INNOTRANS
Interreg Europe

Project Partner 2 Abruzzo Region

Action plan

Part I – General information

Project: **INNOTRANS**

Partner organisation: **PP2 ABRUZZO REGION**

Other partner organisations involved (if relevant): --

Country: **ITALY**

NUTS2 region: ITF1

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Part II – Policy context

The Action Plan aims to impact:

- ☐ Investment for Growth and Jobs programme
- ☐ European Territorial Cooperation programme
- ■ Other regional development policy instrument

Name of the policy instrument addressed: ERDF (European Regional Development Fund) and TRIENNIAL PLAN FOR PUBLIC TRANSPORTATION

The ultimate goal is to take into account the importance of technological innovation in transport systems, traffic control systems and automation levels achieved in logistics, railway and road infrastructures for the transport of goods and passengers.

Preface:

The TRIENNIAL PLAN FOR PUBLIC TRANSPORTATION is a strategic level Plan, that means it does not provide funding, but it clearly states the strategic lines and the direction along which the Regional priorities will move in the three-year period and the rules all necessary provisions in order to implement it, including the procedures (bureaucratic, administrative or in terms of technical monitoring systems) and the regulatory sections (including legislative interventions or amendments to existing laws that are considered necessary to implement those strategic lines).

In this sense, it is a different approach with respect to operational programmes, but they are perfectly in line, because the Triennial Plan is the one that sets and defines the lines of action to be funded by operational programmes.

Also, considering the timing of the delivery of the present Action Plan, we are in a position in time that we have not yet reached the operational level as the Operational Programmes of 2013-2020 are now almost over, and the 2021-2027 Programming phase, with its operational lines of action and related resources to be allocated for each of them is yet to be defined.

As a Region, our budget does not include specific and direct investments for innovation or sustainable development, and all funding for interventions in this direction are granted by EU and national resources, allocated in ad hoc operational programmes.

In conclusion of this premise, for the time being, the Action Plan is based and supported by the exchange of experience of INNOTRANS Project, and its ultimate goal is to take into account the importance of technological innovation in transport systems, traffic control systems and automation levels achieved in logistics, railway and road infrastructures for the transport of goods and passengers. The Region, thanks to INNOTRANS Project, is now building a new horizon for innovation in public transportation, on the basis of consultations with the stakeholders and all such outcome is going to be part of the 2021-2027 programming general and operational objectives and therefore the present document provides a definition of the type of Actions. As far as funding is concerned, we can only represent that, in any case, it is going to be provided by EU and ministerial / national sources, with some regional co-financing share.

Part III – Details of the actions envisaged

ACTION 1 - CAPACITY BUILDING AND IMPROVEMENT OF ICT USE IN REGIONAL PROGRAMMING

1. **The background**

The territorial background of Abruzzo Region is that technology and ICT empowered transportation systems are already in place over the territory of Abruzzo Region (especially in the area of Chieti-Pescara provinces), but there is a lack of coordination and support by the competent Governing Body and the Triennial Plan is the right place to build such coordination and supervising.

The Innotrans Project background is directly connected with the exchange of experience with other Partners especially during study visits and through shared good practices. In particular, Innotrans Project focus on innovation in governance capacity building makes it worth to mention the good practices shared by LP Coventry University Ltd., and by the Region of Central Macedonia Partners.

Good practice GLOSA - Green Light Optimal Speed Advisory that helps reducing Traffic Congestion by informing approaching vehicles of the best average speed to pass through on green and UK CITE that created a testbed for Connected and Autonomous Vehicles (CAV) in real world environments, culminating in trials of CAVs in Coventry City and motorways. Those examples show the need for interaction of Public Administrations and business in order to improve the quality of services provided to passengers through all possible innovation schemes.

Moreover, examples of increased governance capacity are especially two good practices presented by the Partner Region of Central Macedonia, Greece: one is ITS Hellas organisation: promoting and

enhancing Intelligent Transport Systems on a national scale and another one is the One Stop Liaison Office. Promoting a Service of "one stop shop" aiming to play a catalytic role as a single contact point for innovation development and mediation between academia and businesses. Both show how Institutions can cooperate with private entities to pursue a better level of innovation related to ICT extensive use in programming and planning for public transportation.

2. **Action**

Objective: Improvement of ICT use in regional programming - *Improving governance capacity of the Public Administration, in particular the Region, in order to enhance transportation management capacity dealing with local public transportation (LPT) through the implementation of a coordinated digitalization policy.*

Description:

This improvement passes through the strengthening of the skills of the P.A. (capacity building), the acquisition of strategic data for the planning of the IT tools used for the collection of information and the control of the activities of the carriers, and the enhancement of databases for the programming and management of LPT.

Capacity building. The region is equipped with fairly sophisticated tools for planning in the transport sector, that is with dedicated ad hoc software. However, he has not yet fully mastered these tools, due to the frequent changes of staff and various organizational events of the Regional Department of Transport. It is therefore necessary that the regional structures acquire the ability to use the IT planning tools through the training of the officials and employees to whom this task will be entrusted, and their interaction with the staff of the local authorities involved in the same activities for networking of skills and the exchange of design practices and skills.

Strategic data acquisition. In recent years, the availability of data and administrative information necessary for planning activities in the transport and infrastructure sector has increased considerably. On the one hand, also through agreements between public administration bodies, data have been made available, the use of which is indispensable in the programming activity (for example, the ISTAT-ACI data on the accident needed to plan initiatives in the field of road safety); on the other, projects and programs - including community funding - have made available access to information that is simple and immediate to use on information media (an example are the results of the Crowd4Roads project on the state of road maintenance); on the other hand, national legislation has imposed on carriers and made available for the Regions the collection of standardized data

essential for the programming of LPT services (think of the data of the LPT Observatory or the annual surveys of ISTAT at the transport companies). And the examples would be numerous.

Strengthening of information tools and new working methods. In its daily management activities, local authorities and specifically the Region is not yet adequately equipped with tools that allow to computerize activities and thus improve productivity, sometimes also recovering administrative delays accumulated over time. Consider, for example, the computerization of TPL administrative stops. The creation of an internet interface with users, or the creation of a regional website that is at the same time service, information and interaction with companies and public transport carriers, will allow to improve the quality of services also through monitoring of the critical points highlighted by users and the image of the PA towards the latter.

Quality of services and user satisfaction. A further line of activity will concern the actions to be implemented for the acquisition of data from companies and users aimed at improving the quality of services in the context of monitoring service contracts and testing new ones. services that will be in place make it more expeditious and the activity make it automatic.

Examples of possible implementing sub-actions:

1 - optimization in the use of the Visum software (supplied by the region and some local authorities) through the integration of TPL traffic data, taken directly from the carriers, integration in the regional database of data from external databases for example ACI-ISTAT accident data, road maintenance status data acquired with the Crowd4Roads project, etc.)

2 - creation of a regional information portal, service and dissemination of studies, news, information, with a travel planner, a regional carrier database, timetables, etc .; 3 - survey of users for the quality of services

Connection and reference to INNOTRANS Project experiences: urban traffic management and good planning and management practices shown during study visits, spec. Prague, Coventry, Braila.

Relevance and expected impact: the set of actions mentioned above will contribute to improving the programming and management of the ERDF programme and specific projects. For ordinary activities, significant improvements will be found in the planning of road maintenance interventions, construction of infrastructures, programming and management of local public transport services, coordination of initiatives of local authorities. In particular, for transport services, with a view to their ongoing reform, the acquisition of data, information and methods will ensure better programming and better coordination of local and PUMS plans and of these with regional plans. In the LPT

management activity, the action in question allows to optimize management by avoiding duplication of lines and improving the ability to respond to the demand for mobility and therefore to the quality of the services provided.

Indicators: for the phase up to the end of 2021, it is only possible to set indicators aimed at measuring the start of 1 or more projects that fall into each of the areas mentioned above and the related numerical indicators.

For example:

1-number of employees trained and set as a starting with a baseline value of 0 and with target set to 2 or 3;

2 - creation of the interactive website with users: baseline 0 – target 1;

3 - number of databases to be connected to the regional planning software, for which an agreement was obtained with the supplier organization, or number of connected databases and for which the interface software was created, etc.

3. **Players involved**

Mainly Regional and Local Authorities and Public Transport Operators (PTOs).

4. **Timeframe**

This Action is intended to take be ongoing and constantly increasing from January 2020 to December 2021 with prospective developments also in the 2021-2027 Programming period. The Action implementation is expected to be constantly increasing from January 2020 to December 2021, moreover, the sub-actions launched will certainly be integrated and developed over a multi-year span within the actions envisaged in Table 3 on Mobility in the 2021-2027 programming period.

5. **Costs**

For the moment they are not foreseeable, but to be quantified on the basis of the costs for staff training, in addition to a cost-free quota, increasing on-the-job training and training which fall within the indirect costs borne by the Region. Many of the costs are related to the purchase and customization of the software necessary for the database acquisition actions and the detection tools that will be used to improve the administrative actions, as well as the costs for the acquisition and development of the software and the website and for the possible purchase of information collection

services. Other costs are connected to agreements with other administrations for the provision of data and the related adaptation of the software.

6. **Funding sources**

Direct costs related to the purchase and customization of the software are already foreseen and allocated in the Regional budget

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ACTION 2A - PILOT ACTION OF EXTENSION OF THE SM @ RTICKET PROJECT IN A SUBREGIONAL AREA

1. **The background**

Integrated e-tickets are in part operating in Abruzzo Region, but the interest for such innovative solution were triggered by the study visit to other Partners experiences (e.g. Prague, Braila) for the management of public transport users.

In particular we can refer to the good practice of *PID Lítačka-Integrated transportation and ticketing system* in the city of Prague.

2. **Action**

Extension of the Sm@rticket solution in a sub-regional area by a pilot action involving corporate users.

Objective: *The objective is to set a pilot action aiming at experimenting the use of electronic ticketing systems and AVM, on-board computer, people counter ect. in a specific territorial area (namely Val di Sangro industrial cluster area) to analyse pros and cons in order to develop an effective gradual extension of ITS to the Region.*

At the present time, the Action involves the operation of a pilot action implementing a tool for checking and controlling the services provided in a specific territorial area (i.e. Val di Sangro). Looking ahead, it will contribute to providing a feasibility framework on a Regional scale for future ERDF programming and, through its extension, it could also affect the Triennial Planning also with positive effects in the SUMPs.

Description:

The action intends to apply the experimentation already carried out by some carriers by the Polo Forward in the regional metropolitan area of Chieti-Pescara and in the Lanciano area, using the IT platforms, procedures and instrumentation of the original experimentation in another context territorial.

The pilot action responds to territorial specific needs - currently immediate and contingent, but in any case with structural relevance and possible general application - to guarantee the control, verification and evaluation by the assigning body (the Abruzzo Region) of the elements that characterize the transport service for the workers of the SEVEL plant in Atessa (Chieti).

The area is served by 35 so-called "worker" lines, managed by 9 different carriers, which transport workers from various Abruzzo countries (similar services are also provided by 3 carriers from Molise) to the SEVEL plant (automotive giant with about 7,000 employees) and related factories, located in Atessa (in the southern section of the province of Chieti) which constitutes the largest industrial concentration in southern Italy.

The company (and therefore the related companies) has recently intensified its production rates, articulating them on an ordinary basis over three working shifts for six days a week with possible overtime of two Sunday shifts for various Sundays of the year. The need to extend the service for such a large number of lines (as mentioned, 35 for at least 40 buses moved per shift for each of the 3 daily shifts) imposes an effort (organizational, but in many cases, also of management modernization) carriers owning these lines, as well as a growing effort to verify and control user traffic volumes and the quality of services, aimed at their timely reprogramming by the awarding entity (the Region).

Possible indicators:

1) number of connected carriers (total in the testing area = 9) and/or

2) number of trips using an integrated ticket with a baseline value of 0 and a target of 200 or 300 and as a reference the ordinary ticketing reports as they are provided to date by the companies entrusted with LPT services.

All this in particular, but in general also the operational dimension of the service activated in the area, justify an employment - in Val di Sangro on an experimental basis, but aimed at its possible and prospective extension to the entire panorama of the regional TPL, of the system Sm @ rticket for a period of at least a few months.

Connection and reference to INNOTRANS project: the integrated e-tickets developed with the Sm @ rticket project were reported as good practice for Abruzzo and presented in the meetings of the Innotrans Project held in Pescara in November 2017, but are also represented by the other Partners (Prague, Braila) for the management of public transport users.

Relevance and expected impact: at the moment, the pilot action constitutes as said a tool for checking and controlling the services provided in a specific territorial area (Val di Sangro). Looking ahead, it will contribute to providing a feasibility framework on a regional scale of the project for future ERDF programming and, through its extension, it could also affect the three-year planning also here with positive effects in the PUMS.

3. **Players involved**

Mainly Regional and Local Authorities and Public Transport Operators (PTOs).

4. **Timeframe**

Ongoing, i.e. constantly increasing from January 2020 to December 2021. The experimentation should last a few months, and be activated during 2021, when the new entrants of the services of the "worker" lines will be identified.

5. **Costs**

For the moment, a public cost already incurred, consisting of residues from other Projects, is foreseeable. In the absence of these, it can be estimated that the activation of the IT tools necessary for the realization of the project (on-board machines), limited to the 40 vehicles constantly used for the service, is around 200,000 euros.

6. **Funding sources**

Cost supported by residues of other projects already concluded and by Companies involved in the experimentation which should last a few months, and be activated during 2021, when the new entrants of the services of the "worker" lines will be identified.

ACTION 3: DIFFUSION OF DIGITAL SERVICES IN PASSENGER TRANSPORT COMPANIES

1. **The background**

For this Action, the background in the same, as it represents an extension of the Action 2A to a wider area. Again, we refer especially to the good practice of *PID Lítačka-Integrated transportation and ticketing system* in the city of Prague.

2. **Action**

Objectives: *to improve usability and ease of use for both citizens and businesses, for smart mobility.*

Wider diffusion of digital services in passenger transport companies (electronic ticketing). The objective is to improve usability and ease of use for both citizens and businesses, for smart mobility.

The action aims to facilitate and encourage the extensive application of integrated IT tools on board vehicles (AVM, on-board computer, people counter and electronic ticketing) between companies that hold TPL service contracts, according to a computer standard and a common platform. that favor on the one hand the ticketing processes and the tariff integration between service providers, on the other the control of the activities and the verification of the tickets sold, the number of users per line and per run, and therefore quantification and typing of the users in the sections involving regional programming and the TPL services entrusted.

In particular, various strands of intervention are foreseen within this action, with priority for electronic ticketing. The system can be easily integrated with position control systems and other vehicle variables (AVM systems and on-board computer including people counter).

Possible indicators: number of users using the system, number of electronic subscriptions.

Connection and reference to INNOTRANS project: urban traffic management shown during study visits, spec. Prague, Coventry, Braila, the systematic extension of the Abruzzo Sm @ rticket best practice to the whole regional TPL illustrated in the Pescara meeting of October 2017 and experimented in action 2 mentioned above.

Relevance and expected impact: the electronic ticketing system has advantages for users and for the company that applies it. Users considerably facilitate access to public transport services, avoiding the purchase of paper tickets (subject to the presence of local vendors, the availability of tickets, etc.) and facilitating all related operations. The company gives the opportunity to check the position and status of the vehicle and users at any time.

Abruzzo Region intends to encourage the application of ITS in order to solve the problems of cities with a population greater than 50,000 inhabitants related to:

a) traffic congestion;

b) pollution (acoustic, environmental, etc.);

c) reduced quality of life.

We want to respond to these problems with an increase in the use of public transport which in the current period is affected by a series of transformations such as:

I. Competition:

  a.. Objective: greater efficiency

  b. Problem: ensuring low user lines

  c. Problem: facilitating interchange

II. Tariff integration:

  a. Objective: same ticket for different operators

  b. Problem: revenue sharing

III. Intermodality

  a. Objective: increasing system efficiency

IV. Problem: reducing the discomfort of transhipment.

With the functions of the advanced Local Transport Planning Systems (TPL in Italian) it is possible to provide multimodal information to users, manage the vehicle fleet through location systems, dynamic operating systems, preference systems at intersections. It is also possible to allow electronic payment through electronic tickets and "smart cards" and, finally, the user of the system can be monitored as well.

Abruzzo public transport system is not only going to be with vehicle location devices, data communication, vehicle control, traffic management, user monitoring systems and automatic payment, but all such devices will transmit data to orient public policy decision. Among those,

particular attention will be paid to user monitoring systems, APC (Automatic Passenger Counter), in consideration of the importance connected to real usage data in a future dynamic adaptation in an integrated tariff systems perspective. In the same direction, Abruzzo Region needs to introduce electronic ticketing by the use of smart cards in the transport scenario. Finally, in a preferential logic, the Region is also interested in traffic light priority request devices, in order to increase regularity and speed standards for public transport service.

Such systems will be paired with data and information towards users via the website and by integrating tariffs in order to favour multimodality and sustainable solutions avoiding the use of private cars with soft or indirect deterrents measures.

Whatever the results of the agreement on the new organizational models on tariff integration systems (between rail and bus providers called UNICO), it is now evident that to support them, the Region will have to produce tariff measures either in the mechanism of redistribution of revenues or with direct financing or both. This requires also regional intermediary appropriate schemes to protect users.

For the Region (programming body or body entrusting the services), the availability and use of information briefly improves all programming activities, therefore they allow the identification of tariffs and also routes that best meet the demand for mobility, they contribute to improving the management of the ERDF Program as knowledge of the tools and their use may be envisaged as a pre-requisite for companies that access loans. Another impact on the three-year planning: it can allow for more information and therefore better coordination in the planning of services with positive effects in the PUMS.

For the Region or the Municipality (as entities entrusting the services, respectively suburban and urban), the availability of data and the knowledge of the management facts of each carrier entrusted with the services allow to carry out the checks and controls of their competence on the management of the companies , on a periodic basis, but if necessary also in real time.

Indicators:

1 - number of vehicles equipped with electronic ticketing equipment integrated with other functions (according to the Sm @ rticket model) out of the total (total area = 40)

2 - number of connected carriers (total in the testing area = 9)

3 -number of trips made with integrated ticket or season ticket (starting value 0 and target 200 or 300 and as reference the ordinary ticket statements as they are provided to date by the companies entrusted with TPL services

4- number of companies connected to the system or number of transport lines or number of vehicles per company users who use the system during the construction of the system (period 2021-2027).

5- when fully operational, but also during production, the number of users, the number of electronic season tickets and electronic tickets sold.

3. Players involved

Mainly Regional and Local Authorities and Public Transport Operators (PTOs).

4. Timeframe

Starting from the year 2021 until the complete dematerialisation of the travel document. In consideration of the size of the investment, the inclusion of the project in one of the operational actions envisaged in the context of the European programming 2021-2027 will be preferred.

5. Costs

The costs of the digitization process are linked to the investment necessary to equip the means with the necessary equipment and to create the software and the common platform. This investment varies according to the design solution adopted. For example, at the moment it is possible to hypothesize an extension of the system experimented with Sm @ rticket, which has a platform residing at TUA, an in-house company in the Abruzzo Region and partially applied in the Val di Sangro area with action 2 specified above. Such a solution would be the least expensive. But the investment is also variable depending on the administrative instrument adopted, i.e. investment with a total regional load or in co-financing with the Companies: the latter solution is the desirable one, but requires that the companies are identified and therefore can only be applied downstream of credit lines (since 2021).

6. Funding sources

Not existing at the moment, but the starting point is Action 2A with the pilot action.

ACTION 4 - IMPROVEMENT OF SAFETY IN PUBLIC TRANSPORT

1. The background

Innotrans Project urban traffic management shown during study visits, spec. Coventry, with surveillance cameras connected to data collection and control centers.

In particular we can refer to the good practice of *Satellite Navigation in Prague Trams* in the city of Prague and to the *Metropolitan video surveillance solution serving both the road area and public spaces* in the city of Galati Municipality in South Estern Romania Region.

2. **Action**

Improvement of safety in public transport through ICTs.

Objective: *to improve safety and security on board the vehicle, at stops and in public spaces dedicated to passenger transport (stations, bus stations, etc.).*

The Action's specific objective is to improve safety and security on board vehicles, at stops and in public spaces dedicated to passenger transport (stations, bus stations, etc.). It helps monitoring the the conditions of security on vehicles, the safety of routes and of public transport in general, by providing data on the quality of spaces dedicated to parking, transit of passengers and also public bus stations, and also on the quality of services and information to users.

Connection and reference to INNOTRANS Project: urban traffic management shown during study visits, spec. Prague, Coventry, Braila.

Relevance and expected impact: it improves the safety of routes and transport in general, improves the quality of spaces intended for parking, transit and in bus stations, the quality of services and information to users, the conditions of security on vehicles and

Possible indicators: number of installations of control instruments (video surveillance, alarms, etc.) or information diffuser (electronic scoreboards in stations, etc.), with baseline value set to 0.

3. **Players involved**

Mainly Regional and Local Authorities and Public Transport Operators (PTOs).

4. **Timeframe**

Starting from the year 2020 until the complete dematerialisation of the travel document.

5. **Costs**

This digitalisation process requires an investment to be borne by the Region and in co-financing schemes by the Companies.

6. Funding sources

Not existing at the moment, but planned to be among the ERDF Programme funded objectives.

Date: 08.06.2020

Signature: approved by Executive Body of Abruzzo Region Decision; *Delibera Giunta Regionale (DGR n. 295 del 8.06.2020)* – Object: Interreg EUROPE 2014-2020 – INNOTRANS Project – Enhancing transport innovation capacities of regions Approval of Action Plan for innovatin of public transport *(OGGETTO: Programma di Cooperazione territoriale europea di tipo Interregionale INTERREG EUROPE 2014-2020, Progetto* INNOTRANS – Enhancing transport innovation capacities of regions*. Approvazione del "Piano d'azione dell'innovazione del sistema regionale di trasporto pubblico")*

Stamp of the organisation (if available): present on final Italian version: https://www.regione.abruzzo.it/content/dgr-n-295-del-08062020.