

# Deliverable T2.1.3 «Cases AS-IS situation description»

#### FINAL REPORT

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#### 1. Introduction

# 1.1 Work package 2; "Cases examination towards better interconnection of ADRION Region"

Inter-Connect project follows a bottom-up approach for making proof of actors cooperation for overcoming (legal, infrastructure and operational) barriers & providing improved rail-maritime based passengers intermodality.

This bottom – up approach is achieved through WPT2. WPT2 approaches the transport system from the regional/local perspective; Inter-Connect examines intermodality promotion potentials in 8 regional cases, Igoumentisa (GR), Region Emilia Romagna (IT), FVG (IT), Ljubljana (SL), Zagreb (CR), Bar (ME), Durres (AL) and Belgrade (RS), aiming to extract valuable information (effective measures, necessary cooperation schemes to support interventions implementation, transferability potentials, funding schemes for actions' realization) able to be used in other areas too and to be generalized so as to enhance ADRION's connectivity as a whole.



Figure 1: Inter-Connect cases

The measures to be studied and analysed through WP2 are mainly soft interventions; ICT, timetables harmonization for seamless travels, combined services (e.g. maritime-rail, bus-rail), integrated ticketing, intermodal hubs improvement.

Through its 8 test cases, the project aims at:

- \* Increasing efficiency and reduce environmental impact of transport systems, notably by providing alternative, sustainable and environmentally friendly, combined solutions
- \* Improving public transport competitive profile
- \* Facilitating the creation of synergies among transport operators
- \* Creating more and better integrated rail services at local and transnational level



- \* Reducing the declining modal share of railways
- \* Supporting port hinterland connections by rail

The mainstreaming of the cases at policy level, is assured by the Inter-Connect cooperation platform activities (Act 1.3) and their replicability is possible in the ADRION and EUSAIR areas thanks to the visibility given by the platform to all the stakeholders directly and indirectly involved in it. Cases approach has a potential of replicability in other territories at regional and transnational level which are currently suffering of poor levels of accessibility to main corridors, starting from common data collection and processing methodologies defined at project level, analyze transport and accessibility conditions, optimize current services and upgrade existing facilities in poorly connected areas. Cases generalized messages will feed and strengthen Roadmap's content (Act. 3.1).

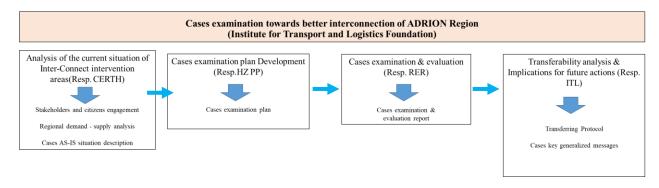


Figure 2: Inter-Connect toolkit and the feeding from the technical WPs

WPT2 will also give input to the 4 tools of project's capacity building toolkit (Act. 3.3; Intermodality understanding, seed money, interventions, cooperation schemes insight tools).

The work flow in WPT2 follows its 4 activities:

- 1. A deep understanding of the real users' needs (travellers) from the outputs of surveys at local people and tourists along with the analysis of the current situation (transport supply and demand data) will reveal the desired path towards intermodality promotion interventions
- 2. A detailed case-tailored plan will be developed
- 3. The cases examination will last 15 months, period within which the evaluation will also take place
- 4. Transferability analysis will be undertaken in order to give value to the results and give also advice to other interested cases with an ultimate scope to multiply effects and achieve sustainability in the region as a whole







#### Figure 3: WPT2 activities

The two main outputs of WP2 are:

- T2.1: Inter-Connect's transnational network formulation (Cooperation Platform), an active network of organizations, authorities, transport providers and other stakeholders in transport planning and operation that join their forces in order to promote rail and maritime based public transport in the area;
  - o Primary stakeholders, directly benefited from the results of the interventions (beneficiaries)
  - o Responsible parties for planning, implementing, monitoring interventions
  - Facilitators; organizations that can provide technical support in the implementation, evaluation and transferability analysis phases
  - Strategy formulation insiders; experts on the field of passengers' intermodal and rail transportation
- T2.1: Detailed Action Plan for intermodal passenger transport promotion that will contain all the wisdom (operational plan, risks, risks' mitigation, obstacles faced, outputs, feedback and corrective actions, cooperation schemes established or at least necessary)

Taking in mind that the successful studying of the cases in Inter-Connect project requires the active involvement of the Cooperation Platform (different mixture of regional, national, transnational per case) in all stages of the examination, the partnership will hardly invest towards achieving this goal. The stakeholders identified by each case will be involved at the case's examination and evaluation phase. Their participation, adding accuracy and acceptance to key findings, will be achieved through the use of 3 out of the 4 involvement steps presented in the report "Engaging Stakeholders for Project Success" (Project Management Institute, Inc., 2015), suitable adapted in Inter-Connect's nature;

- Engagement through the development of the feeling that stakeholders are appropriate parts of project's implementation possibly influencing future decision making procedures
- Benefits presentation (and repetition)
- Further incentives' provision (e.g. publicity of their role and activities at a transnational level)

# 1.2 Activity 2.1; "Analysis of the current situation of Inter-Connect intervention areas"

The first activity of WPT2 is entitled "Analysis of the current situation of Inter-Connect intervention areas". AT2.1 continues the development of the Cooperation Platform of the project with engaging local/regional/national stakeholders in sustainable mobility decision making and implementation. The MoU drafted in DT1.3.4 is enhanced in the current activity with strongly committed local stakeholders, necessary for Inter-Connect cases examination and proposed interventions realization/implementation. The activity deals also with the wider audience engagement, thus the citizens that will be informed for the project through the local events (liaison with WPC). The activity answers also to the need for a clear quantitative and qualitative picture of passengers flows and provisions in the 8 regional cases of Inter-Connect project (focusing on the present situation). Based on the identified national and regional bodies to be involved in the Cooperation Platform, at this stage of the project partners will try to engage them (if they are not already involved from the proposal phase with letters of support). Data collection will be based on an extended desktop research (existing data from various private and public databases, existing methodologies to collect data) and stakeholders' surveys. Data collected along with passengers' needs' identified (online or on the spot surveys), stakeholders' business plans and authorities agendas review (face to face





meetings/interviews) will form the current profile of Inter-Connect's cases to be further examined at the next activities.

Summing up, the goals of T2.1 activity are (grouped per deliverable):

- Deliverable 2.1.1 "Stakeholders and citizens engagement" goals
  - Regional stakeholders engagement face to face meetings/interviews
  - Inter-Connect's Cooperation Platform enhancement MoU update
- Deliverable 2.1.2 "Regional demand supply analysis" goals
  - Transport system operation at local level understanding
- Deliverable 2.1.3 "Cases AS-IS situation description" goals
  - Cases SWOT's analysis
  - Cases initial formulation, case's catchment areas identification
  - Local needs identification guidance for surveys organization for cases examination

#### 1.3 Deliverable T2.1.3; "Cases AS-IS situation description"

Based on the conclusions of D.2.1.1 and D.2.1.2, D.2.1.3 deliverable provides an overview of the current situation (intermodal, sea and rail based transportation) in the 8 Inter-Connect cases. The deliverable aims to act as an introduction for WPT2 that looks connectivity and sustainability at regional level. The current situation, the strong and the weak points in each case, will reveal the opportunities of ADRION and potential threats in its sustainable future.

#### 2. Inter-Connect cases basic connectivity characteristics

Inter-Connect cases were formulated based on a clear 4-step identification procedure;

- 1) Inter-connect partners joined the proposal based on their common need to improve their accessibility and connectivity through public transport and multimodal rail and sea based options (**proposal phase**)
- 2) Inter-Connect partners, after the approval of the project, met with cases' stakeholders and identified key aspects (strengths, weaknesses, opportunities and threats) for their area in terms of sustainable connectivity (Act. 2.1)
- 3) Cases' main axis of examination and interconnectivity aspects to be further investigated were defined (Act. 2.1)
- 4) Cases' exact definition (Act. 2.2)

The remainder of the current chapter presents the SWOT analysis of the Inter-Connect areas of intervention that is focused on the experienced (current) levels of intermodality and PuT use, refers to the central axis of examination per case and to interconnectivity components that will be addressed in the examination phase. As for interconnectivity components the categorization is made on 6 pillars;

- 1) Physical (upgrade/new infrastructures, services)
- 2) Logical (information integration, real time information, route planners, mobility assistants etc)
- 3) Economical (fares, integrated tickets, offers etc)
- 4) Contractual (agreements among key involved actors)





- 5) Institutional (regulations and organizational reforms, integrated authorities)
- 6) Legal and regulatory (market access, main operating and services requirements etc.)

The boundaries among the above components are not always distinct; an integrated ticket requires a contractual procedure to be followed, legal requirements and earnings/risk allocation while technology is a key facilitator (e-ticket) for such an intervention. In the chapter below, as case's interconnectivity components we refer to the primary ones addressed.

#### 2.1The case of Igoumenitsa, GR

#### 2.1.1 SWOT analysis for the examined area

Table 1: SWOT for Igoumenitsa as a case in Inter-Connect project

Strengths	Weaknesses
The main (Western) maritime entrance/exit for Greece (connected to Italy)  The natural beauty of the area	<ul> <li>Lack of PuT services</li> <li>Insufficient walking and cycling paths</li> <li>High use of private car</li> </ul>
A completed SUMP that shows the path towards sustainable connectivity of the city	Although Igoumenitsa is located to a geographically strategic point, it has not yet been developed as a touristic center or as a "destination" point for visitors. Both the lack of appropriate infrastructure that could promote the city as an attraction pole and the lack of alternative, to private car, transport modes are the main weaknesses of the city.
Opportunities	Threats
> Tourism increase > Entrepreneurship increase > Accessibility > Equity > Clean and safe environment > Free spaces > Employment increase in the primary sector > Daily trips facilitation > Reduction of private cars' usage > Sports facilities increase > Domestic pollution reduction > Reduction of pollutants generated by port's operations > Innovative mobility schemes > Traffic restriction for older vehicles > New technologies for traffic management	To lose strategic role from neighbor gates (Albanian or national; e.g. Ioannina Airport, Preveza Airport, Corfu Airport)  Not to achieve high level of stakeholders' engagement





> Reduction of trips number by provision of e-
services

#### 2.1.2 Case's basic axis

#### **Port** – City public transport service examination

According to the need for establishing reliable and frequent Public Transport services (and the absence of PuT services), the case of Igoumenitsa is interested in examining the sustainability of a potential municipal (or under a different effective cooperation scheme) bus service connecting efficiently the port with the city and main Points of Interest in the city and in its close vicinity.

#### 2.1.3 Inter-connectivity Components

Physical (infrastructures, services)

Logical (info)

Examination for the possibility to provide real time information to travellers.

Economical (fares)

Examination for the possibility to provide integrated tickets in cooperation with other transport providers.

Contractual (agreements)

Necessity to reach an agreement (MoU) at least among the Port, the City and the bus service provider.

Institutional (regulations and organizing)

Legal and regulatory (market access, main operating and services requirements etc.)

Legal requirements to be further examined

#### 2.2The case of Bologna and Region Emilia Romagna, IT

#### 2.2.1 SWOT analysis for the examined area

Table 2: SWOT for RER rail connectivity

Strengths	Weaknesses





High number of passengers already using the train in the case study area

Availability of technical solutions able to reduce the travel time between Ravenna, Rimini and Bologna

Interest of RFI (Railway infrastructure owner), Trenitalia (Italian Railway operator) and Emilia-Romagna Region in reducing the travel time between Bologna and Ravenna and between Ravenna and Rimini Long travel times between Bologna and Ravenna/Rimini

No travel time reduction in the last decades Single track railway lines between Castel Bolognese and Ravenna and between Ravenna and Rimini

No economic resources for major infrastructure investments in the short/medium period

#### **Opportunities**

Increase the attractiveness of rail use among commuters and tourists

Very active commuters association directly involved in the Inter-Connect project

Availability of low costs solutions for the travel time reduction

#### **Threats**

Main stakeholder's involvement & coordination Need to reduce the number of train day stops in some minor train stations

Table 3: SWOT for integrated ticketing in RER

#### Strengths

Romagna Smart Pass is well known and in 2017 more than 2.000 tickets were sold

Interest of local public authorities in develop and implement in short times the integrated Romagna Smart pass

Availability of Trenitalia (Italian railway operator) in develop this new integrated ticket High number of tourists during the summer

#### Weaknesses

Different tickets for train and urban public transports

Lack of integration among road and train public transports

Mainly paper tickets are used both for train and bus

#### **Opportunities**

Strong network with touristic operators and hotels to promote the integrated "Romagna Smart Pass" during peak touristic season

Strong promotional campaigns launched by Start Romagna (Public transport company operating in the project area) for the Romagna Smart Pass Complementarity of train and road public transport infrastructures

#### **Threats**

Competition among train and bus lines in some of the most attractive routes

Institutional relations among the public authorities, local public transport operators and national/regional rail managing authority





#### 2.2.2 Case's basic axis

Given the focus of Inter-Connect, Emilia-Romagna region case study will consider the following aspects:

- Inter-Connect aim is to improve passenger railway transport, mainly with soft actions, and with a focus on coast to inland connections.
- Therefore, Emilia-Romagna focuses its case study on the coastal part ("Riviera Romagnola") and its connection with the main inland hub (Bologna).
- Acknowledging that passenger transport is highly seasonal in Emilia-Romagna, especially in the coastal part.
- Emilia-Romagna, with the support of ITL and local stakeholders is willing to investigate both "summer" flows (tourists) and "winter" flows (commuters) and to try to achieve better railway transport for both users' types

Given above reasons, Emilia-Romagna case study will be structured around two subcases;

Table 3. Emilia-Romagna case study overview

ID	CASE STUDY A	CASE STUDY B
Title	Fast rail connection between	Bus-train integrated and discounted
	Bologna and Ravenna.	ticketing for tourists in the Romagna
		area.
Description	With the following case study Emilia-	With the following case study Emilia-
	Romagna want to achieve:	Romagna want to achieve:
	• make the Ravenna	<ul> <li>attract more car-less tourist;</li> </ul>
	commuter's life better;	• give tourists affordable and
	• create a reliable rail	reliable transport solution without
	connection between Ravenna	own car use.
	coast and the Bologna	
	Airport;	
	• do not worsen any other	
	customer's life.	

#### 2.2.3 Inter-connectivity Components

Physical (infrastructures, services)

No infrastructural interventions in Emilia-Romagna two case studies. Case study A is an optimization of existing train service between Bologna, Ravenna and Rimini. The case study B is an integration of different public transport services (bus and train) nowadays with two different ticketing and fares systems.

Logical (info)

Case Study A. Improving the passenger rail service between Ravenna, Rimini and Bologna reducing the time to reach the final destinations.





Case Study B. Extension of the current bus "Romagna smart pass" tourists tickets to rail along the Romagna attractive cities, to promote intermodality and public transport in Romagna.

Economical (fares)

Case study B: Integration in a single ticket and fare scheme of bus and train public transport in Romagna area for tourists (3 or 7 days tickets). Nowadays train and bus services in Romagna have two different ticketing and fares system.

Contractual (agreements)

Both the case study need an agreement between the national railway operator (Trenitalia) and the regional public authority (Case study A) and local transport operators and municipalities (Case study B).

Institutional (regulations and organizing)

Case study A could need a reduction of the number of train day stops in some minor train stations. This will requires specific compensatory interventions to be organized (for example fast bus connections among adjacent train stations).

Legal and regulatory (market access, main operating and services requirements etc.)

No specific legal and regulatory interventions are required.

#### 2.3The case of Trieste and Friuli-Venezia Giulia, IT

#### 2.3.1 SWOT analysis for the examined area

#### Table 4: SWOT for intermodal connectivity of Trieste

# High demand (increasing n. of tourists arriving in Trieste via the maritime lines) Terminal located in the center of Trieste, close to main transport hubs High potential for PT Lack of information about PuT (Public Transport) services in Trieste @ the Terminal Absence of «touristic oriented» PUT daily offer (missing info about: bus network & lines, costs of tickets, how to reach specific touristic destinations, ...)





#### **Opportunities**

- Strong network with touristic operators to promote innovative PuT solution
- Install a ticketing machine @ the terminal
- Improve info to tourists arriving in TS (Corner TT? Totem in agreement with FVG Touristic agency/RFVG?)

#### **Threats**

- Seasonality
- Stakeholder's involvement & coordination (Region FVG, Trieste Trasporti, Terminal passeggeri Molo IV, Samer & Co, Liberty Lines. Municipality of Trieste?, Tourism Agency FVG?, ...)

Table 5: SWOT for transnational maritime connectivity of Trieste

#### **Strengths**

- High potential in terms of improved cross boder connectivity in the area
- Potential demand based on cross boreder commuters
- Institutions in the area already involved in previous experiences for tackling the topic of absence of cross border connections (bus/PT) (Tradomo Project CB Italy-Slovenia 2007-2013)

#### Weaknesses

- Lack of efficient cross border PuT connections
- Financial sustainability (cost of the service)

#### **Opportunities**

- Potential demand based on CB commuters
- Experimental phase (pilot action?) could be financed by a CB programme

#### **Threats**

Stakeholder's involvement & coordination

#### 2.3.2 Case's basic axis

CEI, in close cooperation with Friuli Venezia Giulia Autonomous Region and Trieste Trasporti as Public Transport bus operator for the province of Trieste, based on the above SWOT analysis and the real needs of the area as regards internal and external connectivity (within the city and region, with ADRION countries), are going to structure their case on two subcases;

- SUB CASE A: Improved intermodal connections PT/maritime lines
- SUB CASE B: new maritime cross border connection Muggia –Koper (pre-feasibility analysis)





The subcase A will focus on the improvement of the urban public transport connections with the maritime passenger's terminal, mainly regarding passengers coming to visit Trieste (thus allowing an improved accessibility to the main touristic places).

The sub-case B will be addressing another priority of the Region FVG: to better understand the potential (and the existing demand) of a new maritime public transport connection from Trieste (Muggia) to Koper (Slovenia), also considering the important flows of cross border commuters and lack of efficient cross border public transport connections between these two cities. The subcase wants to seek the following;

- ✓ to check the possibility of being an additional link within a wider set of maritime connections
- ✓ to develop an integrated approach to the cross-border mobility fostering the development of sustainable multimodal solutions (rail/bus/waterborne transport/bike sharing).

This approach is estimated to be effectively carried out by capitalizing previous projects but also by acting synergically with ongoing ones, such as the Sustainable Urban Mobility Plans being developed or implemented in all the main centres of the cross-border area.

#### 2.3.3 Inter-connectivity components

#### SUB CASE A: Improved intermodal connections PT/maritime lines

Physical (infrastructures, services)

Considering the lack of budget for investments in INTER-CONNECT budget, some small physical investments are possible only with the support (and the own budget) of the relevant institutions. In order to provide passengers arriving in Trieste with clear, updated and useful information about PuT connectivity in the municipality of Trieste, some small investments can guarantee a great benefit to passengers:

- Installing a ticketing machine @ the terminal
- Set up an info point @ the terminal with both information on touristic destinations (FVG Tourism Agency?/Municipality of Trieste) as well as on PuT bus network in the area of Trieste

Logical (info)

Main expected outcomes of the case study are soft measures improvements to provide passengers with detailed information & services on how to reach the main touristic destinations in the area of Trieste through public transport.

Economical (fares)

Contractual (agreements)

Institutional (regulations and organizing)

Institutional cooperation and engagement of main stakeholders could play a key role on improving the connectivity of the passengers' maritime terminal with the public transport and the main touristic





destinations in the municipality/province of Trieste. The support from the regional Agency of tourism, from the maritime operator as well as from the Region Friuli Venezia Giulia – together with a strong involvement of the bus operator in the city of Trieste (Trieste Trasporti/TPL FVG) could guarantee improved conditions & innovative measures for promoting more efficient intermodal connections in the area.

Legal and regulatory (market access, min operating and services requirements etc)

#### SUB CASE B: new maritime cross border connection Muggia –Koper (pre-feasibility analysis)

Physical (infrastructures, services)

Logical (info)

Economical (fares)

Contractual (agreements)

Institutional (regulations and organizing)

Institutional cooperation and engagement of the main stakeholders could play a key role on improving the cross border connectivity (Italy-Slovenia). Thanks to the INTER-CONNECT case study CEI expects to support Region FVG (Associated partner) in understanding the potential of a new maritime cross border PuT service, by understanding stakeholders' and institutions' opinion on the expected characteristics of this service. Round tables and strong involvement of local institutions could provide important feedbacks and knowledge about experienced lack of CB connectivity in the area, citizen's needs and potential solutions for improving PuT connectivity.

Legal and regulatory (market access, min operating and services requirements etc)

#### 2.4The case of Zagreb, HR

#### 2.4.1 SWOT analysis for the examined area

Table 6: SWOT for Zagreb as a case in Inter-Connect project





Strengths  • High number of tourists and daily commuters  • Existing rail infrastructure serving Zagreb – coastal areas	<ul> <li>Weaknesses</li> <li>Railways seems to be unattractive in passengers' perception</li> <li>Lack of financing for railway interventions</li> </ul>	
Opportunities  • Rail – maritime combined solutions seems to be an attractive touristic package  • Integrated services, e.g. ticketing	<ul> <li>Threats</li> <li>Indifferent stakeholders</li> <li>Lack of transport data – demand data</li> </ul>	

#### 2.4.2 Case's basic axis

#### CASE: Zagreb to coastal areas connectivity and transnational packages to Greece

Given the high estimated latent interest for travelling to ADRION countries through sea tranpostation, HŽ Passenger transport, the rail operator of Croatia that serves regional connectivity and accessibility from inland areas to coastal areas, plan, in cooperation with other stakeholders, to underateke a feasibility study for integrated regional-transnational packages. The focus will be on all ADRION area, concentrating on the rail links in Croatian ports with parallel involvement of transnational trains (Slovenia, Bosnia and Herzegovina) and transnational maritime lines Croatia-Greece. The intention is to explore the possibility of facilitating faster and cheaper travel for tourist by connecting ADRION countries by innovative services.

#### 2.4.1 Inter-connectivity Components

Physical (infrastructures, services)

Improvement of rail service. Feasibility study on Croatia – Greece railway – maritime tourist route

Logical (info)

Economical (fares)

Contractual (agreements)

Letter of support from defined stakeholders

Institutional (regulations and organizing)

Stakeholders; Croatia tourist board, ministry of tourism. Port of Split and Rijeka

Legal and regulatory (market access, min operating and services requirements etc)





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#### 2.5The case of Ljubljana, SI

#### 2.5.1 SWOT analysis for the examined area

Table 7: SWOT for Ljubljana as a case in Inter-Connect project

#### **Strengths**

- Integration of Koper cruise terminal-Ljubljana hub-Ljubljana Jože Pučnik Airport (from now on Ljubljana Airport) corridor in two trans-Europeanroad and railway axes. Case study corridor is part of Mediterranean (Koper-Ljubljana-Maribor-Lendava) and Baltic Adriatic (Koper-Ljubljana-Maribor-Šentilj) which enhances investments in the transport infrastructure;
- Allready well-developed maritime tourist industry in passenger terminal of Port of Koper which will attract 82 cruise ships in the year 2018 (25 % more than in year 2017);
- Increasing importance of Ljubljana Airport with plans to expand passenger terminal until 2020;
- Many touristic attractions between Koper and Ljubljana are accessible with public transport (Postojna caves, Škocjan caves) with potential for further improvement;
- Improvement connection from Ljubljana to Trieste port and Trieste airport with newly established international SLO-IT train connection trough Villa Opicina;
- Good location of Port of Koper for reaching other interesting cities (Trieste, Piran) and touristic places (Lipica, Portorose, Postojna caves).

#### Weaknesses

- Poor connections in shifting of transport modes from Koper cruise terminal Port to Koper railway station and from Ljubljana main train/bus station to Ljubljana Airport;
- Ljubljana Airport is not connected with rail transport to Ljubljana. Majority of passenger transport is performed with private vehicle or shuttle busses;
- Great competition in private/road traffic on analysed corridor where private cars and private shuttles are prevailing public transport options among the main hubs;
- Favourable private vehicles infrastructure (e.g. many options for parking places, quality highway from Koper to Ljubljana hub) which promotes usage of private modes of transport;
- Long travel times and poor coverage of public transport options from port of Koper to Ljubljana. Some rail connections (on 4 per day of 6 connections) from Koper to Divača are made with bus transport from where transfer on train is needed in order to reach Ljubljana hub;
- Deficient harmonisation of timetables shifting of transport modes from Koper passenger cruise terminal to Koper railway station;
- Poorly developed railway timetables information system with lack of updates on the waiting and delay times for





### Opportunities

- Potential to establish more frequent timetable during morning, afternoon and night peaks for transporting more passengers between main hubs (Koper cruise terminal, Ljubljana Airport) to Ljubljana and vice versa;
- Improvement of public passenger vehicles fleet on railways that will drive the specific locations of corridor from Ljubljana to direction of Koper;
- Possibilities for higher travel speed and improvement of transport quality with renewed railway public transport modes (faster passenger trains, direct connections, shorter waiting/traveling times, introduction of interoperability);
- Introduction of promotional campaigns for improvement of image on public passenger transport service for tourists and raising the level of awareness;
- Establishment of unified information portal within Integrated public transport project (slo. IJPP) with unified transport card for tourists and harmonised timetables among different public transport modes;
- Further potential for establishment of quality intermodal points (Koper cruise terminal, Koper railway station, Ljubljana hub, Ljubljana Airport passenger terminal) with an additional offers for tourists which would make those hubs more attractive and economically viable;
- Possible introduction of low costs solutions for improvement of carrying capacities for passengers with handicap or special needs (persons in wheelchairs, parents with small kids in chairs, passengers with bicycles) on passenger's trains;
- Further development railways infrastructure on Mediterranean and Baltic Adriatic corridors passing through Slovenia which would enable reduction of railway travel times;
- Growing number of traffic jams and decreased level of safety in goods and passenger transport on

#### passengers;

- Poor coverage of public transport outside peak hours and weekends where provision for tourists travel should the more frequent.

#### Threats

- Further increase in the use of passenger motor vehicles (private cars, shuttles) for touristic travels between Koper Cruise terminal, Ljubljana Airport and Ljubljana;
- Continuation of a lack of timetable harmonisation between public passenger transport operators in the coastal area and between Ljubljana Airport and Ljubljana hub:
- Lack of strong political support for comprehensive transport policy and construction of second railway line of Koper-Divača that would also improve passengers connections between coastal areas and hinterland;
- Continuation of poorly coordinated and managed policy process to establish quality multimodal public transport connections among hubs in the pilot area;
- Increase of railway cargo operation from Port of Koper to hinterland that would (on a long run) further reduce the numbers of passenger trains from Koper to Ljubljana;





road among Koper and Ljubljana -	– more
passengers would be interested to use	e public
transport.	

#### 2.5.1 Case's basic axis

## CASE: Intermodal passenger corridor: Koper cruise terminal-Ljubljana hub-Ljubljana Jože Pučnik Airport (Ljubljana airport)

Given the poor connections in shifting of transport modes from Koper cruise terminal Port to Koper railway station and from Ljubljana main train/bus station to Ljubljana Airport and due to the fact that rail connectivity of airport – city of Ljubljana is missing, the examination plan for the Slovenian case is going to define the bottlenecks of the railway network and design solutions for improvements of the rail passenger's transport and better connections between various forms of transport in Slovenia.

#### 2.5.2 Inter-connectivity Components

#### 1. Description of the pilot area and stakeholders:

- 1.1 Basic geographical characterisation of pilot area with general map and main points of interest (e.g. settlement scheme, main transport hubs, main points of touristic attractions);
- 1.2 Presentation of current and projected commuting transport flows and estimation of modal split among Slovenian regions within pilot area;
- 1.3 Review of current and projected tourists flows with modal split. Presentation on touristic overnight stays within the defined pilot area;
- 1.4 Overview of transport operators in the area and relevant stakeholders for pilot action.

#### 2. Overview of transport infrastructure and services:

- 2.1 Analysis of railway passenger infrastructure (main hubs, points of interchange among public transport PT) and services (frequency of service on working and weekend days, transport times among main railway hubs, waiting times and reliability of connections, options of mobility as a service MaaS);
- 2.2 Analysis of road public transport services (timetables on working and weekend days, travel times) among main hubs (Ljubljana Airport-Ljubljana-Koper inland and maritime passenger terminal);
- 2.3: Description of shuttle services (e.g. GoOpti) and other irregular transport services (e.g. FlixBus) among main hubs (Ljubljana Airport-Ljubljana-Koper inland and maritime passenger terminal).





#### 3. Provision of passenger information service and customer support:

- 3.1 Presentation on existing timetable provision for passengers (e.g. info-mobility apps, existing pre-trip and on-trip information systems, timetables on stations, additional information services for tourists);
- 3.2 Interconnectivity and language provision of timetable data among different modes of transport on hubs (e.g. languages of timetables, info for busses/shuttles on train stations, availability of pre-trip and on-trip data for transfers and connections).

#### 4. Fares and ticketing systems:

- 4.1. Presentation on current tariff products for tourists and fares comparison for single/return tickets on different PuT options and shuttle services within defined pilot area;
- 4.2. Presentation on up to date ticketing systems suitable for tourists (e.g. ticketing mediums, types of sale, validation of tickets) for different PuT modes of transport and shuttles within pilot area;
- 4.3. Overview of current fare and ticketing integration (if existing) among different modes of transport within pilot area (e.g. ticket for shuttle included in airplane ticket, integrated bus-train tickets for tourists).

#### 5. Transport agreements among PuT operators in pilot area:

- 5.1. Provision of agreements among existing PuT operators and other parties involved in transport for touristic purposes within pilot area.

#### 6. Legal and regulatory aspects of transport in pilot area:

- 6.1. Regulatory institutions involved in PuT provision in pilot area;
- 6.2. Analysis of regulations taking place for transport operation in case study area (e.g. market access, minimal operating and services requirements).
- 7. <u>List of short- and long-term measures for improvement of touristic PuT in pilot area proposals must include short description of measure, list of parties involved, general cost estimation and proposed time-plan for potential action:</u>
- 7.1. List of short- and long-term measures for infrastructure and service improvement of connection from maritime areas and Ljubljana Airport to Ljubljana urban region;
- 7.2. List of short- and long-term measures for improvement of **info-mobility and passenger information service** (on-board, at interchanges) for tourists;
- 7.3. List of short- and long-term measures for improvement on **fare integration and integrated ticketing systems** among transport operators in pilot area;





- 7.4. List of short- and long-term measures on **organisational and regulation aspects** to improve public transport operation and interconnectivity study area.

#### 2.6The case of Bar, ME

#### 2.6.1 SWOT analysis for the examined area

#### Table 8: SWOT for Bar as a case in Inter-Connect project

#### Strengths

- quality, expertise and commitment of human resources alongside high level of management motivation with the aim to motivate local, regional and state public authorities as well as tourist community to establish cooperation with a view to utilizing natural resources and cultural sights of Montenegro as an important factor for development of Port of Bar as intermodal passenger transport destination
- high quality and standardization of work processes (according to International ISO standards, compliance of the port with ISPS system)
- flexibility and adaptability of port service
- relative financial strength in the region and long-term stability
- successful partner relations with local, regional and national public authorities
- continuity of development projects and high efficiency in the EU project implementation, as well as established partner relations with maritime transport subjects in the whole region and further
- specialized information office
- ATMs, restaurants, bars

#### Weaknesses

- high construction costs of planned port infrastructure, which, apart from existing obstacles, are recognized as a limiting factor to the economic progress of Montenegro although conditions for all types of transport have been improved in the last couple of years
- not well organized transport of passengers to the hinterland by buses and rail
- lack of connections between maritime, road and rail transport, which results in the use of the road as a main mode for passenger transport and under-utilization of the potentials both of the rail and the Port of Bar
- bottlenecks on connecting roads with port hinterland
- inadequate cooperation with entities of port surrounding
- environmental management system which is not sufficiently developed;





- favourable geographic position (more favourable distances in relation to Suez Canal and Gibraltar in comparison to competitive ports, ...);
- lack of conflicts between the development of port area and urban area;

#### **Opportunities**

- natural resources and cultural sights in hinterland of Bar – internal part of Montenegro as an important factor for development of intermodal passenger transport
- tourism attractiveness and ecologically unspoiled microlocation
- entrepreunerial potential in the region
- geografical location within the entrepreunerially active microregion of Montenegro
- immediate proximity of the passenger terminal to the city centre
- development of strong partner relations with other intermodal transport destinations on the Adriatic
- greater interest of passengers for new and cheap ways of intermodal passenger transport
- anchorage of 31-47m in depth, size and proximity of adequate anchorage
- building of adequate inland infrastructure and development of line seaside passenger transport transversal and longitudinal connectivity (Montenegro, Croatia, Albania, Italy...)
- construction of passenger coast from Pier 5 to the end of secondary breakwater of 440m in length

#### **Threats**

- strong competition in transport sector due to attractiveness of the Adriatic Sea and the region as well as attempts of other destinations on the Adriatic to take part in the market
- unorganized tourist offer with insufficient capacities and inexperience of inland carriers in road transport
- development of intermodal passenger transport may cause a formation of potential danger of "conflicts"-confrontation of sea port and city concerning traffic jams etc.
- insufficiently developed foreign trade and passengers flows in comparison to the capacities and transit potentials of Montenegro and countries from the gravitational area;
- disruptions in growth trends in maritime service market:





- realization of major development projects in Montenegro (construction of highway, hydropower plants, valorization of tourism potentials,...)
- connections (by road and rail) with pan-European transport corridor VII and X;
- introduction of incentive measures of national economic policy;
- increase in transit flows across Montenegro;

#### 2.6.2 Case's basic axis

#### **CASE:** Port of Bar – City and regional connectivity

Public transport in Bar is not of high quality;

- buses are rather old and obsolete
  - services are not frequent
- during the summer months tourist flows highly increases that causes additional pressure on the road network
- railway passenger transport needs urgent renewal
- public utilization of railway services is low due to regular train breakdowns, inaccurate estimates given, poor rail infrastructure which has decayed over time

In general, passenger transport needs integrated services that can be achieved partially through harmonizing the timetable of arrivals and departures, integrating different operators' tickets and providing real-time reliable information.

Given the above, a main requirement for the city is to invest on port – city connectivity (being the Port of Bar a gate from/to ADRION) and this intention consists the key axis of Inter-Connect Bar case examination.

#### 2.7The case of Durres, AL

#### 2.7.1 SWOT analysis for the examined area

#### Table 9: SWOT for Durres as a case in Inter-Connect project





Strengths	Weaknesses
Expressed need to promote intermodal transport	Lack of data, lack of harmonized procedures
Opportunities	Threats
Promotion of touristic development	<ul> <li>Willingness of stakeholders to get involved</li> <li>Lack of data</li> </ul>

#### 2.7.2 Case's basic axis

#### **CASE: Durres – Tirana connectivity**

Examined area is characterized by the dominance of road transport on land bound routes and many smaller and bigger ports at the coast line. The connections to the hinterland are poor with many bottlenecks on multimodal connections, while coordination is also inadequate. This is evident by the maritime traffic congestion at ports and the border waiting times, as the number of visitors and the volume of container transport are increasing in the area. Previous studies showed that most residents and visitors of Albania choose cars as their principal means of transport, primarily due to the lack of alternative modes of transport, poor infrastructure of the current transportation system and lack of inform-ability. This has become an increasing problem for Albanian society due to the growing number of visitors and locals that move within the country.

Given the above, the pilot would be a Study on developing and implementing a technological solution for intermodal transport - Real time information of traveller's through digital timetables harmonization for traveller's using the ferry and rail transport and when needed air transport.

#### 2.7.3 Inter-connectivity Components

Physical (infrastructures, services)

Logical (info)

Harmonization of information

Economical (fares)

Contractual (agreements)

-





Institutional (regulations and organizing)

-

Legal and regulatory (market access, min operating and services requirements etc)

-

#### 2.8The case of Belgrade, SB

#### 2.8.1 SWOT analysis for the examined area

Table 10: SWOT for Belgrade as a case in Inter-Connect project

#### Strengths

- Geographic position Belgrade have a central position of West Balkan at the crossroad of two international rivers and road and railway corridors (branch of Mediterranean, main axes and branches of Orient-East Med Corridor – Pan-European Corridors X, VII and IV)
- New destination on international touristic market - Rich cultural and historical heritage with a specific mix of influence of Europe and Orient (West and East)
- Belgrade county has Most developed economy in the country
- Biggest business centre in 500 km area
- Educated and skilled workforce

#### Weaknesses

- Low connectivity by low-cost flights
- Difficult and expensive infrastructure development due to lack of space in the city centre
- Political instability at regional level and surrounding
- Slow administrative procedures
- Lack of strategic documents on national transport development
- Insufficient financial resources for infrastructure development
- Lack of City Transit capacities (insufficient and old tram and bus system)
- Lack (or low capacity) of connections between main terminals (between modes of transport)
- Insufficient railway infrastructure (old tracks, slow-ride spots)

#### **Opportunities**

- Transport Community Treaty signed by WB6 countries and European Commission (strategic baseline)
- City railway development including construction of connection to airport
- Further development of touristic offer
- Potentially good base for intermodal transport development and alternative transport modes
- Light city rail or Metro development
- Activation of river city transport
- Better connectivity and intermodality through movement of central bus and railway stations

#### Threats

- Political instability at regional level and surrounding
- Unplanned development
- Inadequate resource use
- Lack of coordination on national and local level (miss-objectives and overlapping jurisdiction)





#### 2.8.2 Case's basic axis

#### **CASE:** Region to Belgrade interconnectivity

Given the low level of Public Transport use in Serbia and the corresponding small share of railway transport, CCIS, in line with city of Belgrade development vision, will examine how public transport interventions will affect modal split.

Examination plan in general would consist of:

- Current situation analysis
  - Analysis of transport demand/supply and flows
  - Understanding of opportunities for intermodality, railway operations as well as bus operators and public transport system of Belgrade
- Defining of expected results/effects/actions and
  - Identifying of overlapping points
  - Identifying potential gaps and necessary actions
  - Defining of common areas and actions
- Defining of guidelines incorporated with existing strategies and plans

#### 2.8.3 Inter-connectivity Components

Physical (infrastructures, services)

Connections between main terminals – missing connections, new city transit lines, park and ride possible locations (to be discussed with stakeholders)

Logical (info)

Integration of railway and city transit timetables, information and instructions, maps etc. (to be discussed with stakeholders)

Economical (fares)

Integration of the A1 bus line into the city's tariff system and modification of the route line, introduction of a stop near the new bus and railway station in New Belgrade.

Checking compliance timetables city lines 72 with the frequency of arrivals / departures of passengers to the airport.

Introducing a one-hour integrated ticket for all modes of public transport with a plane ticket. (to be further discussed with stakeholders)

Contractual (agreements)

Reaching an agreement between the City, BEG Airport and public transport operators. (to be further discussed with stakeholders)

Institutional (regulations and organizing)





These studies may require modification of regulations and organizational aspects in order to better connectivity of the hubs, so all stakeholders need to be harmonized. (to be further discussed with stakeholders)

Legal and regulatory (market access, min operating and services requirements etc)

No specific legal and regulatory interventions are required. (to be further discussed with stakeholders)

#### 2.9 Proposals for data collection needs for the cases examination

According to cases specific needs as depicted from the previous chapters as well as from the previous deliverables, the current chapter aims to provide case- partners with an initial list of required data and structures (cooperation schemes) for the examination that will take place in the testing phase of the project (to be reported as detailed action plan in Act. 2.2 and as an integrated step-by-step examination report in Act. 2.3). The lists of data and the proposals for stakeholders' engagement is indicative and of course not compulsory, instead they are produced in order to act as a preparatory step prior to the definition of the exact action plan per case.

#### 2.9.1 The case of Igoumenitsa, GR

Required data for case examination in Igoumenitsa are among others;

- Tourist arrivals/departures per month
- Traffic flows and ODs for the city
- Attraction poles in Igoumenitsa (and potential attraction poles)
- Regulatory issues for cooperation among the identified actors
- Alternative scenarios for PuT itinerary
- Revealed and Stated preference for citizens choices

#### 2.9.2 The case of Bologna and Region Emilia Romagna, IT

Case Study A. Improving the passenger rail service between Ravenna, Rimini and Bologna reducing the time to reach the final destinations

Case study A data needs are:

#### 1. Meeting with stakeholders

Gathering of available data from stakeholders, Trenitalia and RFI about origin-to-destination data and passenger flows/loads on the Bologna-Ravenna existing connection, timetables, older transport surveys, Pricing Policy, kilometric network

#### 2. Analysis and design of survey analysis

According to available data, design of a Stated Preference Survey to update older data. A
Stated Preference Survey can be carried out at Bologna and Ravenna, as well as, in the
interdependent cities / stations (crossed by the railway). The context of the SP survey
should include quantitave characteristics of the trip and the commuter (travel time, travel
cost, monthly salary, frequency etc), qualitative characteristics of the trip (whether





obtained conditions of comfort) and mode choice between current railway and updated railway with estimated time savings (e.g. 5% or 10%)

#### 3. Survey administration

Within the summer, the survey can be administered

#### 4. Survey results and finalization of status quo

Survey data analysis, simulation of the present situation and prediction of the future according to the scenarios

#### 5. Re-design of a novel fast rail service between Bologna and Ravenna

- a. According to results development of the solution
- b. Timetable revision to meet "long-haul" passenger needs and redesign of suburban train service
- 6. Sharing of the re-design with local bus transit agency (Tper) so to make an attempt to adjust bus feeder timetables.

#### 7. After implementation monitoring

a. Once the solution is in place (revised and integrated timetables) assessment analysis should be performed

Case Study B. Extension of the current bus "Romagna smart pass" tourists tickets to rail along the Romagna attractive cities, to promote intermodality and public transport in Romagna

Case study B data collection refer to:

#### 1. Meeting with stakeholders

Gathering of available data from stakeholders, particularly Start Romagna about tourists usage of the "Romagna Smart Pass", seasonal touristic flows, points of touristic interest, mode choice among tourists

#### 2. Design of survey analysis

a. According to available data, design of a survey to update available data or to focus on a specific issue. Survey will be designed to calculate the Willingness to Pay (WTP) for the integrated service bus-train (i.e. "Romagna Smart Pass" extension to Romagna services). A stated preferences survey will be developed so to form a discrete choice model (proposal to users of different prices and tickets option for integrated bus-train service)

#### 3. Survey administration

a. Within the summer, the survey will be administered. The survey will be will be addressed to tourists and will be implemented at tourist points of interest along the railway line (terminals, hotels, parks etc).

#### 4. Survey results and finalization of status quo

a. Survey data analysis, implementation of discrete choice model

#### 5. Proposed integrated bus-train fare scheme for tourists





- a. Sharing of survey results with START (bus transit operator) and Trenitalia (passenger train operator)
- b. Discussion about feasibility interest in implementation according to results

# 6. Discussion with Emilia-Romagna region, Trenitalia and Start Romagna about ticket technology

- a. Tourist pass with magnetic stipe
- b. Tourist pass to be loaded on "UNICA EMILIA ROMAGNA CARD" (integrated bus transit card to be release in summer 2018, developed by Trenitalia) based on Calypso technology, also compatible with current "Mi muovo" Emilia-Romagna integrated system
- c. Choice of the ticket technology

#### 7. After implementation monitoring

a. Once the solution is in place (target is summer 2019) monitoring of tourist pass usage will be in place.

Table 11: Bologna's case Stakeholders Table (Case A and B)

Stake	cholders	Provision of data to be exploited
Start Romagna S.p.A.	Public transport company (provinces of Ravenna, Forlì and Cesena)	Start Romagna the bus transport operator for the Romagna coast area- passenger/touristic flows, seasonal timetables, pricing policy, travel times
Trenitalia RER	Italian Railway operator (RER Department)	Trenitalia ER is the responsible unit for regional rail passenger transport after a service contract with Emilia-Romagna - passenger/touristic flows, seasonal timetables, pricing policy, travel times





Stake	holders	Provision of data to be exploited
Comune di Rimini	Local authority	Rimini is a local authority within the case study area – previous (older) transport schemes of the Region, statistics of the Region, indicator's of growth
Comune di Ravenna	Local authority	Ravenna is a local authority within the case study area previous (older) transport schemes of the Region, statistics of the Region, indicator's of growth
Comitato pendolari RomBO	local commuters association	The local commuters association (RomBo - Romagna and Bologna) is an association of people who regularly commutes on the railway lines in the Emilia-Romagna region. – Target group for a Questionaire Survey
Operatori turistici della Romagna	Local tourist operator association	Local tourists operators are important stakeholders to consider –  Target group for a Questionaire Survey
Tper	Bologna and Ferrara province transit agency	Tper is the local transit agency in the provinces of Bologna and Ferrara passenger/touristic flows, seasonal timetables, pricing policy, travel times





Stakeholders		Provision of data to be exploited
RFI	Railway infrastructu re owner	RFI is responsible for rail infrastructure allocation, rail circulation infrastructure management passenger/touristic flows, seasonal timetables, pricing policy, travel times
Città metropoli tana di Bologna	Local	Città metropolitana di Bologna is the local authority in the Bologna FUA. Demand Analysis from the SUMP, modal split, O-D Analysis

#### 2.9.3 The case of Trieste and Friuli-Venezia Giulia, IT

#### **SUB CASE A: Improved intermodal connections PT/maritime lines**

Passengers' terminal is located in the center of Trieste, close to the railway station (450m walking, 6mins walking app.) and already is served by the bus service (an urban bus stop is available outside the passenger terminal). The necessary data are:

- Passenger flows from maritime transport
- Maritime passengers' origin destination profile in Trieste (OD Analysis)
- Users of public transport
- Characteristics of public transport (timetables, frequency, number of seats, accessibility for commuters/tourists with special needs, comfort conditions)
- Accessibility from maritime terminal to public transport station (if there is luck of safety because of the cars that are using the parking)

The stakeholders involved, Autonomous Region Friuli Venezia Giulia and the Trieste Trasporti can provide some of these data. A complementary survey could be a more useful and updated source of information to describe the current situation correctly and to implement the missing characteristics to improve the intermodality of the means of transport for the improvement of the commuters' accessibility.

#### SUB CASE B: new maritime cross border connection Muggia –Koper (pre-feasibility analysis)

Efficient public transport connections between Muggia and Koper are missing. Collection of data about the current transport connection between Muggia (Italy) and Koper (Slovenia) is necessary because there are no available data, so there is a need for the organization of a demand analysis. The data needs concerning each means of transport are:

- 1. Travel by private car kilometric distance, travel time (shortest path)
- 2. Travel by bus routes (with intermediate stops or transfers), timetables, travel time, ticket cost
- 3. Passenger flows from Muggia to Koper by private car
- 4. Passenger flows from Muggia to Koper by bus





To examine the necessity and feasibility of maritime transport connection between Muggia and Koper a modal split analysis is needed, about the current means of transport and the scenario of the new maritime transport connection. The preferences of the commuters about the new means of transport will be reflected in a Stated Preferences Survey which is important to be held. The areas of interest, which should conduct the SP survey are Muggia, Kopper Triest and the FVG region. After the collection of data from the authorities and the commuters a modal split analysis with discrete choices can be held.

#### 2.9.4 The case of Zagreb, HR

#### CASE: Zagreb to coastal areas connectivity and transnational packages to Greece

Main purpose of this Action is to set up foundation for own, independent, reliable and automatic system for providing information regarding timetable, train punctuality and operative changes during journeys (delays, unexpected events and similar) in stations, on new trains and through other communication channels.

- 1. Passenger Flows to Greece with maritime transport (through Italian Ports)
- 2. Passenger Flows to Greece with road transport
- 3. Passenger Flows to Greece with rail transport
- **4.** Travel Time (Greece) with maritime transport (through Italian Ports)
- 5. Travel Time (Croatia Greece) with rail transport
- **6.** Travel Time (Croatia Greece) with road transport
- 7. Travel Cost to Greece with maritime transport (through Italian Ports)
- **8.** Travel Cost to Greece with road transport
- **9.** Travel Cost to Greece with rail transport
- **10.** Identification of points that suffer from luck of safety (black spots )

The gathering of the above data, will contribute to the implementation of the automatic system for providing information regarding timetable, train punctuality and operative changes during journeys (delays, unexpected events and similar) in stations, on new trains and through other communication channels. At the same time, this dataset can be the input for the desired Demand Analysis for the identification of the modal split analysis, the origin to destination analysis and the future transport needs (development of new transport lines, modes)

#### Table 12: Zagreb case Stakeholders Table





Stakeholders / name of organization	Provision of Data
Croatian National Tourist Board	Current Passenger/Tourist Traffic flows, cross-border passenger flows
Port of Rijeka authority	Current Passenger Traffic Volume, timetables of the existing services, pricing
Port of Zadar authority	Current Passenger Traffic Volume, timetables of the existing services, pricing
Port of Split authority	Current Passenger Traffic Volume, Timetables of the existing services, pricing
Port of Dubrovnik authority	Current Passenger Traffic Volume, timetables of the existing services, pricing
City of Rijeka	Stated Preference Survey, older transport schemes, Origin to destination data
City of Zadar	Stated Preference Survey, Survey, older transport schemes, Origin to destination data
City of Split	Stated Preference Survey, Survey, older transport schemes, Origin to destination data
City of Dubrovnik	Stated Preference Survey, Survey, older transport schemes, Origin to destination data
Ministry of Maritime Affairs, Transport and Infrastructure	Current Passenger Traffic Volume, cross-border passenger flows
Ministry of Tourism	cross-border passenger and touristic flows

#### 2.9.5 The case of Ljubljana, SI

# CASE: Intermodal passenger corridor: Koper cruise terminal-Ljubljana hub-Ljubljana Jože Pučnik Airport (Ljubljana airport)

For the upgrade of connectivity among Koper – Ljubljana – Ljubljana Airport, among data/information to be collected during the examination phase are:

- Tourist flows from/to Koper
- Tourist arrivals/departures to Ljubljana with different transport modes
- Provision of information from analysis of railway passenger infrastructure (main hubs, points of interchange among public transport PT) and services (frequency of service on working and weekend days, transport times among main railway hubs, waiting times and reliability of connections, options of mobility as a service MaaS for tourists);
- Stated and revealed preference for the tourists (Airport, Port for foreign and phone/web survey for domestic)
- Identification of main attraction poles within the buffer zone Koper Ljubljana





- Field data on interconnectivity and language provision of timetable data among different modes of transport on hubs (e.g. languages of timetables, info for busses/shuttles on train stations, availability of pre-trip and on-trip data for transfers and connections) for tourists
- Public operators involvement and future roles identification
- Ongoing and future mobility projects examination to formulate the base scenario per examination horizon(s)

Actor	Type of actor	Provision of Data
Ministry of infrastructure of Republic of Slovenia	national public authority	Available transport data for public transport services (road PT). Data from integrated tariff and ticketing systems of Slovenia.
Ministry of the environment and spatial planning of Republic of Slovenia	national public authority	Data on further spatial plans for PuT and touristic development of main region within catchment area.
Regional development Agency Koper	Regional development agency	Data on transport flows and stated preferences for tourists from maritime area to hinterland.
Slovenian railways - Passenger transport	Railway operator	Timetables, pricing policy, travel times, passenger flows. Data on railway passenger transport flows between coastal areas and Ljubljana urban area.
Arriva Slovenia	Private bus operator	Provision of timetables and passengers flows in City of Koper and public transport from Ljubljana to Ljubljana airport.
Ljubljana urban transport	Municipal bus operator	Provision of timetables and passengers flows in city of Koper, provision of data on intermodality among railway and bus transport.
DRI Investment Management Ltd	sectoral agency	Data on current and future development of public infrastructure (rail infrastructure, road infrastructure).
Fraport Slovenia	Operator of air services at Ljubljana Jože Pučnik Airport	Data on airline timetables, modal split for transport to and from airport, provision of data for pilot.
Port of Koper	Consessionar for maritime cruise services at Port of Koper	Passenger/ touristic flows for maritime mode of transport, seasonal timetables, origin to destination analysis of cruise ships and trips to hinterland.





#### 2.9.6 The case of Bar, ME

#### **CASE:** Port of Bar – City and regional connectivity

Port of Bar Case Study in Inter-Connect project will deal with:

- The general role of the port in the process of movement of people, from road transport to sea transport and rail transport to sea transport and vice versa
- The analysis of passenger flows within the study area
- The identification of passenger demands
- The examination of intermodal passenger transport, sea-bus-rail connection in Bar
- The improvement of the port role within the transport system and general promotion of the alternatives to road transport

The methodology needed to update the transport system:

- Description of the current status of transport modes available in Bar and Montenegro modal split (urban modal split interurban modal split)
- Origin to destination analysis
- Characteristics of the population (demographic characteristics, professions, salaries, purpose of travel)
- Methodology and the best practices
- SWOT Analysis detection of strengths, weaknesses, opportunites and threats for Port of Bar concerning sea-bus-rail intermodal passenger transport
- Formulation of the road map towards intermodal passenger transport and rail promotion

The institutions and stakeholders involved that can provide data are presented in the table below:

Table 13: Bar case Stakeholders Table

Actor	Type of actor	Provision of Data
Ministry of Transport and Maritime Affairs	Public Authority	The Maritime Transport Strategy of Montenegro, available transport data/statistics, passenger/touristic flows
Municipality Bar	Public Authority	Timetables of public transportation, capacity of buses, pricing policy, travel times, passenger flows
Railway Transport of Montenegro JSC	Railway operator	Timetables, pricing policy, travel times, passenger flows





Barska Plovidba AD	Ferry company	Passenger/ flows,	touristic seasonal	
		timetables, destination a	_	to

If the two main risks referred to the Port of Bar's case (Insufficient stakeholders engagement and Quality of collected data) are a fact in this occasion too, a questionnaire survey is very important to be held. A questionnaire survey should be held for tourists and residents too. The collection of data, refer to the qualitative and quantitative characteristics of the population, the current modal split and origin to destination profile of the commuters is crucial for the enhancement of the transport services and transport system connectivity of the case study.

#### 2.9.7 The case of Durres, AL

#### **CASE:** Durres – Tirana connectivity

In order to develop digital timetables harmonization for intermodal transport, between Durres and Tirana a catalog with the current timetables of all means of transport is needed. Furthermore, an estimation of the walking times from one terminal to the other and main indicators as presented in the following table could be useful.

Table 14: Proposed data to be collected for case examination in Durres

TIMETADIEC	
TIMETABLES	
Durres Port- Durres Port Authority	
2. Albanian Railway - Albanian Railway S.A.	
3. Public Transport Durres	
4. Public Transport Tirana	
5. Seasonal Arrivals and Departures at Tirana Airport (or the first and the	e last
flight)	
Walking Times	
Durres Port - Public Transport Durres	
2. Albanian Railway - Public Transport Durres	
3. Albanian Railway - Public Transport Tirana	
4. Public Transport Tirana - Arrivals and Departures at Tirana Airport	
Indicators	
Mean waiting time of public transport	
2. Durres Port Passenger flow	
3. Tirana Airport Passenger flow	
4. Public Transport Tirana and Durres Passenger flow	<u> </u>

#### 2.9.8 The case of Belgrade, SB

#### **CASE: Region to Belgrade interconnectivity**





Optimization of the connection of central bus and railway stations with new locations and also the enhancement of the connectivity of Belgrade airport "Nicola Tesla" with the city of Belgrade and neighbouring urban environments as well as the activation of Park&Ride solutions, is a process that needs gathering of transport data, population characteristics and the knowledge of current transport and urban policies.

Belgrade's Transport Planning is presented in the following Studies:

- The Transport Master Plan for the City of Belgrade presented in November 2017
- The Regional Balkans Infrastructure Study (REBIS) Update
- Recently done projects and researches on Belgrade city network and public transport

The possession and the exploitation of these studies and the data/database used is very important. If they are not available, the collection of new data with the organization of a questionnaire survey would be useful. Data analysis could include:

- Current situation analysis, Demographics of the commuters, Analysis of transport demand/supply and flows, Modal Split, O-D Analysis
- After the recognition of the current situation the defining of actions and goals would be possible
  - Identifying of overlapping points
  - o Identifying potential gaps and necessary actions
  - o Defining of common areas and actions
- Defining of guidelines incorporated with existing strategies and plans

All of the scenarios examined should be conducted for the three different types of commuters. So the data collection or the gathering of data from transport institutions should be organized for:

- Local travelers at the level of City of Belgrade
- National travelers intercity and Belgrade catchment area
- Transnational level regional and wider

Table 15: Involved stakeholders that can provide useful data for Belgrade case

Stakeholders	Data Provision					
Belgrade Railway	Current timetables, O-D data, passenger flows, tourist					
<b>Junction Construction</b>	flows, pricing policy, capacity					
Company Ltd, Belgrade						
City of Belgrade -	Provision of existing transport data, modal split, O-D					
Secretariat for Public	analysis, travel times, population demographic					
Transport	characteristics, tourist characteristics, data from older					
	surveys					
City of Belgrade -	Provision of existing transport data, modal split, O-D					
Secretariat for	analysis, travel times, population demographic					
Transport	characteristics, tourist characteristics, data from older					
	surveys					
Traffic Company	Current timetables, O-D data, passenger flows, tourist					
"Lasta", Belgrade	flows, pricing policy, capacity					
National Railway	Current timetables, O-D data, passenger flows, tourist					
operator "Srbija Voz"	flows, pricing policy					
Airport Nikola Tesla	Current timetables, O-D data, passenger flows, tourist					





#### 3. Conclusions & key remarks

Car is the dominant mode in all 8 cases examined in the framework of Inter-Connect project as revealed with the data collected in Del. 2.1.2 and as derived also through the SWOT analysis and Round tables' input while the 2<sup>nd</sup> (relevant and related to the car dominance) common, for the majority of cases, characteristic regarding connectivity in Inter-Connect cases is the need to further upgrade public transport services (attributes like coverage, reliability, frequency, intermodality). Furthermore, it seems that stakeholders and citizens' engagement in mobility planning, although supported through EU directions (e.g. SUMP cycle), is not at the desired level.

From an initial diagnostic territorial analysis based on the collected input in Act. 2.1 (RT, data collected, SWOTs, citizens' proposals) we can conclude in the following main drawbacks:

- Low level of stakeholders cooperation and limited participatory approach on future mobility interventions design and implementation
- Low level of provided public transport services (quality, coverage, reliability)
- Lack of open data & integrated data and information provision
- Lack of integration e.g. integrated tickets
- Seasonality issues highly increased demand during specific periods that calls for focused interventions and probably on demand services
- Low connectivity of intermodal stations (transport hubs)
- Lack of political will and plans' continuity lack of a common vision

Intermodal accessibility (and connectivity among transport nodes; ports, airports, rail stations and hinterlands) at ADRION regions is significantly low as derives from the Round tables and data collection efforts in the framework of Act. 2.1 with the exception of the two Italian Inter-Connect cases – Region Emilia Romagna and Fruili Venezia Giulia – a fact that is supported also through larger in extent data collection and analysis efforts e.g. TRACC set of accessibility indicators (Figure 4: Accessibility potential, ESPON, Figure 4).





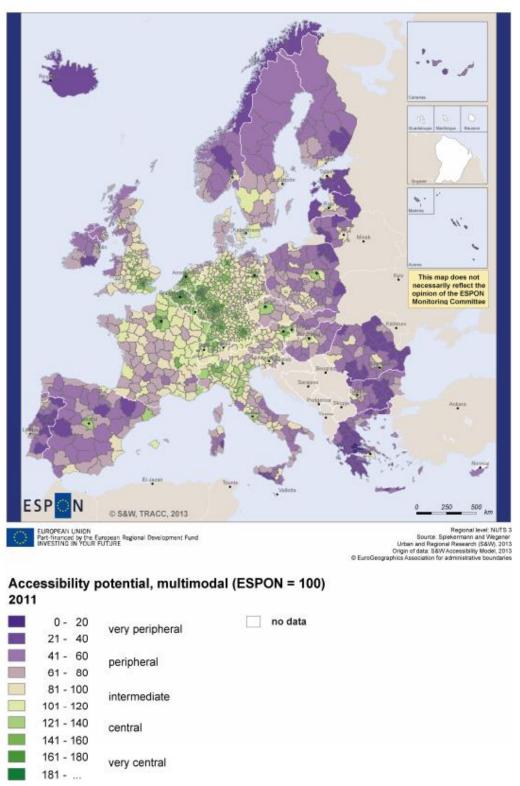


Figure 4: Accessibility potential, ESPON

The level of accessibility seems to vary greatly between ADRION Inter-Connect cases with the ERDF cases to be a step forward and IPA cases to have recently entered in a development path regarding





interconnectivity. The port- hinterland and rail hubs – hinterland connections need to attract decision makers' and market's interest in order to enhance interconnectivity profile of Inter-Connect cases.

Gathering input for Inter-Connect cases, the following tables are generated providing an overview of i) Table 16: the levels of examination (city, regional and transnational connectivity) and ii) Table 17: interconnectivity components to be further analysed at the next steps per Inter-Connect case.

Table 16: Levels of examination (city, regional and transnational connectivity) per case

	CASE EXAMINATION LEVEL						
	city connectivity	regional connectivity	transnational connectivity				
Bologna		RER					
Trieste	port - city accessibility		IT-SL				
Igoumenitsa	port - city accessibility						
Ljubljana		Port of Koper - Ljubljana Airport					
Zagreb		Zagreb to coastal areas by rail	HR-GR				
Bar	port - city accessibility	Bar to rest ME					
Belgrade		from the rest Serbia to Belgrade					
Durres		Durres - Tirana					

As depicted from Table 16, 4 out of the 8 Inter-Connect cases will deal (not exclusively) with intracity connectivity by PuT, 6/8 with regional connectivity and 2 cases will also approach the examination from a transnational approach. It can be added here however that even with city-focused connectivity upgrades, the whole picture of the Regions is upgraded and it is possible, throught transferring activities and knowledge exchange, to further upgrade ADRION's as a whole profile (gentrification phenomenon).

Table 17: Inter-Connectivity components to be examined per case

	Inter-Connectivity components							
	addressed by cases							
	Physical	Logical	Economic al	Contractu al	Institution al	Legal and regulatory		Feasibility study or implementation?
Igoumenitsa								FS
Bologna -								
case A								IMP
Bologna -							main	
case B							component	IMP





Trieste - subcaseA				secondary component	FS
Trieste - subcaseB				not addressed	FS
Zagreb					FS
Ljubljana					FS
Bar					FS
Belgrade					FS
Durres					FS

Except of the two sub cases that refer to Region Emilia Romagna that consist of both examination and implementation stages, the rest Inter-Connect cases will examine specific aspects able to upgrade intermodal public transport based services. According to the specific needs, greater focus will be posed to specific interconnectivity components (Table 17). Legal and regulatory aspects being the last steps of the examination of a potential intervention while simultaneously involving other than transport related professions (e.g. lawyers) seem not to be inside the core examined aspects of Inter-Connect cases. From the other side, logical, contractual and institutional aspects rank at the top of examined aspects at Inter-Connect project; therefore harmonization of information provision and stakeholders cooperation and engagement are considered as necessary preparatory step and prerequisite for offering advanced services to travellers.

According to case specific needs, the following table summarizes the most important data that should be collected for cases' examination (not compulsory):

Table 18: List of important data/information for cases' examination

Data that can facilitate/serve cases' examination scopes
Traffic flows/ Origin - Destination matrices/ Arrivals & departures
at transport nodes (e.g. ports, airports, rail stations) / cruise data
Modal split
PuT characteristics (timetables, coverage etc)
Ongoing and planned projects - synergies
Pricing policies

Finally, and in order to present success stories through Inter-Connect project, the partnership recognizes the significant role of stakeholders' (transport operators, hubs managers, decision makers, tourist related bodies and marketing and communication experts) and travellers' (citizens and tourists) engagement for designing effective and acceptable mobility interventions. Without the active role and the feeling of ownership of local communities and transport related actors, the viability of the proposed mobility interventions would be at high risk.