



# WP.T3 - D.T3.3.2

---

Regional Action plans to better integrate  
peripheral areas (Bologna, IT)

---

Final Version  
06 2022



|                             |   |
|-----------------------------|---|
| Dissemination level         | <i>Public</i>   |
| Activity                    | <i>A.T3.3 - Action plan for a better integration of peripheral areas and for behavioural change</i> |
| Deliverable                 | <i>D.T3.3.2 - Regional Action plans to better integrate peripheral areas (Bologna, IT)</i>          |
| Coordinating partner        | <i>SRM</i>  |
| Contributors                | <i>Marco Amadori, Chiara Lepori, Giuseppe Liguori</i>   |
| Due date of deliverable     | <i>28.02.2022</i>   |
| Actual date of deliverable  | <i>15.06.2022</i>   |
| Status (F: final, D: draft) | <i>Final</i>  |
| File name                   | <i>090_SMACKER_D-T-3-3-2_2022-06-15_Final</i>   |



# TABLE OF CONTENTS

|  |    |
|--|----|
| 1. Introduction .....  | 4  |
| 2. Aims .....  | 5  |
| 3. Stakeholders to be involved .....   | 6  |
| 4. Key actions to solve the problems and to reach the proposed objectives..... | 8  |
| 5. Implementation time plan .....  | 11 |
| 6. Risk analysis .....   | 12 |
| 7. Funding resources .....   | 15 |
| 8. Key action monitoring scheme .....  | 16 |
| 9. Key stakeholders' involvement strategies .....                              | 20 |
| 10. Conclusions.....   | 21 |
| 11. References .....   | 22 |



# 1. Introduction

Remote regions in central Europe share the same risks and issues related to being 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 the challenges that many central European regions face.

The SMACKER project addresses those disparities to promote 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, and main barriers are assessed and addressed by providing solutions that draw on the best international know-how. SMACKER promotes demand-responsive transport services to connect local and regional systems to 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 to achieve more liveable and sustainable environments, better integration of the population to main corridors and better feeding services. 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; SMACKERS 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 share 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, development of an engagement strategy would be necessary.

This document is the Regional Action Plan for the Bologna SMACKER pilot area. It is based on regional and transnational strategies developed in SMACKER WP.T1 and on joint reflection/evaluation on the Bologna pilot results achieved through the pilot action developed in WP.T2. The Regional Action Plan serves the Regional Government to support common practices in the area and provides hints for planning a better integration of the peripheral area/s in the regional transport system. It also prepares public discussion for mainstreaming the SMACKER achievements into the local policies.

The Bologna pilot has developed a DRT service in mountainous areas to satisfy the mobility needs of both tourists and residents. In particular, the tourists' needs are mostly addressed during the weekends and to cover the last mile from train stations to touristic attractions / facilities, while the residents' requirements are predominantly covered during weekdays and off-peak hours, with a service linking the main towns with small villages of the Municipality area).

This Regional Action Plan has the objective to provide a standardized but non-exhaustive list of actions and tips to be used to implement a new DRT service in areas with the same characteristics of the pilot one.

This document is organized following the common SMACKER approach and framework provided in D.T3.3.1. It is composed by ten chapters.

Chapters 2 to 10 present each one a section of the Regional Action Plan, which detail its Aims, Stakeholders to be involved, Key actions to solve the problem/s and to reach the proposed objective/s, Implementation time plan, Risk analysis, Funding resources, Key action monitoring schemes, Key stakeholders' involvement strategies in the medium/long terms, Conclusions.



## 2. Aims

This chapter presents the objectives and priorities of the Regional Action Plan in terms of a better integration of the SMACKER pilot at regional level and of a better accessibility of peripheral areas to the TEN-T core network.

In the specific Bologna pilot case, the main objectives and priorities of the mountainous areas are quite the same throughout the whole Emilia Romagna Region, and are listed in the Table below. The list is to be considered no exhaustive as it could be integrated with specific objectives in the various regional context.

Furthermore, it is noted that the objectives and priorities could have different levels of relevance depending on some peculiar characteristic of the mountainous area of interest.

**Table 1: Main objectives/priorities of the Regional Action Plan in the Bologna regional mountainous areas**

| MAIN OBJECTIVES / PRIORITIES   | RATIONALE  |
|--|--|
| Improve the quality and quantity of Public Transport service in mountainous areas                    | In mountainous areas, due to the large extension of the territory and the low population density, traditional public transport services are not economically viable nor effective. In particular, the mobility requests usually remain uncovered, except for education or work-related needs (commuting mobility). Off-peak hours and weekends usually suffer from a low mobility offer, with a consequent dependency on car.  |
| Reduce the attractiveness gap between mountainous areas and main city centres for tourist activities | The low mobility offer and the distance from the main mobility centres create an attractiveness gap among different areas, and bring to a concentration of activities and services in the main cities. However, also the peripheral areas have interesting tourist offers and attractions, which can be reached and visited only with an efficient connection with the main mobility hubs.   |
| Stop the depopulation of mountainous areas   | The lack of facilities at local level and the low mobility offer create a vicious circle that can bring to increasing depopulation of mountainous areas. An adequate supply of services, including PT <sup>1</sup> services, is the basis of restocking policies in peripheral and rural areas.  |
| Optimize economic and operational resources  | In peripheral areas there is often room for increasing PT services by optimizing the exploitation of existing resources already on site, such as vehicles and drivers operating school services during peak hours but not busy during off-peak hours. This may allow the implementation of services at reduced marginal costs.   |
| Satisfy not systematic travel needs  | Mountainous areas are generally characterized by a heavy sprawl of villages and residences, and the needs for trips, especially during off-peak hours, are therefore not systematic nor distributed throughout the whole territory. This implies difficulties in organizing regular PT services that usually serve "strong" demand corridors, and the need for organizing services with a high level of flexibility: during the day, during the week and along several routes and stops. |

<sup>1</sup> Public Transport



### 3. Stakeholders to be involved

This chapter illustrates the main stakeholders to be involved in developing DRT transport solutions in mountainous areas in the Emilia Romagna Region.

Based on the Bologna pilot experience, the table below provides a list of these stakeholders who should be engaged in order to reach the objectives listed in the previous chapter.

In the Bologna pilot implementation, a Local Mobility Forum (LMF) was established and several meetings were organized during the full duration of the project. The LMF was participated by stakeholders involved in the pilot on the basis of their specific expertise and technical/political mandate. The continuous exchange of feedback and ideas was fundamental during each phase of the pilot: pre-planning, planning, fine-tuning and evaluation.

The experience from SMACKER Bologna pilot implementation suggests identifying two different levels of the LMF: a Permanent LMF, composed of the most relevant stakeholder, which have the power to directly act on the pilot service features, and an Extended LMF, including local operators and the public, which can have a more direct contact with potential users.

Based on the above, the table below details the roles of all the indicated stakeholders, clarifying their expected contributions towards a DRT service establishment in the mountainous areas.

**Table 2: Stakeholder to be involved in developing DRT transport solutions in mountainous areas in the Emilia-Romagna Region**

| SMACKER TARGET GROUP          | STAKEHOLDERS                             | KEY ROLE(S)   | COLLATERAL ROLES  |
|-------------------------------|--|---|---|
| <b>LOCAL PUBLIC AUTHORITY</b> | Local government / Metropolitan city     | Ordering and supervising local PT services and DRT services | -   |
|                               | Municipalities                           | Providing information about local specific mobility needs   | Promoting the service at local level (residents).<br>Possible financier of public transport and DRT services at local level.  |
|                               | Local Public transport authority         | Developing the concept of DRT                               | Managing the PT Contract of Service and awarding additional services.<br>Coordinating activities among stakeholders.<br>Fundraising at local, regional and European level.  |
|                               | Institutional Touristic promotional body | Managing touristic destinations                             | Coordinating the touristic activities and tour operators of the area.<br>Promoting mobility to and from tourist sites.<br>Offering up-to-date information on the tourist offer and report the specific needs of tourist mobility. |



| SMACKER TARGET GROUP                       | STAKEHOLDERS                                   | KEY ROLE(S)  | COLLATERAL ROLES  |
|--|--|--|---|
| INFRASTRUCTURE AND PUBLIC SERVICE PROVIDER | Public transport operator (bus) <sup>2</sup>   | Operating DRT services                                       | Integrating new DRT services into the main PT network, ensuring (if included in the Contract of Service) seamless ticketing and information.                          |
|  | Local Public transport operators (bus)         | Operating the local PT service in the highest service level. | Offering technical support for resource optimization: availability of vehicles and drivers on site, knowledge of critical issues related to road / transport aspects. |
|  | Regional Public transport operators (railways) | Providing local rail PT service                              | Providing periodic updates on train service timetables, as it could impact local mobility needs.  |
| GENERAL PUBLIC                             | Local population                               | Acting as customers for DRT services                         | Providing feedback on existing services, report mobility needs, provide feedback on new DRT services to further improve and optimize resources.                       |
| OTHER                                      | Touristic operators                            | Promoting the service among their customers                  | -   |

<sup>2</sup> This operator can be the same operating the regular PT service.



## 4. Key actions to solve the problems and to reach the proposed objectives

Several problems and barriers could arise during the planning phase and the service operation. Recommendations for key actions and strategies to solve the problems and to reach the proposed objectives - especially in terms of regional integration - are described in the table below.

The actions and strategies are listed in a sequence that starts from the occurrence of the problem / barrier and ends with the overcoming of the identified issue; this is also propaedeutic to the mainstreaming of the Action Plan at regional level (see D.T3.3.8). Furthermore, also the actions/strategies required for ensuring the pilot survival beyond SMACKER and their integration in the respective local mobility systems are considered.

**Table 3: Problems/barriers and related overcoming key actions and strategies**

| PROBLEMS/<br>BARRIERS  | DESCRIPTION OF<br>PROBLEM/BARRIER  | KEY ACTIONS AND STRATEGIES TO SOLVE THE<br>PROBLEM/S AND REACH THE OBJECTIVE/S  |
|--|--|---|
| <b>Over-extension of service area</b>                                  | Local communities may ask for a service extended to the whole area of their interest, but this extension could be overestimated compared to real needs and bring to diseconomies in the service. | <b>LOCAL MOBILITY FORUM INVOLVEMENT</b><br><br>Since the planning phase the LMF, and in particular the local bodies which are part of it, can offer a fundamental contribution to identify the real mobility needs, focusing the attention and the service on the sub-areas more relevant in terms of potential users, and identifying “second level stakeholders” that can offer a contribution in terms of communication of the service and collecting feedback from users. This approach is relevant also for ensuring the economic viability of DRT services and their integration in the existing traditional PT system.   |
| <b>Low number of users</b>   | Low density areas have an intrinsic low mobility demand, therefore one of the effects could be an apparent low response in terms of passengers transported.                                      | <b>CONTINUOUS MONITORING OF THE SERVICE</b><br><br>The number of passengers must be related to the population density and the real mobility needs of the area. Besides a proper communication approach towards the potential users that is a fundamental activity to make the service visible and increase users’ awareness, the continuous monitoring of the service can enable its fine-tuning.<br><br>In particular, at the end of a first testing-period an analysis of service results must be carried out also compared to the characteristics listed above (population density and real mobility needs), to evaluate its effectiveness and cost / benefit ratio. |
| <b>Difficulty in communicating with potential users of the service</b> | DRT services have characteristics that are difficult to be communicated, depending both on their particular features (no regular timetable and/or no fixed                                       | <b>PLANNING OF A TAILORED COMMUNICATION CAMPAIGN</b><br><br>To ensure proper visibility to a DRT service and the understanding from the potential users’ side, it is necessary to prepare the communication campaign since the planning phase, identifying the most effective actors and institutions to be involved and the most performing communication channels. Each territory has its own   |



| PROBLEMS/<br>BARRIERS               | DESCRIPTION OF<br>PROBLEM/BARRIER  | KEY ACTIONS AND STRATEGIES TO SOLVE THE<br>PROBLEM/S AND REACH THE OBJECTIVE/S   |
|-------------------------------------|--|--|
|                                     | <p>routes/bus stops), and on an intrinsic lack of attractiveness of PT service itself.</p>   | <p>peculiarities that do not allow to define a standard strategy. On the basis of the experience gained during the SMACKER project, it is possible to provide some suggestions:</p> <ul style="list-style-type: none"> <li>- tourists need to be aware of the service since their visit/trip planning: tour operators and tourism promotion bodies must therefore be involved to communicate the existence of the service in dedicated sections "how to reach us" on their websites, or with special banners or pop-ups, or with targeted social campaigns:</li> <li>- residents may already have existing communication channels managed by the local administrations for institutional communications that can be exploited to promote DRT services (e.g. official website of the Municipality, social network profiles, newsletters, SMS and WhatsApp);</li> <li>- third parties (like commercial activities, training centres, gyms and sports activities, ...) who can benefit from these PT services could communicate the DRT service through their channels (social, web, advertising, etc.).</li> </ul>   |
| <p><b>Relevant service cost</b></p> | <p>Given the low number of users (intrinsic in the characteristics of low-density areas), DRT services in the peripheral areas do not have enough revenues from fares to cover the cost of the service, therefore they need additional funds to cover operating costs.</p> | <p><b>ENSURING OF FUNDS FOR DRT SERVICES</b></p> <p>The research of funds is an essential element in planning and implementing a DRT service. Depending on the type of service, funds can be obtained from different sources: local (from the Municipalities), regional (from the Province / Metropolitan City or from the Region), European (from European projects that finance services). Each source may have different research timings and activation times.</p> <p>A first test-period can be done with a one-time economic coverage (for example European funds), but during this period the service must be continuously monitored to get data for a detailed analysis of its performance. The real-time analysis can allow to define in advance the possible continuation of the DRT service over time (follow-up) and to search for more structural and stable funds.</p> <p>Stable funds may come from a reorganization of existing regular PT services that - given their existing routes and timetables - could not meet the real needs of mobility anymore and may therefore be converted into DRT services or switched-off to save operating resources: however, this activity requires time for analysis, political evaluation and redesign, therefore it becomes</p> |



| PROBLEMS/<br>BARRIERS                    | DESCRIPTION OF<br>PROBLEM/BARRIER  | KEY ACTIONS AND STRATEGIES TO SOLVE THE<br>PROBLEM/S AND REACH THE OBJECTIVE/S  |
|--|--|---|
|  |  | even more important the continuous monitoring during the test-phase.  |
| <b>Difficulty in booking the service</b> | Difficulty of booking through IT systems (website / app) for some categories of users. | <p><b>OFFERING OF VARIOUS BOOKING OPTIONS</b></p> <p>An IT platform is fundamental for the management of DRT services because it allows trips optimization, real-time communication with users and drivers, data-storage for service monitoring, etc. However, some categories of users, in particular the elderly or people who do not have the necessary skills, may experience difficulties to book a DRT trip via the app / IT platform. Therefore, it is recommended to keep available also a call center managed by operators offering direct contact with the user. The call center should use the same IT platform in order to make all reservations converge into the same system.</p> |



## 5. Implementation time plan

This chapter provides a suggested time plan for the implementation of a DRT service in mountainous areas of the Emilia Romagna Region. The time plan links the steps and actions to a timeframe and is also important as a basis for the setting-up of a proper DRT service monitoring process. Regarding the development of demand responsive public transport, the implementation schedule of the key actions can be divided into incremental steps:

1. Short-term actions, to be implemented within 1 year - preparation and planning;
2. Medium-term actions, to be implemented within 2 years - first testing of DRT service;
3. Long-term actions, beyond 2 years - follow-up of DRT (continuation of the service after the initial testing / start-up phase).

More in detail, the preparation and planning include:

- Design of the service in cooperation with a Local Mobility Forum (see the list of stakeholders in chapter 3) in order to collect all real needs and expectations and plan the most fitting features of the DRT in terms of routes, stops, operating timeslots, bus fleet, fare integration;
- Estimation of the service cost and identification of possible funding sources (EU funds, national/local funds);
- Operational planning of the service: ensuring the availability of buses, defining the staff which is carried out by the transport operator as part of his organisational activity for ensuring the operation service;
- Evaluation whether the service must be awarded through a specific tender or it can be part of the existing Contract of Service with the PT operator;
- Definition of the IT-platform, setting-up of the booking system and the call-centre;
- Preliminary communication activity, i.e. design of the promotional material and definition of the communication channels to be used;
- Target communication and promotion of the services towards citizens and tourists.

The first testing of DRT service includes:

- Provision of the day-to-day operation of the service;
- Monitoring of the service operations almost real-time (in particular during the very first period) through the management platform, in order to find out possible problems and perform adjustment to specific operational aspects of the service;
- Hold LMF meetings on a regular basis, in order to provide the LMF members with updates on the service and collect their feedback;
- By the end of the testing period, it will be necessary a final meeting with the LMF to define the follow-up of the service.

Finally, the follow-up of DRT can be developed adopting the medium-to-long term perspective, on the basis of the results collected and the decisions taken at the end of the testing period.



## 6. Risk analysis

The risk analysis lists all the possible negative issues that may affect the implementation of the proposed Regional Action Plan.

Generally speaking, these risks include both the risks directly affecting the Regional Action Plan implementation and the disruptive trends, such as new technologies that may change the perception or the way to manage the entire PT system at local and regional levels.

The following table summarizes the main risks that might arise in the Emilia Romagna Region case and the potential measures that could be adopted to solve or mitigate them.

**Table 1: Risks of DRT establishment in rural and peripheral areas of Emilia Romagna Region and the potential mitigation measures**

| RISK  | RISK DESCRIPTION   | MITIGATION MEASURE  |
|---|--|---|
| <b>Difficult cooperation between tourist centres and PT authority/operators (for DRT service dedicated to tourists)</b> | <p>The past experience shows that close cooperation can be difficult in practice, as tourist operators are used to work individually rather than cooperatively, in particular the small ones.</p> <p>Furthermore, the high number of operators could make the circulation of information among them difficult.</p>   | <p>A fundamental role to tackle this risk must be played by the Metropolitan Tourist centre, which must coordinate the various operators providing all the needed and useful information about the service.</p> <p>The Metropolitan Tourist should also coordinate a common communication campaign of the service.</p> <p>The Metropolitan touristic centre must be included in the LMF since the pre-planning phase. Regular meetings must be held with all stakeholders, which will help to build closer cooperation among the touristic operators.</p> |
| <b>Difficult cooperation between municipalities and PT authority/operators (for DRT service dedicated to residents)</b> | <p>Municipalities are often over-loaded with local problems; this could lead to difficulties in managing their collaboration and involvement during the service test phase.</p> <p>This could happen also if the funding comes from other subjects (EU, Region...), because in this case the Municipalities are not directly involved from an economic point of view and do not have the real perception of the cost of the service.</p> | <p>Municipalities have a fundamental role and must be involved in the LMF since the planning phase. Regular meetings must be held with all stakeholders, and regular feedbacks must be asked and collected from the Municipalities, which are the first contact with residents.</p> <p>In parallel, Municipalities must be regularly informed about the status of the service and its real cost.</p>  |



| RISK  | RISK DESCRIPTION  | MITIGATION MEASURE  |
|---|---|---|
| <b>Difficulties in ensuring the DRT funding</b>             | If the DRT is established as a new service instead of replacing regular lines with flexible lines, the related funding must be found and its amount could be high (in particular in the first year of service, because all the IT-structure must be set-up from the scratch and the service must be planned). | All the funding possibilities at different levels (EU, Central, Regional, Local) must be analysed in order to find the one that best fits depending on the status of the service.<br><br>The test phase could be funded with EU resources, but it is important to plan 3-5 years of funding since the first planning phase to grant the follow-up of the service in case of a successful testing period.  |
| <b>Lack of passengers</b>                                   | Low-population density areas have an intrinsic low number of potential users and reduced mobility needs. Therefore, one of the possible results of the testing phase of a DRT service could be a low number of transported passengers.  | The number of passengers must be related to the population density and the real mobility needs of the area, to understand whether it is the result of a poorly designed / uninteresting service or if it is due to an intrinsic characteristic of the area. Depending on this, corrective actions can be activated, which may affect various areas:<br><br>- reshape communication to the public to increase its effectiveness;<br><br>- refine the continuous monitoring to adapt and fine-tune the service according to the obtained results. |
| <b>Lack of passengers due to external unexpected events</b> | External unexpected events (as it has been the COVID-19 pandemic) can lead to restrictions of movements and at the same time reduce the PT users on a general basis.  | If the lack of passengers is due to external events, DRT cannot operate, and economic resources can be saved for a re-start of the service.   |
| <b>Difficulties/Lack of information</b>                     | If potential users are not informed, the service cannot obtain good performances.   | It is important to define the most efficient communication campaign from the very first planning phase, tailoring the service to the specific users: i.e., tourists must be informed before they start the journey to give them the possibility to choose PT services instead of private cars; residents must also be informed through the most direct communication channels (e.g. schools, sport centres, health centres, shopkeepers, etc.).   |



| RISK  | RISK DESCRIPTION  | MITIGATION MEASURE  |
|---|---|---|
| <p><b>Technical problems with IT-platform</b></p> | <p>In some areas, in particular mountainous ones, the mobile phone network could not be performing well, thus creating difficulties in communication between the IT-platform and the drivers.</p> | <p>During the planning phase a connection check of the area should be performed, in order to find out possible no-signal areas. This could help to identify waiting-zones for drivers, where they can have a good internet connection and receive information about bookings; furthermore, the advance for booking could be defined on the basis of these features.</p> |



## 7. Funding resources

A concrete Action Plan must identify funding sources to ensure the implementation of the proposed service. As already described in the previous chapters, during the testing-phase and based on its results, it is possible to identify the best solution to get the needed funds.

It is not possible to make an exhaustive list of costs and revenues, since they deeply depend on the feature that the service will have. Anyway, some key costs must for sure be considered:

- Cost of the service in terms of hours of activity and covered / operated distance: based on the existing Contract of Service, the DRT could be operated as an extension of the regular PT service or as a new service that is awarded through a new bid;
- IT platform: an accurate market research can help to identify the best IT solution and define its cost;
- Promotion of the service: the amount of this cost depends on the availability of existing channels of communications, the extensions of the area, the target users. A preliminary design of the communication campaign with the estimation of its cost is recommended.

As regards the revenues from a DRT service, it is important to be aware of the fact that this kind of service would always have a low number of passengers, and consequently the income from ticket fares cannot have a significative impact on balancing the cost of the service.

With regard to funds options, these are various possible sources that should be investigated: EU grants / subsidies, national and regional government subsidies, potential revenues funding from public sector activities; private sector operators, developers, industry; other sources such as bank loans and private investment. Depending on the specific area covered by the DRT service and the interested stakeholders, it is possible to define the best solution for covering the service cost.



## 8. Key action monitoring scheme

The key action monitoring scheme defines the Key Performance Indicators (KPIs) to be adopted in order to monitor the implementation of the Action Plan for establishing a DRT service in the rural and peripheral areas of the Emilia Romagna Region.

It is very important to identify the suitable KPIs as they can provide useful information for both the service fine-tuning and follow-up.

The following table provides a potential list of KPIs based on the experience of the Bologna pilot developed within the SMACKER project. This list could be modified on the basis of specific peculiarities of the DRT service.

It is noted that the KPIs should support also in consideration of the potential effects of the integration of a DRT service at a regional level, and the list can be enriched with this purpose.

**Table 4: Key action monitoring scheme suggested for a DRT in the rural and peripheral areas of the Emilia-Romagna Region**

| KPIs                | Indicators  | Monitoring plan   | Monitoring tool  | Scope / expected info from monitoring             |  |
|---------------------|---|---|--|---|--|
| <b>MUST - HAVE</b>  | <b>Quality of public transport/ DRT</b>                           | Average number of operating hours per day                         | Ex-ante and ex-post evaluation pre and post pilot implementation | Report from IT platform with booking system (app) | Assess the increase of the indicator and then of the public transport offer quality  |
|                     |   | Average number of kilometres offered per day                      | Ex-ante and ex-post evaluation pre and post pilot implementation | Contract of Service                               | Assess the increase of the indicator and then of the public transport offer quality  |
|                     | <b>Usage of supply in the course of the pilot action</b>          | DRT/ public transport users per day                               | Ex-ante and ex-post evaluation pre and post pilot implementation | Report from IT platform with booking system (app) | Assess the increase of the indicator and then of the usage of the public transport   |
| <b>NICE-TO-HAVE</b> | <b>Quality of public transport/DR T (Extended version of KPI)</b> | Share of trips for each transport mode (PT-car non motorized) [%] | Ex-ante and ex-post evaluation pre and post pilot implementation | Customer satisfaction / modal share yearly survey | Assess the increase of the indicator and then of the quality of the public transport |
|                     |   | Range of network  | Ex-ante and ex-post evaluation pre and post pilot implementation | Contract of Service                               | Assess the increase of the indicator and then of the public transport offer quality  |
|                     |   | Share of residents accessed within                                | Ex-ante and ex-post evaluation pre and post pilot implementation | Demographic analysis                              | Assess the increase of the indicator and then of the                                 |



| KPIs | Indicators   | Monitoring plan   | Monitoring tool  | Scope / expected info from monitoring  |
|------|--|---|--|--|
|      | 500 metres of PT stop [%]  |   |  | public transport offer quality   |
|      | (Operating hours of each line [hrs])   | Ex-ante and ex-post evaluation pre and post pilot implementation  | Report from IT platform with booking system (app)  | Make a crossed analysis with the number of passengers per day to evaluate the change in the service optimization |
|      | Number of interchanges of each line [number]   | Ex-ante and ex-post evaluation pre and post pilot implementation<br>(Some hypotheses could be needed to perform the monitoring) | Report from IT platform with booking system (app)<br><br>(for instance, it can be assumed that all those who get on / off at the railway station stops then make interchanges) | Assess the increase of the indicator and then of the quality of the public transport                             |
|      | Prices for public transport [€/km]   | Ex-ante and ex-post evaluation pre and post pilot implementation  | Website of the transport provider  | Assess the increase of the indicator and then of the public transport offer quality                              |
|      | Prices for PT/DRT service for users per trip [€/km]                                  | Ex-ante and ex-post evaluation pre and post pilot implementation  | Website of the transport provider  | Assess the increase of the indicator and then of the public transport offer quality                              |
|      | Number of available booking options for DRT [number + description]                   | Ex-ante and ex-post evaluation pre and post pilot implementation  | Contract of Service  | Assess the increase of the indicator and then of the public transport accessibility                              |
|      | Number of vehicles per line equipped with bike/ ski carriers [number and % of fleet] | Ex-ante and ex-post evaluation pre and post pilot implementation  | Contract of Service  | Assess the increase of the indicator and then of the public transport offer and accessibility                    |



| KPIs                                       | Indicators   | Monitoring plan   | Monitoring tool  | Scope / expected info from monitoring   |
|--|--|---|--|---|
|  | Number of new on-demand lines [number]                           | Ex-ante and ex-post evaluation pre and post pilot implementation  | Contract of Service  | Assess the increase of the indicator and then of the public transport offer quality                         |
|  | Change of existing regular lines into DRT lines [number]         | Ex-ante and ex-post evaluation pre and post pilot implementation  | Contract of Service  | Assess the increase of the indicator and then of the public transport offer quality                         |
|  | Waiting time at interchanges [minutes]                           | Ex-ante and ex-post evaluation pre and post pilot implementation<br>(Some hypotheses could be needed to perform the monitoring) | Report from IT platform with booking system (app)<br><br>(for instance, it can be assumed that all those who get on / off at the railway station stops then make interchanges) | Assess the increase of the indicator and then of the quality of the public transport                        |
| <b>Quantity of public transport lines</b>  | Number of operating PT-lines [number]                            | Ex-ante and ex-post evaluation pre and post pilot implementation  | Contract of Service  | Assess the increase of the indicator and then of the public transport offer quantity                        |
|  | Number of operating PT-line kilometres per year [number]         | Ex-ante and ex-post evaluation pre and post pilot implementation  | Contract of Service  | Assess the increase of the indicator and then of the public transport offer quantity                        |
|  | Number of vehicles in operation [number]                         | Ex-ante and ex-post evaluation pre and post pilot implementation  | Contract of Service  | Assess the increase of the indicator and then of the public transport offer quantity                        |
| <b>Visibility of public transport/ DRT</b> | Average number or % of clicks and likes on social media [number] | From beginning of communication campaign until its end (e.g. end of the start-up / test phase)                                  | Report from social media manager   | Assess the increase of the indicator and then of the users' awareness level of the public transport service |



| KPIs   | Indicators   | Monitoring plan  | Monitoring tool   | Scope / expected info from monitoring   |
|--|--|--|---|---|
|  | Number of distributed leaflets [number]  | From beginning of communication campaign until its end (e.g., end of the start-up / testing phase)     | Report from the responsible of the communication campaign | Assess the people's awareness related to DRT service                                |
| <b>Offer CO<sub>2</sub> friendly tourism</b> | Number of CO <sub>2</sub> friendly vehicles in the fleet of public transport/DRT in municipality/ region operating at schedule and routes relevant for tourists [number] | Ex-ante and ex-post evaluation pre and post pilot implementation                                       | Contract of Service                                       | Assess the increase of the indicator and then of the public transport offer         |
| <b>Online booking tool</b>                   | Number or % of DRT bookings via online booking tool [bookings/month ]  | Ex-post evaluation post pilot implementation until its end (e.g., end of the start-up / testing phase) | Report from IT platform with booking system (app)         | Assess the increase of the indicator and then of the public transport accessibility |



## 9. Key stakeholders' involvement strategies

This chapter defines the key strategies and tools that can be adopted in the medium/long terms to involve the key local stakeholders towards reaching the objectives defined in the Regional Action Plan, and in particular, to get their support towards the structural establishment of a DRT service in a rural or peripheral area in the Emilia Romagna Region.

Based on the experience gained during the Bologna pilot developed within the SMACKER project, the stakeholders and target groups are already identified in chapter 3: the table below provides a non-exhaustive list of actions to be done during the DRT service implementation.

**Table 5: Key stakeholders' involvement strategy**

| DRT establishment phase               | STRATEGIES AND/OR TOOLS  | INVOLVED STAKEHOLDERS  |
|---------------------------------------|--|--|
| Short term - preparation and planning | Definition of the approach for the LMF creation and identification of main stakeholders to appoint the members of both Permanent and Extended LMF  | Local government / Metropolitan city<br>Municipalities<br>Local Public transport authority |
|                                       | Meetings to share the main objectives/priorities (see chapter 2), evaluate problems/barriers that could rise during the service operations and identify the key actions to mitigate them (see chapter 4), define a time plan (see chapter 5), identify funding sources (see chapter 7) | Permanent LMF  |
| Medium term - testing phase           | Meetings whenever needed to implement the Regional Action Plan<br>Service fine-tuning<br>Communication activities  | Permanent LMF<br>Extended LMF  |
| Long term - follow up                 | Regular meetings and discussion tables on the topic of mobility in the area / region, to evaluate on one side the follow-up of the service, and on the other side the possible transferability of good practices in surrounding areas with similar characteristics / needs.            | Permanent LMF<br>Extended LMF  |



## 10. Conclusions

This final chapter provides a synthesis of the key results of the action planning process based on the main analysis conducted in the previous chapters.

The goal of the Regional Action Plan is to define a clear and feasible path towards the integration of rural and peripheral areas in the regional transport system through the establishment of a DRT/flexible service.

In detail, this Action Plan, which is based on the results and experiences gained during the Bologna pilot developed within the SMACKER project, provides suggestions and tips to implement a DRT in mountainous areas with a low-density population, where both tourists and residents share the space and the trips, both suffering from a lack of PT service during the off-peak hours and the weekends.

The proper involvement of stakeholders through a Local Mobility Forum, the continuous monitoring of the service through specific KPIs and an accurate and realistic research of funds are the bases for establishing and performing an effective long-lasting DRT service. Attention must be paid to possible barriers/obstacles that could arise during the DRT implementation, therefore it is important to identify them in advance and prepare solutions to mitigate them.



## 11. References

1. SMACKER Application Form, Version 30 April 2021
2. SMACKER “D.T1.2.4 Methodology for stakeholders involvement and creation of Local Mobility Forum (LMF)”, September 2019
3. SMACKER “D.T1.2.5 Creating Communities (Bologna, IT)”, December 2019
4. SMACKER “D.T1.2.11 Methodology for data collection on users mobility needs”, November 2019
5. SMACKER “D.T1.2.12 Data collection on users mobility needs and expectations (Bologna, IT)”, February 2020
6. SMACKER “D.T1.2.18 Review for matching needs and services for a comprehensive planning (Bologna, IT), April 2019
7. SMACKER “D.T1.2.24 Transnational review for matching needs and services for a comprehensive planning”, July 2020
8. SMACKER “D.T2.2.2 Stakeholders and users group involvement”, February 2020
9. SMACKER “D.T2.2.3 Pilot action planning (Bologna, IT)”, July 2020
10. SMACKER “D.T2.3.2 Pilot implementation - Bologna (IT) - Last mile connection for tourists and resident”, May 2022
11. SMACKER “D.T2.4.1 Pilot action monitoring - Bologna (IT)”, May 2022
12. SMACKER “D.T2.4.7 - Pilot action evaluation - Bologna (IT)”, May 2022