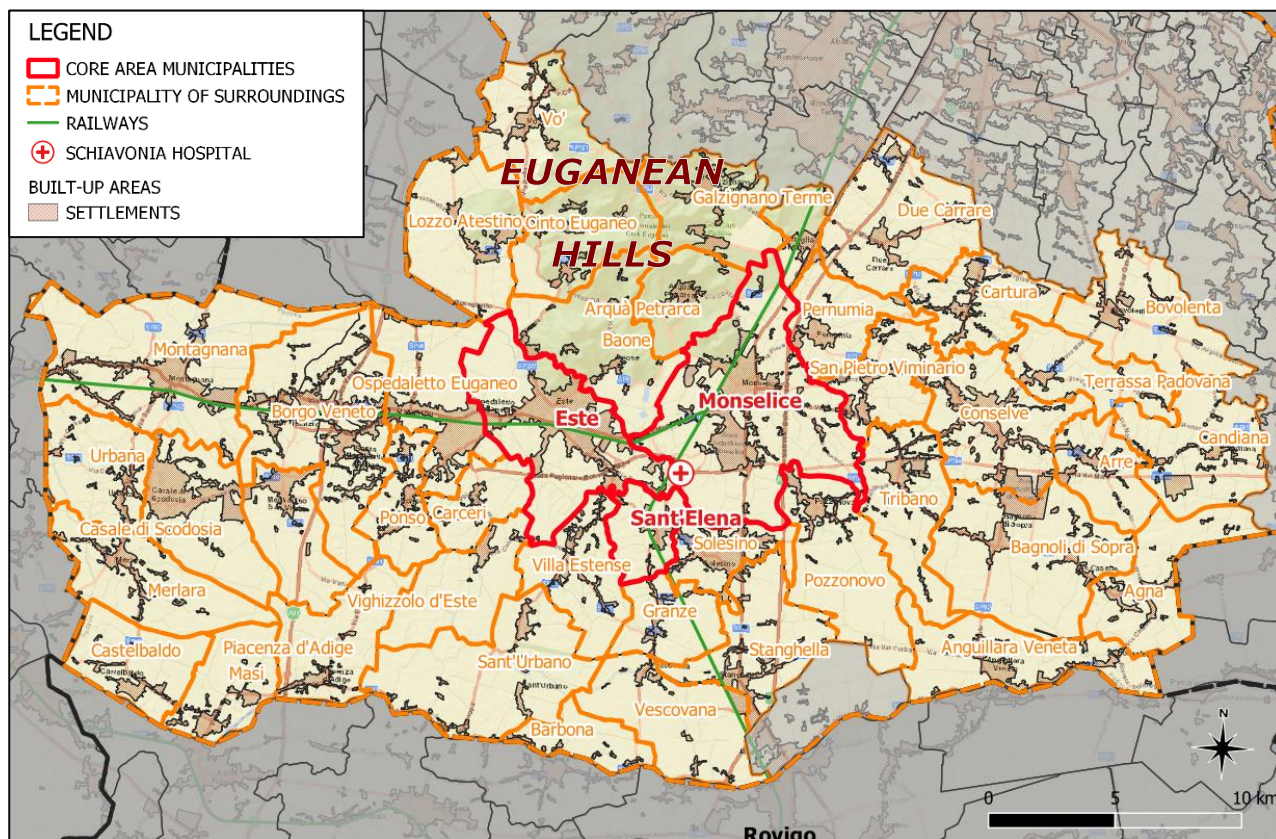


Figure 2. Map representation of the core pilot area as well as the surroundings - zoomed view

NAME	TOTAL POPULATION	0-9 years [%]	10-19 years [%]	20-29 years [%]	30-64 years [%]	65-79 years [%]	>80 years [%]	OVERALL POPULATION DENSITY
MONSELICE	17404	7,1%	9,1%	9,8%	48,6%	17,0%	8,3%	344
ESTE	16171	6,7%	8,6%	9,8%	47,4%	18,3%	9,2%	493
SANT'ELENA	2566	10,3%	10,9%	8,3%	52,6%	13,3%	4,6%	288
CONSELVE	10066	8,3%	9,7%	9,7%	48,7%	16,0%	7,6%	414
DUE CARRARE	8986	7,8%	9,8%	10,0%	52,3%	14,5%	5,6%	338
MONTAGNANA	8922	7,3%	8,8%	8,8%	48,8%	17,7%	8,7%	198
REMAINING SURROUNDING AREA	98107	7,5%	8,9%	9,3%	50,5%	16,4%	7,5%	166
WHOLE ANALYSED AREA	179089	7,5%	9,0%	9,4%	49,9%	16,5%	7,6%	203
WHOLE PROVINCE OF PADOVA	933700	8,2%	9,4%	9,8%	49,7%	15,7%	7,2%	437

Table 1. Population and demographic distribution in the analysed area in 2019². Source: elaborations on ISTAT data

The resulting population density of the overall catchment area is fairly below (less than a half) the average at provincial level. Moreover, as shown in table 1 a certain heterogeneity is also to be ascertained with

² In the columns reporting the percentages of population for the different age classes and the one with population density values the cells are highlighted through a colour scale (conditional formatting) ranging from blue (for lower values) to red (for higher values); intermediate values, in white colour, correspond to the averages at provincial level (reported in the last row).

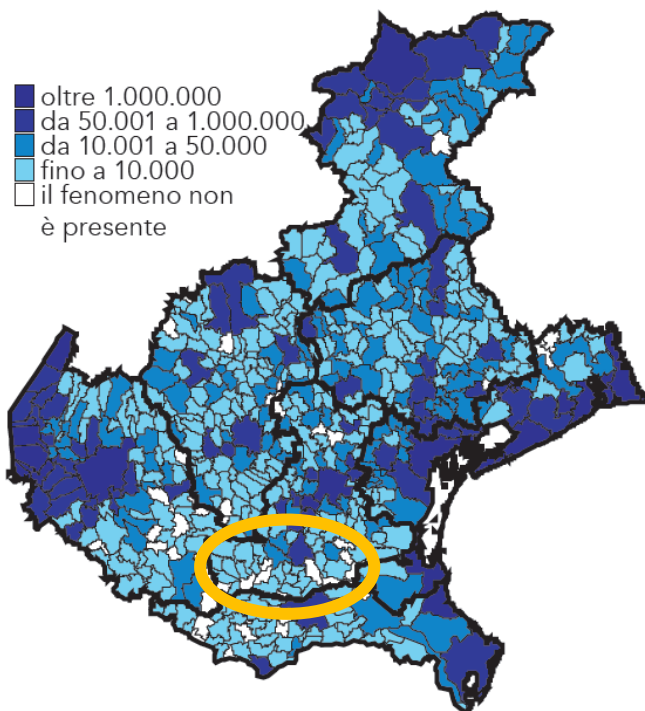


reference to the demographic characterisation within the analysed area. For instance, as regards to age distribution, main centres (esp. Este and Montagnana) are showing a higher share of elderly people (with the exception of Due Carrare, which is also characterised by the fact of belonging to the surrounding of the city of Padova).

As far as mobility for studying purposes is concerned, relevant flows of students between the two main centres and the smaller municipalities are to be registered. In this purpose, it is to underline that the majority of secondary schools are located in Este (2842 students) and Monselice (2155 students). University students, instead, are commuting towards main cities external to the analysed area (esp. Padova but also Venice, Ferrara and Bologna).

Concerning tourism and related mobility flows, some relevant attractions are located in the analysed areas, which includes part of the Euganean Hills Regional Park (“Parco regionale dei Colli Euganei”) as well as the remarkable historical centres of Este, Monselice and Montagnana (located in the westernmost part of the analysed area)³. Nonetheless, it is to registered limited number of tourists (especially in comparison with the overall Veneto region, the first region for presence of tourists at national level), as also depicted by the thematic map in Figure 3, showing on the yearly number of tourists in each municipality.

Fig. 6.1.4 - Presenze di turisti in strutture ricettive per comune. Veneto – Anno 2018



Fonte: Elaborazioni dell’Ufficio di Statistica della Regione del Veneto su dati Istat - Regione Veneto

Figure 3. - Thematic map on the number of tourists per municipality registered in 2018. Source: Veneto Region Statistics Unit

³ The Euganean Thermal Basin, the largest thermal basin in Europe, is mainly concentrated in the close municipalities of Abano Terme and Montegrotto Terme, which are external to the area analysed in this report.



3. Description of the mobility demand and needs (relations and attractors poles)

As far as transport demand is concerned, among the different components, a particularly relevant one is represented by (daily) systematic mobility, mainly corresponding to commuting for work or study purposes. In this regard, the results from the 15th National Census (carried out by ISTAT in 2011) provide a remarkable source of information.

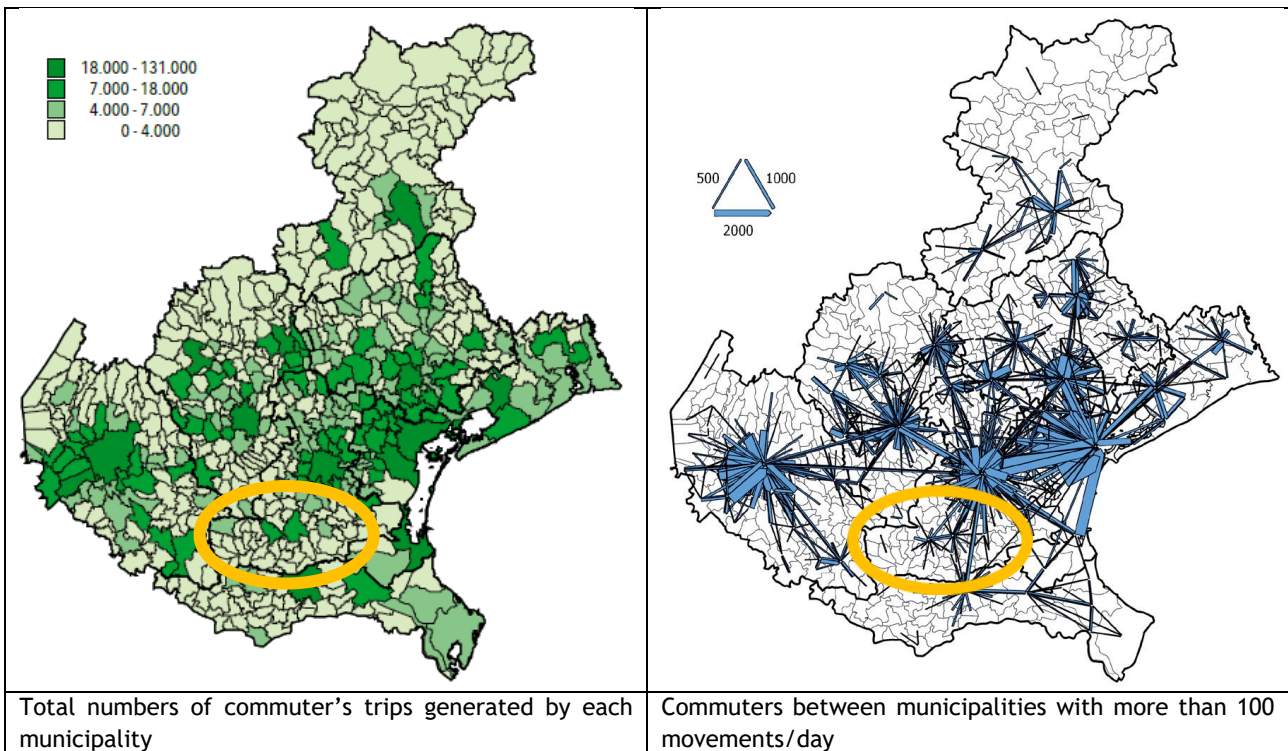


Figure 4. - Thematic maps on commuting mobility demand resulting from the National Census carried out in 2011. Source: Veneto Region Statistics Unit

The resulting demand flows are characterised by quite limited values, especially with respect to more urbanised areas of Veneto region. More in detail, Monselice and Este (as well as, to a less extent, Conselve and Montagnana) play the role of second-level polarities, thus attracting flows from the surrounding area municipalities but, at the same time, they are part of the basin of the city of Padova towards which many trips are destined (e.g. University students going to the University of Padova). Moreover, the city of Rovigo is attracting flows as well, especially from the closer municipality located in the Southern part of the analysed area.

Focusing more on the mobility patterns and behaviour related to the key focus of the present analysis (i.e. the Schiavonia hospital and its catchment area), remarkable and updated information has been recently collected through a survey carried out (in May 2019) within the synergic SaMBA - Sustainable Mobility Behaviours in the Alpine Region - project (co-funded by the Interreg Alpine Space Programme).

More in detail, the overall survey has included different tasks:

1. Interviews with users and visitors, made in correspondence of the exit of the hospital;
2. Interviews with healthcare personnel, made either in correspondence of exiting the main entrance of the hospital or by emailing;



3. Interviews with students of Science in Nursing degree courses as well as of the 1st level Master in Coordination of healthcare professions, who attend the hospital;
4. Counts of passengers boarding/alighting at each stop of the bus line E34 (see Figure 11 and Figure 12) serving the hospital and, more specifically, running along the Este - Sant'Elena - Schiavonia Hospital - Monselice route;
5. Interviews with passengers of the bus line E34;
6. Counts of in/out vehicle flows at the visitor parking lot as well as at the hospital employee parking lot;
7. Survey of the cars turnover rate at the visitor parking lot.

The key outcomes from points 1-5 are briefly summarised in the following part of this paragraph; 6-7, instead, are addressed in the next paragraph about accessibility.

Concerning the interviews related to the points 1-3, they were carried out on the basis of similar questionnaires encompassing some differentiation on the basis of the respondent categories (e.g. visitors vs healthcare personnel), as to ensure a well-tailored process. Obviously, the questionnaire of the on-board survey E34 bus line presented significant differences since the sample included all the users of the bus line carrying out the trip for different purposes (e.g. going to the hospital, going to school or other destinations) The total number of questionnaires filled-in is reported in the following table. The registered numbers allow to have a good coverage of different typologies and, consequently, representativity of the obtained results. In this purpose, with reference to the interviews at the hospital/via email (in comparison of the overall population) the percentual coverage reaches 10% of users (630 interviewed out of a total number of 3574 daily visitors) and about 84% of (university) students; a similar percentage (83.5%).

Category	Number of questionnaires	Number of questionnaires (%)	Trip purpose category	Number of questionnaires	Number of questionnaires (%)
Healthcare Personnel	73	12%	Hospital	65	61%
Students ⁴	201	32%	Secondary school	24	22%
Users	356	56%	Others	20	17%
TOTAL	630	100%	TOTAL	109	100%
Interviewed samples at the parking lot or via email			Interviewed sample of the E34 bus line on-board survey		

Table 3. Interviewed samples during 2019 surveys. Source: SaMBA project

Among other collected data, not reported in this brief summary, it is to recall the age of respondents. In this purpose, it is to ascertain a particularly low percentage (7%) of people more than 70 years old in the case of interviews to passengers of E34 line (maybe correlated to the difficulty of carrying out this kind of trip for elderly who would be rather prefer or need to be accompanied).

The origins of the interviewed are summarised in the following table with reference to the following three categories:

- Three municipalities of Este, Monselice and Sant'Elena (Core Area);
- The remaining surrounding municipalities belonging to the hospital catchment area (Surroundings);
- Municipalities located outside of the hospital catchment area (External).

⁴ i.e. The students of Science in Nursing degree courses as well as of the 1st level Master in Coordination of healthcare professions, who attend the hospital.



Category	Core Area	Surroundings	External	Category	Core Area	Surroundings	External
Personnel	37%	21%	42%	Interviews	29	28	7
Students	9%	25%	66%	Percentage	45%	44%	11%
Users	26%	58%	16%	Percentage within catchment area	51%	49%	-
TOTAL	22%	43%	35%				
Interviewed samples at the parking lot or via email				Interviewed sample of the E34 bus line on-board survey			

Table 4. Origins of the Interviewed samples during 2019 surveys. Source: SaMBA project

From the interviewed sample at the parking lot or via emailing, it is possible to ascertain a significant percentage of people coming from the external of the catchment area, especially in the case of the students (2/3) and of the healthcare personnel (though a significant 16% is also to register for the users).

Concerning the on-board interviews, being carried out in a line running in three core area municipality, the registered 45% value associated to the core area respondents is well-understandable. In this purpose, it is worth noting that (focusing the attention to the catchment area only) the three municipalities corresponding to 20% of the population account for an estimated 51% of the PT users of the line allowing to reach the hospital.

Moreover, a further detailed picture of the origin of people reaching the hospital is also provided by the following figure, belonging to a previous survey carried out in 2018.

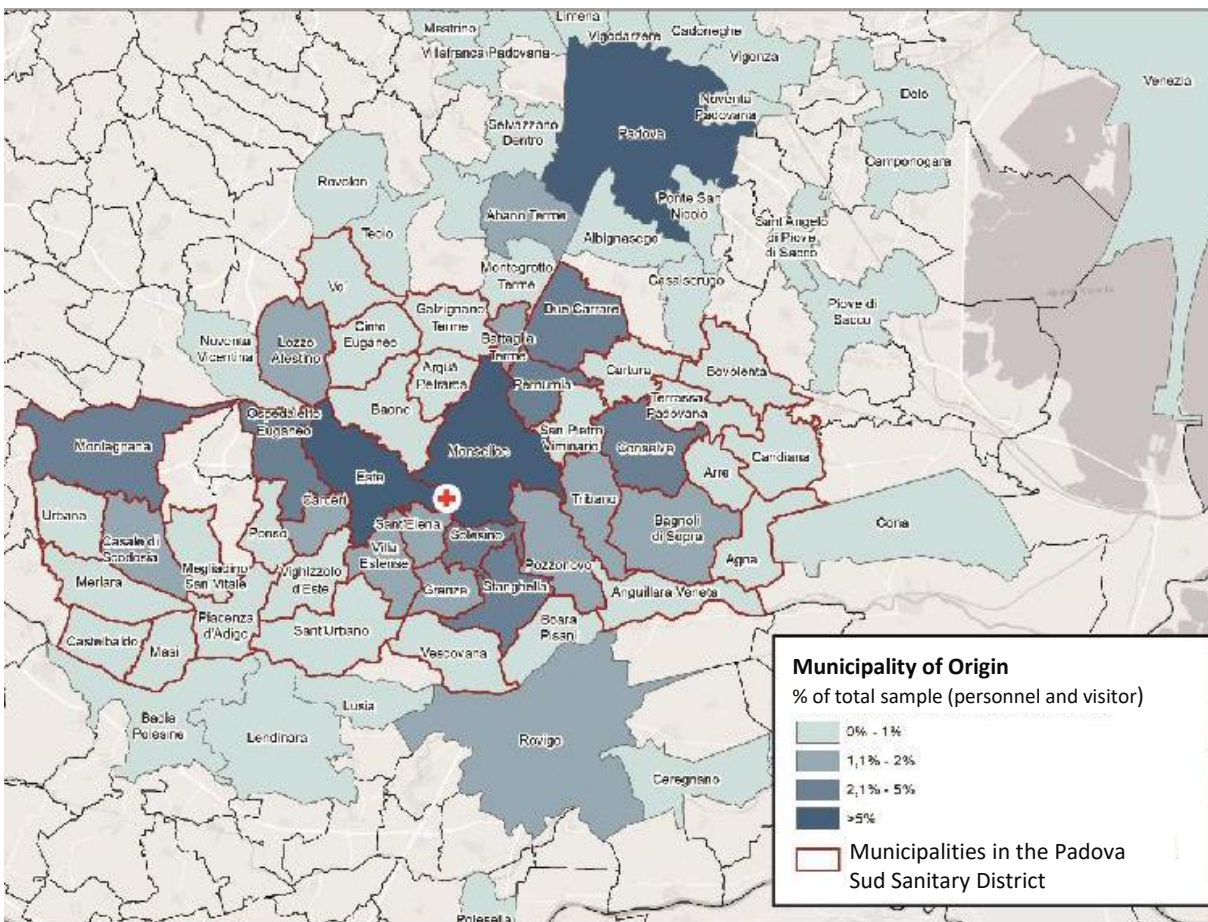


Figure 5. Catchment area of the Schiavonia Hospital (2018 survey)



As regards to the modal share, the following figures is showing a highly predominant usage of the car resulting from the interviewed samples at the parking lot (which is located also in correspondence of the bus stops) or via email. A positive aspect is a car-pooling attitude, especially among students, which contribute to fairly occupancy rate of cars (1.7 persons per car on average)

Category	Car	Bicycle	Bus	Train+bus
Personnel	87.7%	1.4%	9.6%	1.3%
Students	91.0%	0.0%	7.5%	1.5%
Users	96.6%	0.0%	3.4%	0.0%
TOTAL	93.8%	0.2%	5.4%	0.6%

Table 5. Mode of transport used for reaching the Schiavonia Hospital. Source: SaMBA project - 2019 surveys

The limited usage of public transport is also confirmed by the counts of passengers boarding/alighting the buses of the E34 line. During the whole day of survey, a total number of 207 passengers was registered, mainly boarding/alighting either at the hospital bus stop or at one of the two ends of the line (Monselice and Este). In particular, 65% of registered trips started or ended at the hospital.

Concerning the evaluations of key aspects to be improved for modal shift, the answers regarding the users needs, obtained from the interviewed samples at the parking lot or via email, and main reasons for not using the bus service reaching the Schiavonia hospital, gathered from on-board survey interviewed sample of the E34 bus line (see Figure 11 and Figure 12), are particularly relevant. In this purpose, it is underlined the key factor represented by current route, which is providing with a direct connection only a limited portion of the Padova Sud district population.

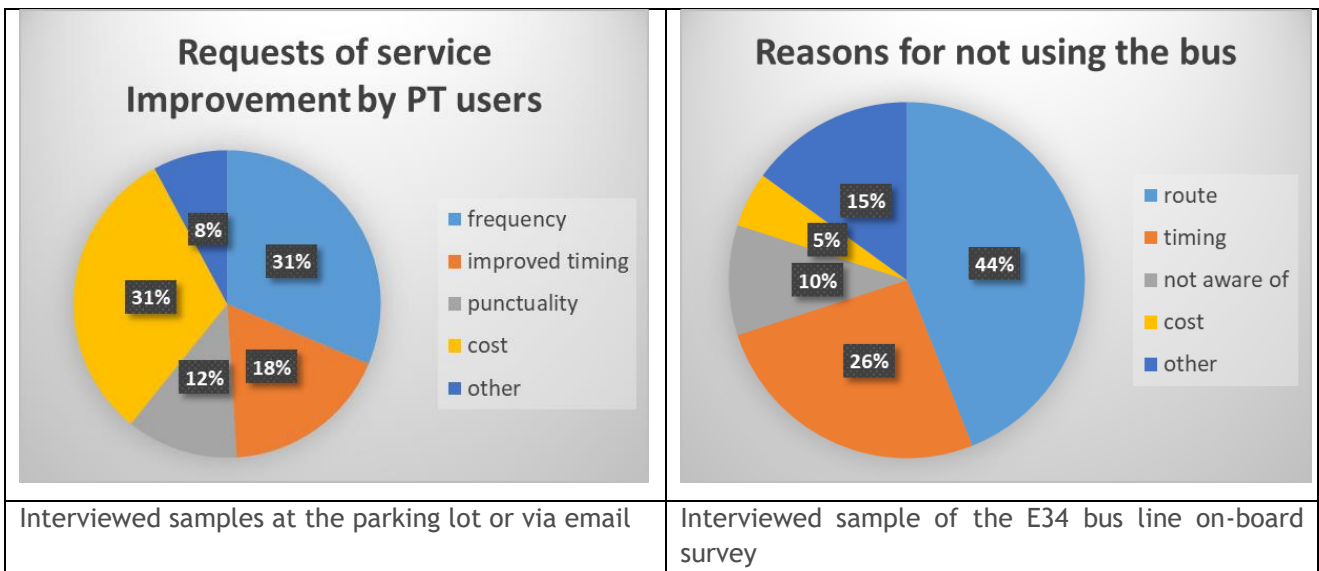


Figure 6. Assessment of user needs and main reasons for not using the bus service reaching the Schiavonia hospital. Source: elaborations on SaMBA project data - 2019 surveys.

4. Description of the public transport services and related multimodal accessibility

4.1. PT transport supply

The multimodal transport system is made up by the road and rail network shown in the following figures.

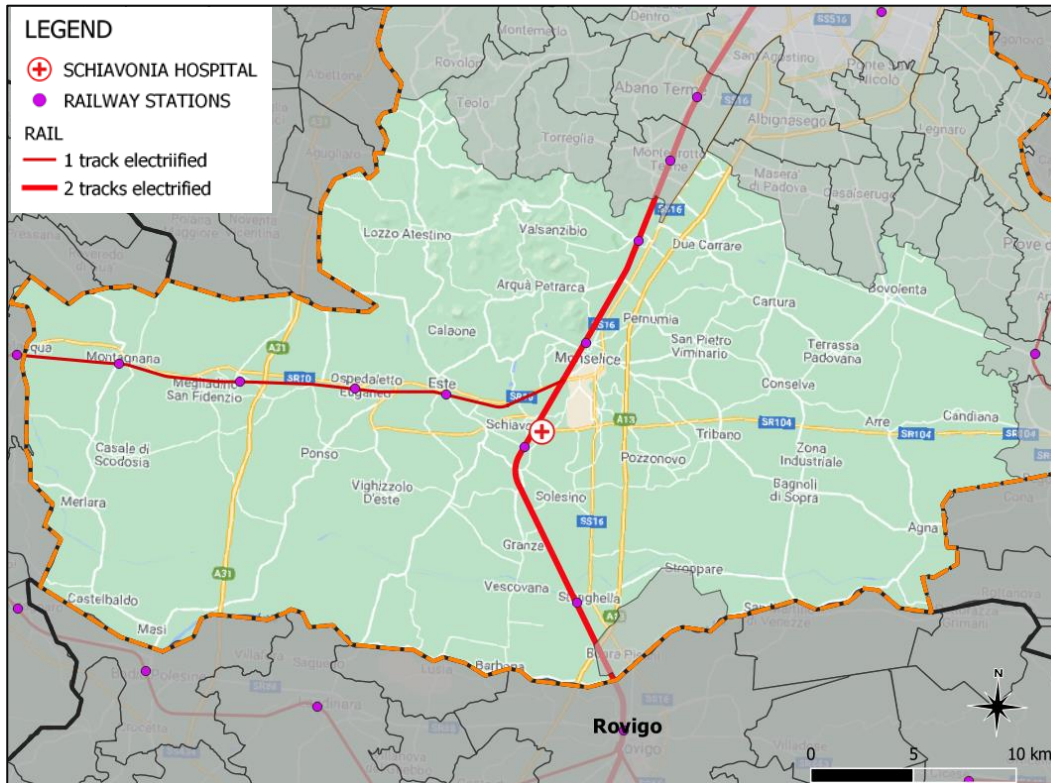


Figure 7. Multimodal transport network in the analysed area. Source: own elaborations with Google Maps® as basemap.

Concerning the rail network, it is to register the presence of the following two lines:

- Bologna-Padova, a 2-tracks electrified line served by about 30 daily regional passenger trains per direction, whose relevance is also certified by the fact that it is part of both the Mediterranean and Baltic-Adriatic corridor of the TEN-T core network;
- Monselice-Mantova, a single-track electrified line, linking in East-West direction the centres of Monselice, Este, Montagnana (with 13-14 daily passenger trains per direction) and further connecting to neighbouring provinces of Verona and Mantova in western direction.

The two lines are mutually interconnected in the Monselice station, which is the most important of the 8 stations located in the analysed area. The closest located to the Schiavonia hospital is the Sant'Elena d'Este station (near to the Sant'Elena centre but positioned in the Este municipality area). However, it is to underline that, though being located on the main line (Bologna-Padova), only lower speed regional rail services stop in this station (i.e. 13 daily trains per direction).

Concerning the road network, it is to register the presence of the following main roads along the North-South direction:



- A13 motorway Bologna-Padova, whose relevance is also certified by the fact that it is part of both the Mediterranean and Baltic-Adriatic corridor of the TEN-T core network;
- A31 motorway "della Val d'Astico", whose southern section crossing the analysed area has been accomplished in 2015;
- SS16 national road, linking Rovigo and Padova and passing through Monselice.

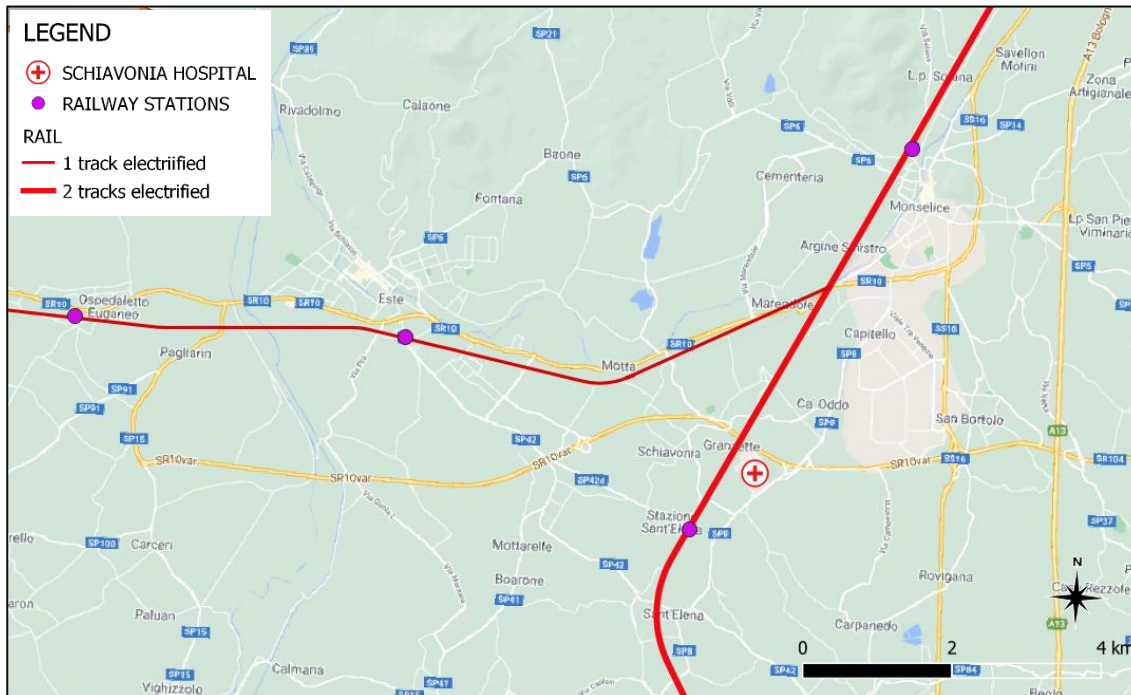


Figure 8. Multimodal transport network in the analysed area - zoomed view Source: own elaborations with Google Maps® as basemap.

In East-West Direction, instead, the following links of the secondary network are to be underlined:

- SR10 regional road, linking the main centres of Monselice, Este, Montagnana and further connecting to neighbouring provinces of Verona and Mantova in western direction;
- SR 104 linking Monselice with the Adriatic Sea coastal area;
- SR 10 Var, which (being aligned SR104) is providing a southern bypass of the Monselice and Este centres, which is planned to be further extended up to Legnago and the Verona province (i.e. in West direction), thus allowing also an interconnection with A31 motorway.

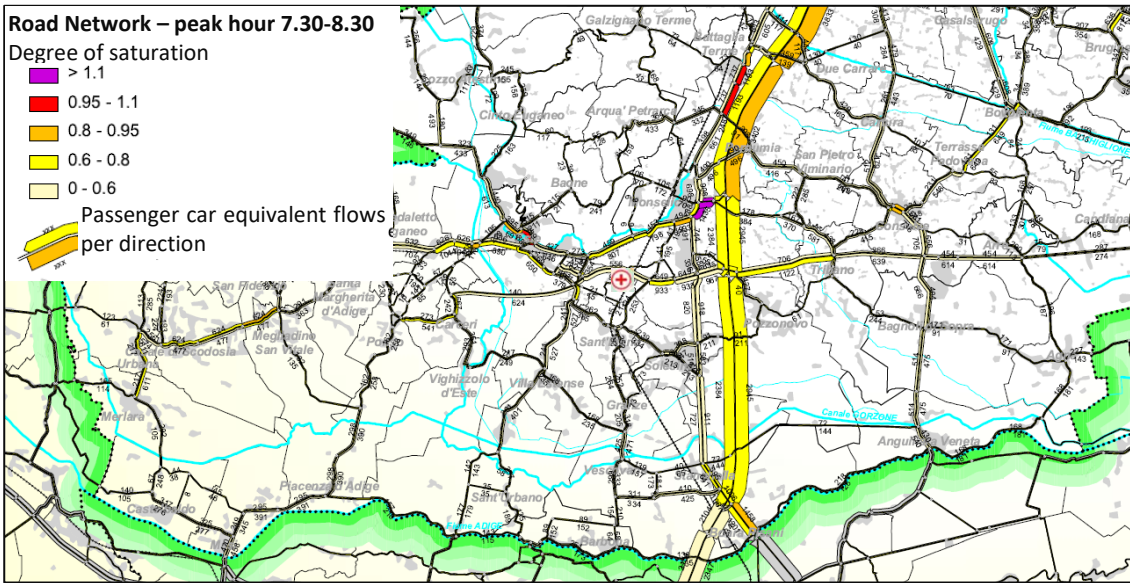


Figure 9. Road traffic assignment: flows and degree of saturation in the morning peak hour (reference year 2012). Source: Padova Province Road Transport Plan

Concerning traffic flows, as depicted in the 2012 road transport model, the higher values are associated with the A13 motorway. Moreover, remarkable flows are related in correspondence of the main centres, leading to high degree of saturation on certain links.

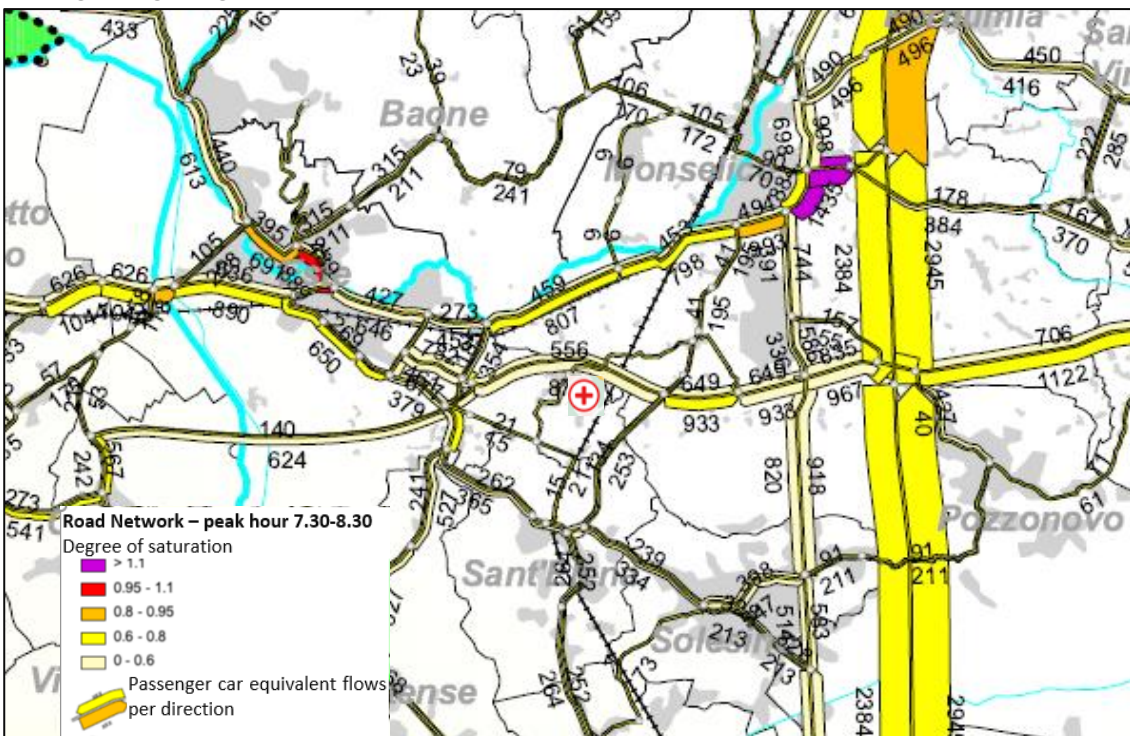


Figure 10. Road traffic assignment: flows and degree of saturation in the morning peak hour (reference year 2012) - zoomed view. Source Padova Province Road Transport Plan

The bus transport in the Padova province (both urban and extra-urban) is operated by Busitalia Veneto. In particular, in the following figures are representing the bus line providing the network which allows the multimodal accessibility to the Schiavonia Hospital. In particular, the Hospital is directly served by a line (E034) running along the Este - Sant'Elena - Schiavonia Hospital - Monselice route.



In particular, the hospital is directly served by 15/16 daily runs (belonging to line E34) in each direction. Concerning ticketing, a recent initiative, made through the support of the “SaMBA” project, allows passengers to travel with a discounted ticket (1 €) for trips having origin or destination at the Schiavonia Hospital.

Moreover, through interchanges, to be made especially in correspondence with the main bus station of Este and Monselice, a wider basin can be reached from/to the hospital (see lines and stops represented in blue colour). Furthermore, by directly reaching also the rail station of Monselice (being also served by 5 daily runs per direction of the E034 bus line) the intermodal connections can be achieved.

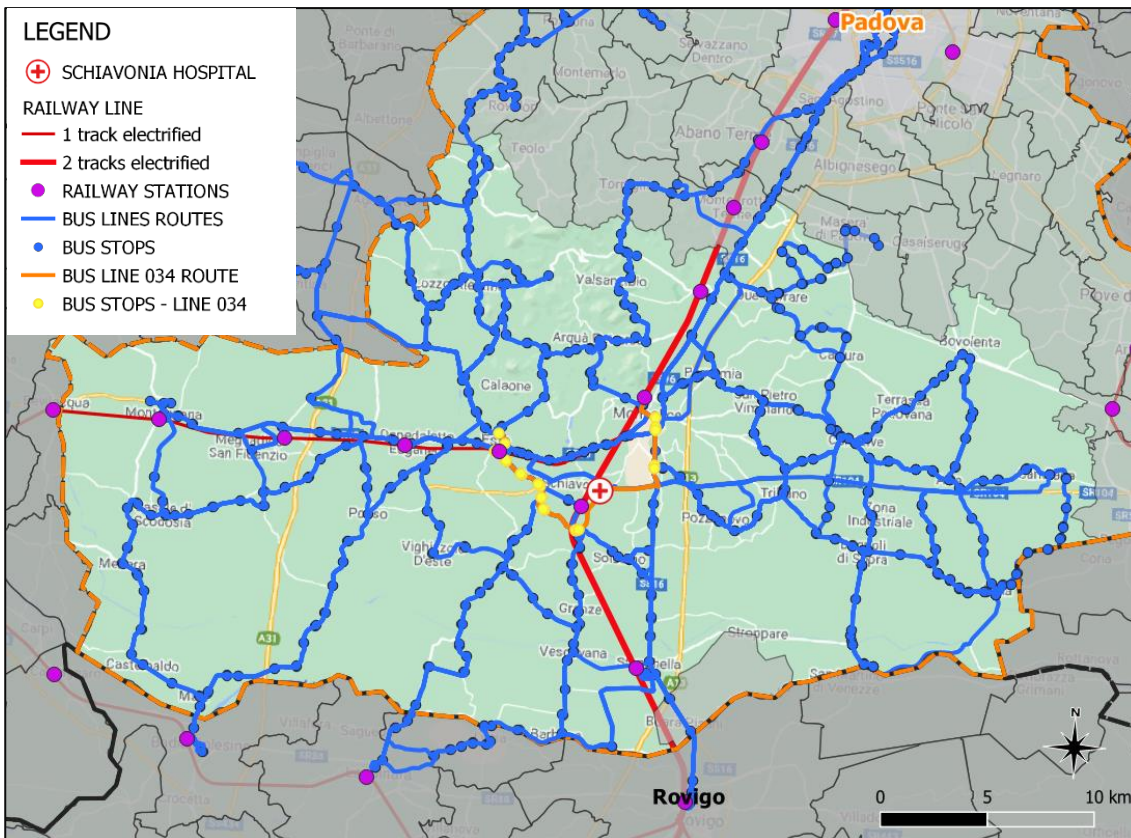


Figure 11. Local Public Transport Network serving the Schiavonia hospital catchment area (reference year 2019). Elaborations on data provided by Busitalia Veneto with Google Maps® as basemap.

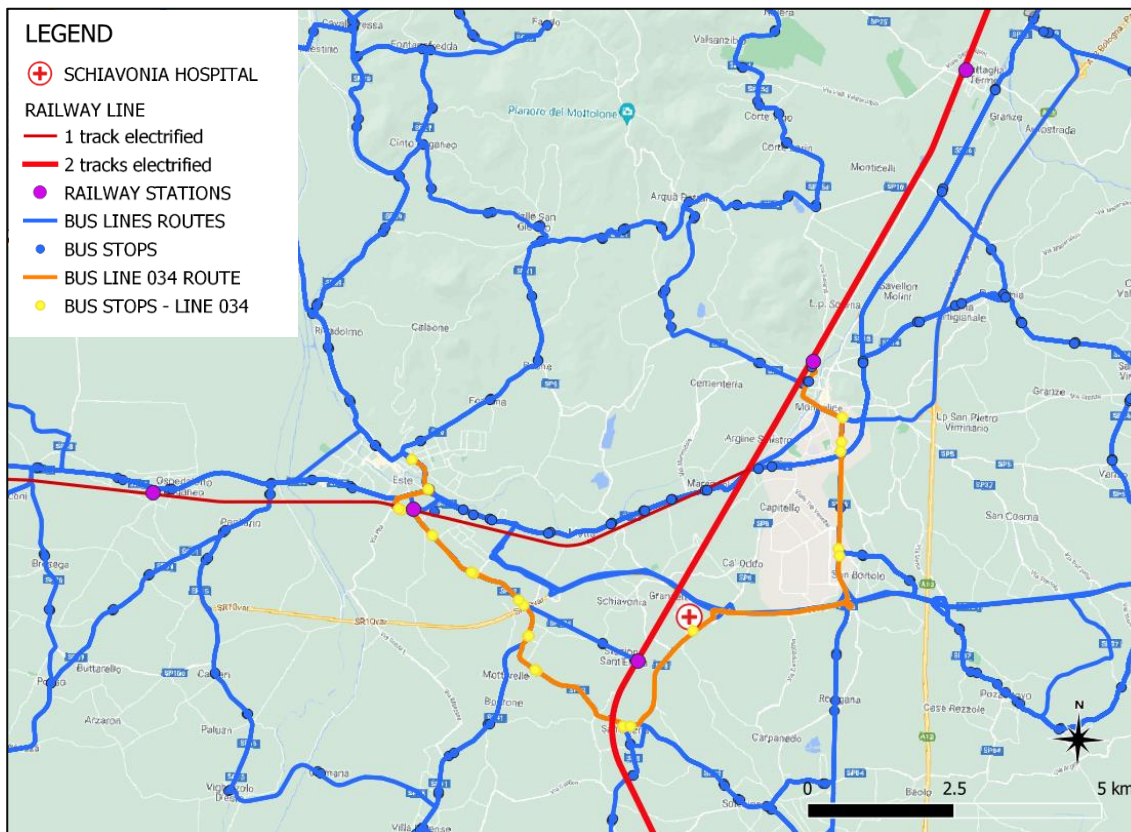


Figure 12. Local Public Transport Network (reference year 2019) - zoomed view. Elaborations on data provided by Busitalia Veneto with Google Maps® as basemap.

4.2. Accessibility

The multimodal accessibility of the analysed area (and, in particular, of the Schiavonia hospital) can be represented through an isochrone map (i.e. a thematic map that depicts the areas accessible from a point within certain time thresholds). In particular, the following Figure 13 and Figure 14 show isochrone maps providing a bus transit travel times computed using the open source routing engine OpenTripPlanner. In general, these isochrone maps show a remarkable variability between different parts of the day (for instance peak versus off-peak hours). Moreover, lower level of accessibility can be seen in the western part of the analysed area, especially in off-peak hours.

The representation in Figure 15, instead, is obtained by applying the same methodology and tools to car-only trips. Obviously, the resulting representation is covering wider areas due to the higher speed especially if compared to the different steps to be carried (reaching the bus stop and waiting and running times).

Moreover, focusing the specific aspects related to the hospital location it is to recall that it served by a bus stop located within the parking lot of the hospital (therefore with no safety issues concerning the bus stop itself as well as the path connecting to the hospital structure). On the other hand, car users can benefit from the convenient location along the key arterial represented by the SR10 VAR as well as by a high availability of parking lots (e.g. on daily basis an average 58% and 51% of free places was registered, respectively, in the visitors and the personnel parking lots).

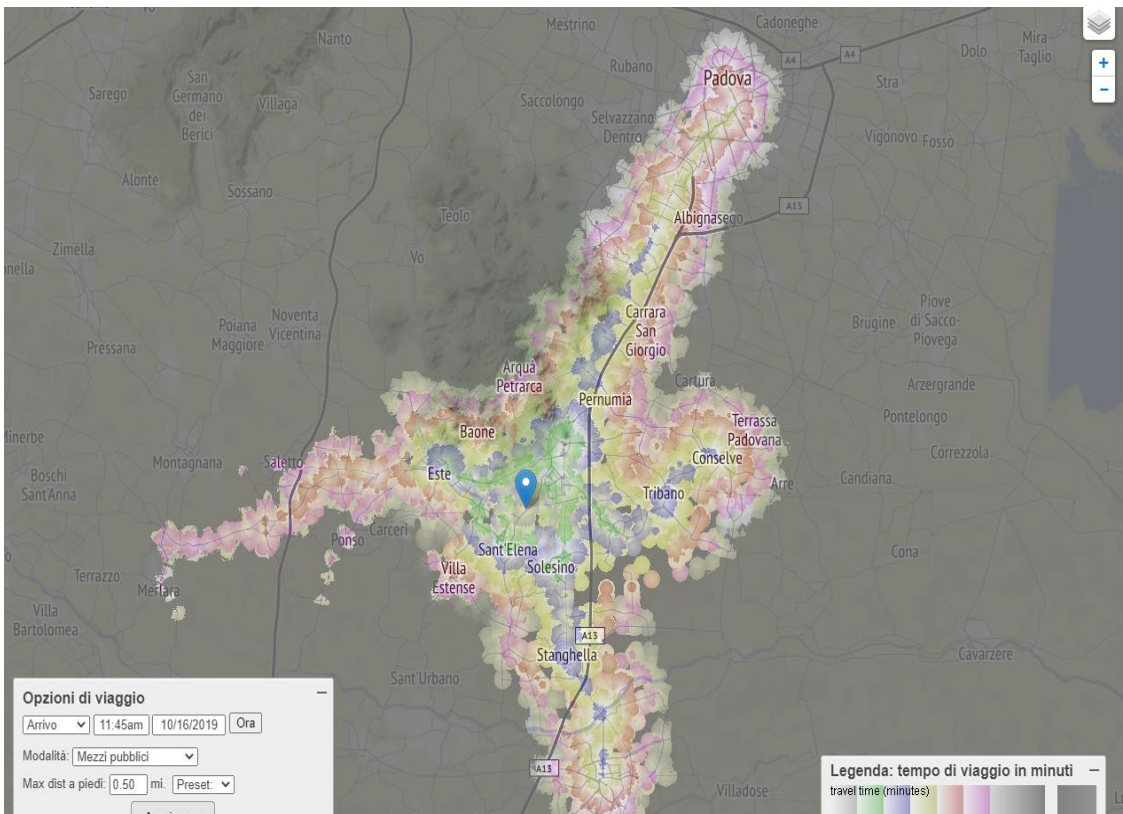


Figure 13. Example of isochrone map of the accessibility of the Schiavonia Hospital using bus service during the morning peak-hour (reference year 2019). Elaborations using OperTripPlanner on data provided by Busitalia Veneto and OpenStreetmap

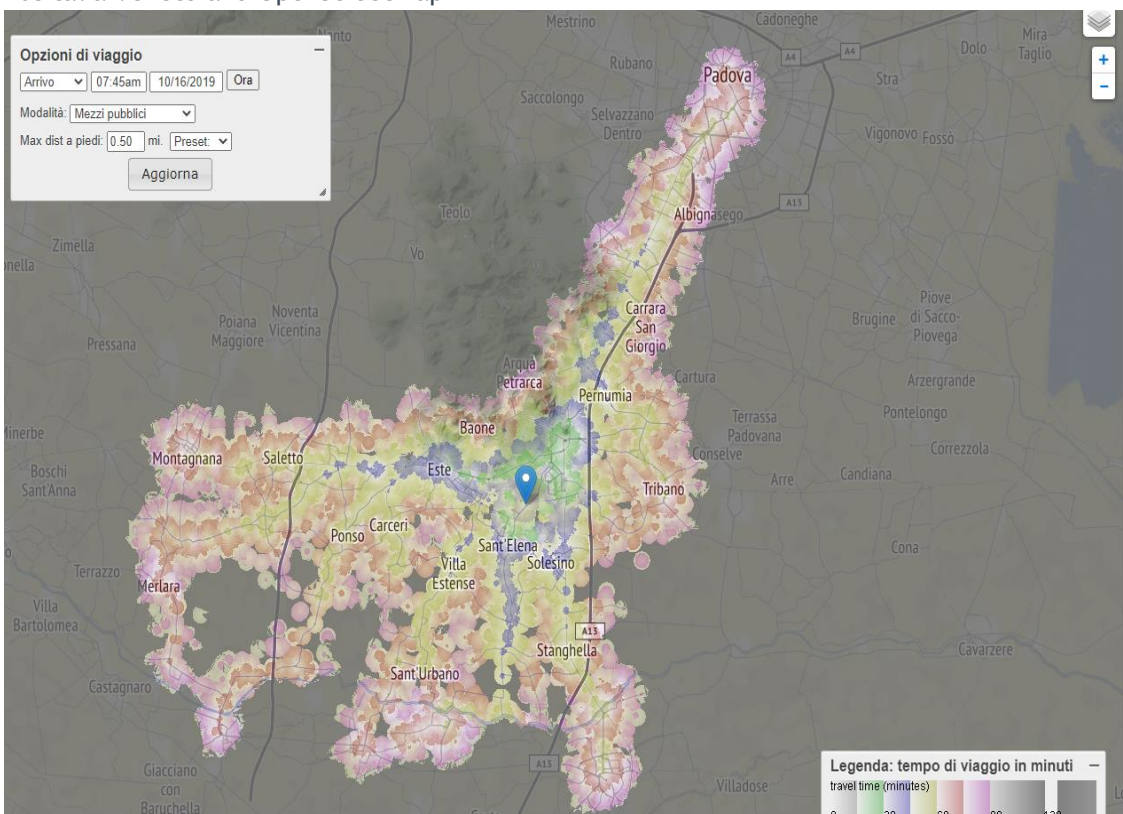


Figure 14. Example of isochrone map of the accessibility of the Schiavonia Hospital using bus service during the morning off-peak hour (reference year 2019). Elaborations using OperTripPlanner on data provided by Busitalia Veneto S.p.a. and OpenStreetmap

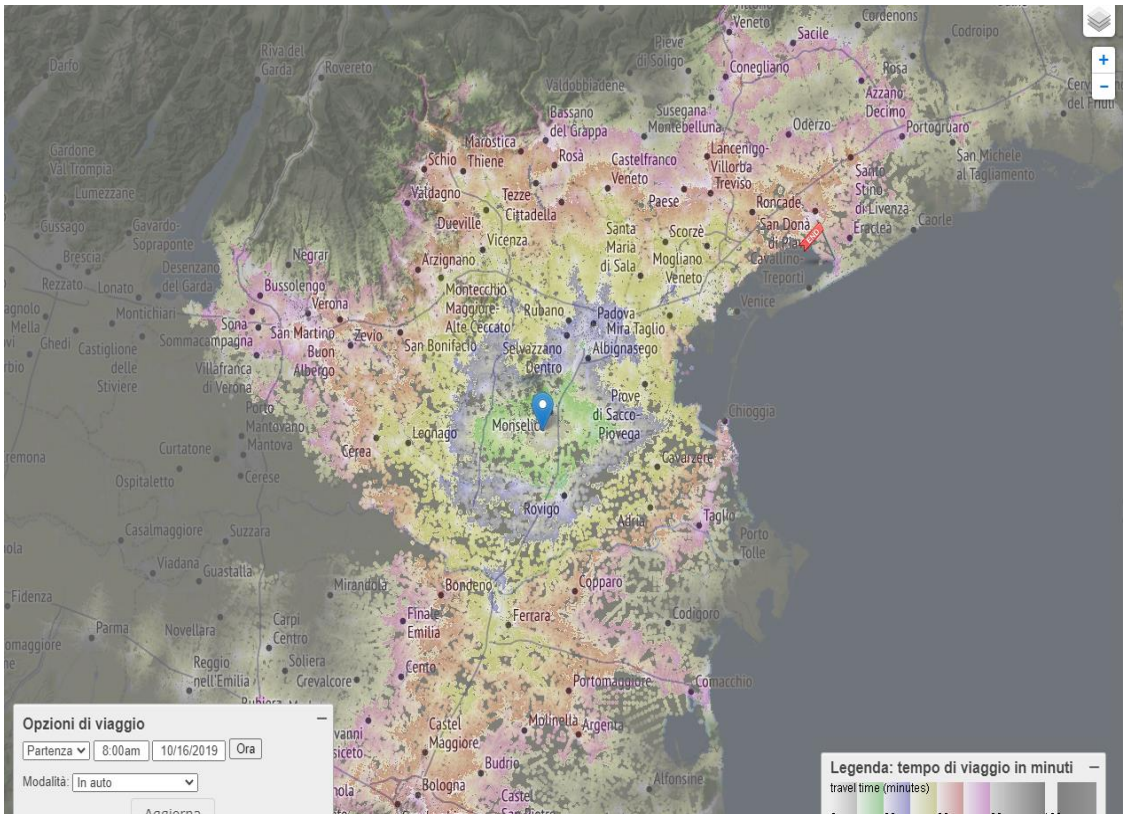


Figure 15. Example of isochrone map related to the accessibility by car of the Schiavonia Hospital (reference year 2019). Elaborations using OperTripPlanner on OpenStreetmap data



5. Mapping the governance framework and relevant actors

5.1. Planning and regulatory framework

As far as the regulatory framework is concerned, first of all, it is to recall that it is the result of a complex and still ongoing reform process that in Italy the Public Transport sector, which started in 1997 with the National Acts (law 59/1997 and Legislative Decree 422/1997), implementing the EU Directive 1831/1991. In Veneto, at regional level the key milestone is provided by the Regional Decree 25/1998.

A key goal of the reform was shifting from a concession-based system to a competitive tendering one, to be managed by Regions and the Local Administrations. Through the years such reform process has been accompanied by various national and regional provisions implementing the subsequent EU regulations (e.g. EU Reg. 1370/2007 and EU directive 2012/34).

Within this overall framework, the Province of Padova has specific competences with particular reference to tendering and overseeing the extra-urban services. A remarkable achievement, in this purpose is related to the recent accomplishment of the European tender procedure for the identification of a new single economic operator for the public transport for the entire urban and extra-urban area. Consequently, last December (2020) a contract was signed with the operator Busitalia Veneto S.p.a. for a 9-year period starting from September 2021. This new contract foresees relevant improvement and envisages the implementation of DRT solutions with particular reference to the catchment area of the Schiavonia Hospital.

This key milestone is also coherent with the provisions of the planning framework. In this purpose, it is to mention the recently approved (July 2019) new Veneto Regional Transport Plan. In fact, among other things, the regional transport plan is fostering the development of new solutions and pilots (such as DRTs) tailored on the needs of low-demand areas (see Action 3.4 of the Plan). Furthermore, the Regional plan calls for the improvement and renovation of minor stations (such as the Sant'Elena d'Este station located close to the hospital).

With reference to the road network planning, it is to recall the analyses and provisions of the 2012 Road Network Plan of the Province of Padua as well as the related actions of the Regional Plan, which foresees relevant interventions further enhancing the wider road network accessibility of the Schiavonia hospital:

- the prolongation in Western direction (up to Legnago in the neighbouring province of Verona) of the SR 10 VAR;
- New motorways exit “Monselice South” as well as adding a third lane (per direction) in the A13 motorway link between Monselice and Padova.

5.2. Identification of Stakeholders and key target groups

The key target groups for whom on-demand/DRT service is being developed correspond to the same three categories addressed during the surveys carried out in 2019 through the SAMBA project:

1. Users and visitors of the hospital;
2. Healthcare personnel working in the hospital;
3. Interviews with students of University of Padova belonging to Science in Nursing degree courses as well as of the 1st level Master in Coordination of healthcare professions, who attend the hospital;



With reference to the stakeholders to be involved as to ensure a successful development of the action plan and possible follow-up service, different categories are to be considered (see the following).

First of all, the institutional level includes, in addition to key actor represented by the Province of Padova, the Municipalities, starting from those of Este and Monselice. Another relevant institution is undoubtedly the Veneto Region administration, given its role in coordinating the overall public transport service and the specific provisions foreseen in the new Regional Transport Plan.

Obviously, the actual implementation will require a close cooperation with the public transport operator, Busitalia Veneto SpA, as well as a good coordination with Local Health Authority (“Azienda - Unità Locale Socio Sanitaria”, AULSS).

Moreover, taking into account the specific goal of addressing the needs of impaired users and elderly, different players and associations operating in this specific fields are likely to provide a relevant contribution to the further steps.

SMACKER TARGET GROUPS	REPRESENTATIVES
LOCAL PUBLIC AUTHORITY	Municipalities in the catchment area, especially Este and Monselice
REGIONAL/LOCAL PUBLIC AUTHORITY	Veneto Region, Province of Padova
INFRASTRUCTURE AND (PUBLIC) SERVICE PROVIDER	Busitalia Veneto S.p.A., Local Health Authority (“Azienda - Unità Locale Socio Sanitaria”, AULSS).
GENERAL PUBLIC	
EDUCATION/TRAINING CENTRE AND SCHOOL	University of Padova
OTHER	Elderly nursing and caring centres - RSA SANTA TECLA in Este; CSA (“Centro Servizi Anziani”) in Monselice;
SME	
HIGHER EDUCATION AND RESEARCH	
SECTORAL AGENCY	/
INTEREST GROUPS INCLUDING NGOS	Association of Public Transport users (Assoutenti), SOGIT (Soccorso Ordine San Giovanni Italia), Association of hospital Volunteers (AVO Monselice)
NATIONAL PUBLIC AUTHORITY	/
LARGE ENTERPRISES	/



INTERNATIONAL ORGANISATION, EEIG UNDER NATIONAL LAW	/
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Table 6. Key target groups and stakeholders.



6. SWOT analysis

Summarising what previously described, a SWOT analysis (see the following table) addressing the goal of improving accessibility of the Schiavonia hospital via public transport allows to provide a synopsis of different aspects (strengths, weaknesses, opportunities and threats). Hence, it effectively outlines a comprehensive assessment paving the way following ETP SMACKER technical activities related to the Action Plans development.

First of all, it is to mention the existing multimodal network providing a relevant backbone for the development of further services. In this purpose, it is also to recall the presence of a station (Sant'Elena d'Este) at less than 2 km from the hospital as well as the main one located in the centre of Monselice.

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> • Existing multimodal transport network • Closely located railway station (esp. Monselice and Sant'Elena) • Relevant basin of (also potential) demand specifically related to the hospital as well as to other segments (e.g. students) 	<ul style="list-style-type: none"> • Appeal and accessibility of the private cars alternative • Difficulties of traditional public transport solutions in matching the needs of (potential) users (e.g. frequencies and travel time) • Exchanges needed for reaching the hospital through bus services • Limited multimodal accessibility, esp. from/to the western part of the analysed area
OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> • Synergies with other EU projects (esp. SAMBA) • Novelties being brought-in by new public transport service contract • Addressing the impaired and elderly potential users • Future improvement of rail infrastructures (e.g. S. Elena Station) 	<ul style="list-style-type: none"> • New realisations further enhancing car-based accessibility • Future developments of COVID-19 pandemic

Table 7. SWOT analysis

Obviously, a key weakness point for the choice of intermodal solution is related to the high accessibility and performances associated to the car alternative (both in terms of travel time and parking availability). In this regard, it is also to report some internal weaknesses of the current bus service in terms of frequency and timing as well as to limited coverage of direct connection for reaching the hospital without interchanges (i.e. the related line, E34, is covering only 3 municipalities of the catchment area). These aspects are particularly evident (see isochrones map in previous part of this report) with reference to the western part of the analysed area.

Among opportunities to be underlined, an already exploited one is definitely represented by synergies with other cooperation activities, such as the project SAMBA, whose survey have provided relevant information for the further steps and action plan development. Another relevant opportunity is related to the upcoming start of implementation of the new Public Transport service contract (from September 2021), bringing relevant novelties and envisaging the implementation of DRT services. Moreover, possible improvements are also related to further addressing the needs of specific (potential) users category such as the elderly people,



thus giving also a particular relevance from the social point of view to the present initiative. Furthermore, interventions enhancing rail infrastructures (esp. with reference to the Sant'Elena) could also provide room for new/improved intermodal alternatives.

Potential threats could worsen specific weaknesses related to the higher appeal of car-related alternatives. In this purpose, it is to recall new infrastructures realisation directly linking to the hospital area (e.g. the further extensions of the SR10 VAR and the planned A13 Motorway exit Monselice South). More in general, an element potentially bringing some uncertainties in the following months is obviously related to the future developments of the COVID-19 pandemic.



7. Policy challenges

The policy challenges are mainly related to the issues that motivate the participation of the Province of Padova in the SMACKER ETP program. In particular, the objective of starting the implementations of new well-tailored services, in compliance with strategic goals aimed to efficiently address the needs of the analysed area with particular reference to the intermodal and sustainable accessibility of the Schiavonia hospital. In this purpose, as policy objectives and specific interest for the deployment of Demand Responsive Transport solution(s) in the ETP project area is concerned, the main objectives are to increase the use of public transport, contextually reducing the use of private car, among hospital users and to attend the organization of public transport passing from a traditional system (rigid) to a more flexible system (DRT).

In this purpose, the Province of Padova, as part of the SMACKER project, wants to verify if the DRT service planned, but not yet activated, could effectively operate or if it needs to be modified. This relevant and challenging goal can be tackled also profiting from synergies with other cooperation projects developed, such as "SaMBA - Sustainable Mobility Behaviours in the Alpine Region", an Alpine Space project focused on the public transport service towards an hospital area which analyses the different business model to be applied in order to satisfy users needs. Within this project a recent survey has allowed to provide a clear picture of the current demand, including the mode choices and preferences. Among others, a particular aspect to be tackled is enhancing the multimodal accessibility from/towards the different parts of its catchment areas. A more specific aspect, that could be further explored and tackled through a DRT service is the need for facilitating the usage of the services by the elderly and impaired.

In order to address these needs, a remarkable opportunity is definitely represented by the provisions of the new contract of bus services, which will come into effect starting from next September 2021. In fact, it is specifically envisaging the development of DRT services in the analysed context, together with the development of various improvements aiming to facilitate smooth intermodal transport through enhanced user information provision and facilitated ticketing (e.g. on-board facilities).



8. Conclusions and addresses for the Action Plan development

The present deliverable has addressed the Province of Padova ETP area of the SMACKER project focusing on the catchment area of the Schiavonia hospital, representing the key reference hub for the whole “Padova Sud” sanitary district. Overall, the catchment area of the hospital (i.e. the Padova Sud district) encompasses 44 municipalities, with about 180.000 inhabitants and corresponding to approximately the 20% of the whole population of the province of Padova. The hospital is located on the border between the two bigger municipalities of the catchment area, Este and Monselice, which together with the closely located Sant’Elena make up the core area of the present analysis. The route of the bus line serving the hospital is passing through only these three municipalities. Moreover, the core area is endowed with three rail stations (the more relevant is Monselice station, while the closer to the hospital is Sant’Elena d’Este, at a distance of less than 2 km).

Another relevant aspect is the availability of road infrastructures and parking facility in the hospital site, allowing for a high level of car-accessibility (which is, obviously, highly concurrent to more sustainable intermodal transport solutions). In this purpose, as policy objectives and specific interest for the deployment of Demand Responsive Transport solution(s) in the ETP project area is concerned, the main objectives are to increase the use of public transport, contextually reducing the use of private car, among hospital users and to attend the organization of public transport passing from a traditional system (rigid) to a more flexible system (DRT). This possibility is particularly topical, also in the light of the new Public Transport contract coming into force next September 2021, which envisages relevant innovations to be implemented (including DRTs). This relevant and challenging goal can be tackled also profiting from synergies with other cooperation projects developed, such as “SaMBA - Sustainable Mobility Behaviours in the Alpine Region”, whose recent surveys has allowed to provide a clear picture of the current demand related to the hospital, including the users transport mode choices and preferences. Among others, a particular aspect to be tackled is enhancing the multimodal accessibility from/towards the different parts of its catchment areas (e.g. in the western one). A more specific aspect, that could be further explored and tackled through a DRT service, is the need for facilitating the usage of the services by the elderly and impaired people (e.g. by involving related stakeholder operating in the social sector providing services for the senior citizens).



9. References

The main references are:

- SAMBA project (Alpine Space Programme)
- ISTAT national census data
- Veneto Region Statistics Unit
- Veneto Regional Transport Plan (2019)
- Province of Padova Road transport Plan (2012)
- OpenStreetMap



10. Annexes

10.1. Annex 1 - Stakeholders list

See attached file ANNEX_1_Stakeholder_List_en_PD.xlsx