

D.T4.4.4 REGIONAL STRATEGIC PLANNING FOR INNOVATIVE MOBILITY SERVICES

Final

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Summary

The deliverable elaborates a common strategic approach aimed at enhancing connectivity to TEN-T network through seamless mobility, integrating shared/flexible options with existing mobility services. The report includes specific model scenarios for the regions interested by the project activities, detailing the strategic elements for the implementation on a regional scale of innovative services, business model elements and service-hub based functions according to the outcomes of the pilot testing phases (A.T3.3-8) and the consistency and sustainability assessment (A.T4.2).

The deliverable is part of a “scaling up” package, designed in order to guide the implementation of innovative services into real life frameworks with the contribution of stakeholders at different levels in creating sustainable ecosystems. The package is composed by:

- D.T4.2.6 SHAREPLACE improvement potential of regional passenger transport and sustainability of actions
- **D.T4.4.4 Regional strategic planning for innovative mobility services**
- D.T4.4.5 Local strategic plans for seamless mobility

The approach follows the structure defined by the co-designed innovative solutions, clustered in a) Data integration and multimodal trip planning. b) Shared mobility services, and c) Flexible mobility services



1. The regional mobility planning context in the SHAREPLACE Regions

Although the local level is generally identified as the reference scale for sustainable mobility planning, and SHAREPLACE territories are no exception, the role of the regional level should not be underestimated in terms of governance and coordination.

In fact, the knowledge gathered and developed by the project on the efficient planning and governance of mobility ecosystems and innovations identifies in the regional scale the efficient point of delivery of policy initiatives that are fundamental to enable the birth and growth of innovative mobility ecosystems, and to support their economic sustainability.

As previous analyses have shown, also resulting in the elaboration of local strategic plans for seamless mobility (D.T4.4.5), Sustainable Mobility Plans are the most common instruments at local level (Municipality, Functional Urban Area, etc.) as reference models.

In the specific, for Italy the areas of Bergamo and Crema both have approved a Sustainable Urban Mobility plan, and so did Zalaegerszeg. In Ulm the reference plans are the "Nahverkehrsplan" (plan for public transport), and the "Verkehrsentwicklungsplan" (plan for public transport development). In Osijek, the current reference is the master plan of the City of Osijek and the Osijek-Baranja County.

In Bergamo, the area of interest of the plan is represented by the city and by the neighbouring municipalities contained within the Bergamo Broad Area.

In Ulm, the reference scale is represented both by the City of Ulm "Stadtkreis" and the Alb-Donau-District "Kreis" (both NUTS DE Level 3).

In Zalaegerszeg and Crema the reference scale for sustainable mobility planning on local level is the city, while for Osijek the focus area is the city and the Osijek-Baranja County, part of the eastern Croatia region.

In all cases, the planning focus is represented mainly by the city, and in second place by territories classified at NUTS 3 level (or part of it).

Looking at complementary planning references, either broadening the scope of the actions or integrating the strategic planning represented by SUMP's etc., it is worth to quote for Italy the reference to the so called Piani di Bacino (tactical planning, usually at NUTS3 level, in Lombardy defined by the Public Transport Agencies).

At regional level, in 2017 in Germany Baden-Württemberg has developed a Climate Protection plan/scenario, which includes a dedicated section on sustainable mobility. In Italy, the Lombardy Region adopted its Regional Programme for Mobility and transport (RPMT) in 2016.

The investigation on the role of the elements of the SHAREPLACE approach in the planning documents currently active have shown that project innovations are part of the strategies with different levels of detail. In many cases further steps towards the definition of specific plans and solutions to be implemented are necessary (see D.T4.4.5 Local strategic plans for seamless mobility).

While the plans of partners to interact with the planning cycle at local level are clear and well defined in the local strategic plans, the potential and space for interaction at regional level still has to be defined mainly as complementary. As we have seen in the investigation phase in fact, the regional level does not seem to have a central role, and in general seems to deal rather superficially with mobility innovations based on shared, flexible and digitalized solutions. The following paragraphs will identify possible roles for regional planning to contribute to the innovation process according to their role in the mobility planning process.



2. The SHAREPLACE prototype ecosystem and the regional context

The experience of SHAREPLACE living labs and co-designed mobility innovation highlighted how, for a certain range of strategic elements, governance issues and regulation needs the regional level could represent an efficient planning level, both under the organizational and economic point of view.

In order to define the role and added value of the regional planning in delivering SHAREPLACE innovation, it is worth to go through the main elements of the prototype mobility ecosystem describe in D.T4.2.6 report on the improvement potential of the SHAREPLACE solutions, and focus on the effects of the engagement of the Regional governance level.

The following schemes catalyse the hints and lessons learned through the engagement, codesign and testing processes in our five pilot areas where digital, shared and flexible services have been introduced.

The prototype ecosystem summarizes all the finding in the definition of an ideal and replicable concept, to be translated into regional and local strategic approaches and plans in order to deliver innovative mobility networks. The structure follows the three clusters of innovations developed through the pilot activities.

Tab. 1 - The SHAREPLACE prototype ecosystem, data integration and multimodal trip planning

Data integration and multimodal trip planning			
Operation	Policy/planning	Business	Integration
<ul style="list-style-type: none"> ✓ Open source approach coordinated by municipalities/ regions ✓ Transparent conditions for integration ✓ Common formats, open APIs 	<ul style="list-style-type: none"> ✓ Local/regional scale identified according to ecosystem critical mass of participants ✓ Data provided according to EU regulation for public transport and DRT ✓ Non-monetary incentives to foster the participation of mobility providers 	<ul style="list-style-type: none"> ✓ Ecosystem coordinator, independent and public-oriented ✓ Integration costs sustained by operators, compensated by higher revenues ✓ Ecosystem building and maintenance costs compensated by positive externalities 	<ul style="list-style-type: none"> ✓ Data provision and integration duties and integration linked to licences/ authorisations/ tenders/contracts ✓ Possibility to develop functionalities such as booking, ticketing and payment according to the business models of participants

Concerning the first block of the prototype ecosystem, the following elements can be considered for the definition of potential regional role and competencies in strategic planning scenarios:

Operation - Regions can coordinate the open-source approach to data integration, by designing a common **digital ecosystem framework** for data integration (e.g. E015 in Lombardy) and defining common formats and rules the sharing of open APIs.

Policy/planning - The decision on the scale for the implementation of the **mobility ecosystem** basically depends on policy competencies and objectives, market structure and potential, and mobility demand



characteristics. Two approaches are possible, depending on those conditions. The regional level is expected to have a primary role if:

- It is the funding body for mobility services;
- It is desirable that public transport and other mobility services providers are present in more the one territorial context within the region, e.g. urban, FUA, district/province areas;
- Policies fostering the integration of services in areas with different densities might be necessary.

On the contrary, if no relevant synergies can be exploited, a number of largely independent mobility ecosystems can be promoted at lower governance levels, and the role of regions might be relevant only in terms of coordination and setup of a common framework.

Business - In order to guarantee transparency and fair competition the mobility ecosystem coordinator (defining the rules of engagement for data sharing, and in some cases data integrator) must be trusted as independent and public oriented. The regional authority can be identified as the suitable subject to assume this role, directly or indirectly, coherently with the elements described before for the policy/planning. Two approaches can be followed by the region aiming at being the ecosystem: on one side, the region can provide the data repository and integrator, while on the other the role would focus on the definition of the ecosystem framework, including rules and incentives for the participation as well as for data sharing with mobility planning authorities (municipalities, districts/provinces, public agencies, etc.)

In any case, a direct involvement in the region as coordinator of the ecosystem must be thoroughly evaluated in case the body is also a primary actor (and competitor) on the mobility market (.g. if the region own local public transport/ regional railway operators).

Integration - In general, the role of regions in the data integration is limited to the case in which a centralized data repository and some specific functions are offered. It is unlikely that this role envisages the development of specific functionalities for seamless mobility services (e.g. ticketing, payments), except for information and routing, in any case not on exclusive basis.



Tab. 2 - The SHAREPLACE prototype ecosystem, shared mobility

Shared mobility services			
Operation	Policy/planning	Business	Integration
<ul style="list-style-type: none"> ✓ Intermodal, integrated in the scheduled mobility network ✓ Focus on low demand areas and off-peak hours ✓ Available in territorial nodes attracting/generating traffic flows 	<ul style="list-style-type: none"> ✓ Integration with scheduled services and infrastructure ✓ Services co-designed and planned according to public objectives and attention to low demand areas ✓ Bundling of tendered and/or authorised services for areas with different densities 	<ul style="list-style-type: none"> ✓ Costs structure of companies includes data integration and participation ✓ Mobility management based incentives to foster the use of shared services integrating supply in low demand areas ✓ Multimodal integration-based public contribution 	<ul style="list-style-type: none"> ✓ Mobility hubs integrating different modes, traditional, shared and flexible ✓ Digital integration of information on services and schedules, supporting intermodality ✓ joint service planning, integrating flexible and shared approaches in the network, especially for low demand times and areas

Focusing on the second block (shared mobility), the following elements can support the definition of the regional role in planning scenarios:

Operation - Regions can promote the integration of shared options into the traditional networks, considering intermodal options; moreover, regions can have a role supporting the development of flexible services connected to settlements attracting/generating traffic in peripheries and outside the urban areas (e.g. business parks, industrial settlements etc.) where a local sustainable mobility planning strategy is not existing nor envisaged.

Policy/planning - Regions can contribute to the take up of shared solutions by planning their adoption in connection to regional level infrastructure and services (e.g. parkings, regional railway services) of the opportunity in within the local mobility planning process, including economic parameters for low demand areas.

Business - A common regulatory approach can be suggested to the local level also on the basis of market creation/uptake objectives for flexible mobility. In particular, regions can define parameters and analysis for the definition of equilibria between flexible and traditional services according to the demand, population and territorial characteristics, suggesting the adoption of different market models across the regional territory.

Integration - In order to support integration, regions can develop and implement mobility hub concepts integrating different modes, traditional, shared and flexible. These models can be replicated on the territory on the basis of common characteristics, in particular for low demand/ peripheral areas.



Tab. 3 - The SHAREPLACE prototype ecosystem, flexible mobility services

Flexible mobility services			
Operation	Policy/planning	Business	Integration
<ul style="list-style-type: none"> ✓ Integrated in the scheduled mobility network ✓ Designed according to user needs, gaps in the network, inefficiency of existing solutions ✓ Combining “on-demand” and “shuttle” models 	<ul style="list-style-type: none"> ✓ Balance between service flexibility and economic efficiency, cost reduction and increased demand captured ✓ Bundling of scheduled and flexible services in tenders and service contracts 	<ul style="list-style-type: none"> ✓ Scenarios and business models for the application in areas with different density and demand ✓ Dynamic/differentiated and integrated tariff schemes ✓ Common regulatory and planning approach to support the sustainability of DRT solutions on the market 	<ul style="list-style-type: none"> ✓ Intermodal, integrated in the scheduled mobility network ✓ Common interoperability platform allowing multimodal booking, ticketing and payments, etc. ✓ Fare integration and ticketing

Concerning the third block (flexible mobility), the following elements can be considered for the definition of potential regional role and competencies in strategic planning scenarios:

Operation - Regions can promote, where suitable and not envisaged by local planning, intermodal flexible options connected with the regional railway network, to guarantee **first/last mile connectivity**. In general, the operational aspects of flexible services are efficiently dealt with at local level.

Policy/planning - Regions can contribute to the take up of flexible solutions by **defining set of rules for the assessment** of the opportunity in within the local mobility planning process, including economic parameters for low demand areas. Moreover, when compatible with the regional competencies, the bundling of flexible and traditional services can be fostered through regional regulations on the basis of economic efficiency parameters, to provide guidance to local tactical planning.

Business - A common regulatory approach can be suggested to the local level also on the basis of **market creation/uptake** objectives for flexible mobility. In particular, regions can define parameters and analysis for the definition of equilibria between flexible and traditional services according to the demand, population and territorial characteristics, suggesting the adoption of different market models across the regional territory.

Integration - In order to support integration, regions can focus on the creation of door-to-door links with special focus on low demand areas integrating regional and flexible transport options, directly or through planning and tendering procedures.



3. Conclusions - Strategic scenarios in Regions for SHAREPLACE innovations

On the basis of the options and recommendations provided on the contribution of regional authorities in developing and implementing the SHAREPLACE mobility ecosystems in Central Europe, two possible alternative model scenarios can be sketched.

Model scenario 1 - Leading region for innovation in mobility (Regulation, planning and management)

In the first model scenario, the regional authority plays an active role in the governance of mobility innovations designing the lines of development of actions and assuming a strategic and primary role in the coordination of common functions such as the management of the ecosystem. The authority designs regulations and plans for the implementation of common measures and modes for shared and flexible mobility, in order to generate synergies and deliver efficiency. In particular:

- coordinates the open-source approach to data integration, by designing a common **digital ecosystem framework** for data integration (e.g. E015 in Lombardy) and defining common formats and rules the sharing of open APIs;
- provides the data repository and integrator, guarantees transparency and develops analysis and plans on the basis of the collected data;
- defines the rules of engagement for data sharing, and in some cases data integrator;
- promotes a market structure where public transport and other mobility services providers are present in more than one territorial context within the region, e.g. urban, FUA, district/province areas;
- develops innovative service models (flexible and shared) to be replicated on the territory at lower governance level through participative processes, on the basis of territorial, social and mobility demand characteristics;
- supports the development of integrated mobility concepts with infrastructural measures (multimodal hubs) and other dedicated measures and direct funding and incentives.

Model scenario 2 - Enabling Region for mobility innovation processes

In the second model scenario, the regional authority focuses on coordination aspects and acts as enabler for the development of local mobility ecosystems, supporting the development of innovative solutions according to its strategic objectives and to local needs. In particular:

- coordinates the open-source approach to data integration, by designing a common **digital ecosystem framework** for data integration (e.g. E015 in Lombardy) and defining common formats and rules the sharing of open APIs;
- supports the creation of independent mobility ecosystems can be promoted at lower governance levels, according to a common framework, and contributes to adapt the framework to new mobility options and applications on the territory;
- delegates to local authorities the development of innovative solutions in line with common strategic objectives, participates to the debate, planning and co-design processes as relevant stakeholders;



- supports the development of integrated mobility concepts with enabling policies and measures and incentives to diverse actors (local authorities, service providers, users) on the basis of potential and generated impacts.

Obviously, the two model scenarios represent two completely distinct approach, while in reality a certain level of overlapping of approaches is expected.

These models are intended to be used as blueprints within the participative process in order to identify the role of regional stakeholders in supporting the adoption of the SHAREPLACE innovations into the planning cycle. Starting from the suggested alternative model scenarios, a regional draft is elaborated, and a strategic action plan can be delivered in interested regions, in order to integrate local planning with the regional dimension where this option improves the efficiency and scalability of measures.