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CROSSCONNECT

INTERREG ITALY-CROATIA PROJECT CROSSCONNECT

Output 1.1 – Transferability of the selected policies, practices and instruments to other regions and contexts

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1. INTRODUCTION

One of the main goals of this document focused on the *"Collection of Mobility Solutions: Transferability of the Selected Policies/Practices/ Instruments to Other Regions and Contexts",* is to develop a strategic document based on the capitalisation reports and Cross Border Technical Group analysis.

The strategy covers sustainability, environmental impact, and the integration of innovative technologies. A comprehensive strategy outlining the integration of sustainable and advanced technological solutions in transportation is developed taking into consideration following aspects:

1. **Identification and Evaluation**: To identify a set of mobility solutions (policies, practices, and instruments) that have been successfully implemented in specific regions or contexts.
2. **Assessment of Effectiveness**: To assess the effectiveness and impact of these solutions in their original settings, including evaluating their successes, challenges, and outcomes.
3. **Transferability Analysis**: To analyze the potential for transferring these solutions to other regions or contexts with different socio-economic, geographical, or cultural conditions.
4. **Recommendations for Adaptation**: To provide guidelines and recommendations for adapting these policies and practices in new environments, considering local needs, constraints, and opportunities.
5. **Facilitation of Knowledge Sharing**: To encourage the exchange of knowledge and best practices between regions or countries, fostering cross-regional cooperation in mobility planning and innovation.

6. **Promotion of Sustainable Mobility**: To contribute to the development of sustainable and efficient mobility solutions across diverse contexts, enhancing transportation systems' sustainability, accessibility, and inclusivity globally.
7. **Policy Advocacy**: To influence policymakers by showcasing successful mobility strategies that can be adopted and customized for other regions, thereby improving regional and global mobility systems.

Essentially, the document would aim to promote the dissemination and adaptation of successful mobility policies and practices across different regions, while considering local specificities for effective implementation.

2. CROSSCONNECT GOOD PRACTICES FOR REGIONAL DEVELOPMENT

2.1 The CROSSCONNECT Project

The CROSSCONNECT Project "Cross-border Coordinated Sea-Land Approach Interconnecting Ports of the Adriatic Sea with Airports and Urban Areas," is financed by the Interreg Italy-Croatia Programme, specifically under Standard call, Specific objective 3.1. This objective focuses on developing and enhancing sustainable, climate-resilient, intelligent, and intermodal mobility, including improved access to TEN-T and cross-border mobility.

The overall objective is to develop and promote a multimodal coordinated sea-land approach based on sustainable and technologically advanced ICT solutions, in order to interconnect Croatian and Italian ports with urban areas and airports, improving passengers'

mobility, focusing on innovation and sustainability in the blue economy to solve current inefficiencies.

In order to do that, the project will implement a set of structured activities based on cross-border and cooperative approach and will produce **three main outputs**:

- CROSSCONNECT transfer strategy: This strategic document will collect the key results from the capitalisation and assessment report, the feedback from the experts at cross-border level and available technologies and solutions. It will represent the key supporting tool for the definition of the joint pilot actions.
- Sustainable & ICT solutions' testing actions: a first phase of capitalisation of the available knowledge from Interreg projects will lead to a definition of a cross-border transfer strategy, with the aim to test new sustainable & innovative ICT based solutions, which will speed up the passengers processing from/to ports and airports and urban areas. Project partners will then define and test joint pilot actions (on type of connectivity level and territorial level) that will lead to the implementation of a Manual on tested solutions.
- Strategic Roadmaps interconnecting ports with urban areas & airports: project partners together with external technical experts will work jointly to formalise the tested intermodal connections by drafting a Strategic Roadmap aimed at transferring the CROSSCONNECT model to other port authorities. The roadmap will be presented at Cross-border Forum and at dedicated roundtables with all ports operating in the Adriatic Sea with the aim of engaging the ports and port authorities and to explain on how to adapt modernised and sustainable operational and technological solutions that have been tested through the project and to commit them towards the creation of a new or modernised connection with airports and urban transport authorities to enhance the mobility of passengers.

Project is divided into three technical work packages with following specific objectives:

- To capitalise and transfer the available knowledge and strategies on innovative and green intermodal solutions,
- To develop and test innovative green solutions and ICT tools for enhancing the processing of passengers between ports and other transport infrastructures (urban transport authorities and airports),
- To define and capitalise a strategic framework for the implementation of innovative intermodal connections between ports and the hinterland.

Main target groups that will benefit from the project outputs and results are:

- Infrastructure and public service providers (airports, ports, airlines, ferry lines)
- National public authorities (Ministries of Sea, Transport and Infrastructure)
- Regional public authorities
- Local public authorities
- General public (passengers, tourists from all over the EU and beyond)
- Sectoral agencies (tourism agencies)
- SMEs & enterprises
- International organisations and EEIG
- Higher education & research organisations

Partnership

The CROSSCONNECT consortium consists of 8 project partners and 2 associated partners. Partnership is composed of 4 ports and 2 airports and 2 urban public transport companies from 4 different metropolitan areas (Venice, Pula, Dubrovnik, and Brindisi).

The project partners are:

- Dubrovnik Airport (Lead Partner),
- Dubrovnik Port Authority (Project partner 2)

- North Adriatic Sea Port Authority - Ports of Venice and Chioggia (Project partner 3)
- SAVE S.p.A (Project partner 4)
- Pula Port Authority (Project partner 5)
- Pula promet (Project partner 6)
- Southern Adriatic Sea Port Authority - Ports of Bari, Brindisi, Manfredonia, Barletta, Monopoli and Termoli (Project partner 7)
- Public Transport Company Brindisi S.p.A (Project partner 8)

The associated partners are:

- Port of Rijeka
- Port of Ancona

2.2 Overview of selected Good Practices

2.2.1 CROSS-BORDER TECHNICAL WORKING GROUP (CBTG)

The CBTG is a cross-disciplinary team composed of technical experts, project managers, representatives from port / airport authorities, urban transport companies, and other key stakeholders from both Italy and Croatia. The group is responsible for the technical guidance and strategic direction of the CROSSCONNECT project, ensuring that the project aligns with both regional needs and broader EU objectives, such as those outlined in the EU Green Deal.

CBTG group has following tasks within the project:

- **Capitalization of Knowledge:** The CBTG is tasked with reviewing and adapting successful measures from previous projects (ADRIGREEN, INTERPASS, INTERCONNECT) to the specific context of the CROSSCONNECT project.

- **Development and Testing of Solutions:** The group is responsible for guiding the development of ICT tools and green technologies that will be tested in various pilot actions across the participating regions.
- **Strategic Framework Development:** The CBTG contributes to the creation of strategic frameworks that will guide the implementation of sustainable and innovative intermodal transport solutions in the Adriatic region.
- **Monitoring and Evaluation:** The group monitors the progress of the project, evaluates the outcomes of pilot actions, and makes recommendations for adjustments as needed.

2.2.2 Relation and contribution of the selected Good Practices

a) Data Collection and Analysis Methodology

For collection and analyzing data from partners through the questionnaire, the proposed methodology combined **SWOT Analysis** with **Likert scale evaluation of identified measures from previous INTERREG projects** (INTER-PASS, ADRIGREEN, INTERCONNECT). This approach allowed for both qualitative and quantitative assessment, helping to identify the strengths, weaknesses, opportunities, and threats (SWOT) associated with each proposed solution, alongside a quantitative ranking for specific implementation aspects. This mixed-methods approach is effective for selecting the most suitable solutions to transfer and adapt within the CROSSCONNECT project.

Analysis methodology steps can be presented as follows:

1. **SWOT Analysis:**
   - This approach enables partners to evaluate each proposed solution critically, considering factors that facilitate or hinder implementation and long-term impact. SWOT is useful for identifying internal and external factors that could affect the transferability and success of each solution.

2. **Likert Scale Evaluation:**
    - Partners rate each aspect of the proposed measures identified in previous projects, such as relevance (importance), scalability, cost-effectiveness, environmental impact, and user acceptance, using a Likert scale from 1 (Strongly Disagree) to 5 (Strongly Agree). This scale offers a structured, quantitative assessment that aids in identifying solutions with the highest potential for adaptation within CROSSCONNECT.

SWOT analysis has been performed by each project partner as part of the D1.1.1. Cross-border assessment and capitalisation report and according to received template. Results of the SWOT analysis were than summarised per each region to identify territorial needs.

According to the SWOT analysis results there are many opportunities that partners can explore to improve connectivity of port / hinterlands for ferry passengers and for fly&cruise concept. Additionally, lot of opportunities have been recognised that where already envisaged to be implemented during the pilot action phase of the CROSSCONNECT project. Most important measures identified through SWOT analysis process mostly relate to:

- establishing strong cooperation between infrastructure service providers (port, airport, railways, urban public transport) with inclusion of all stakeholders, institutional support and strategic planning on national / regional level,
- adopting passenger-oriented measures to improve seamless journey experience (optimisation of Fly&Cruise concept through process automatization, reducing queuing time, reducing congested road areas, integration of data sharing between different transport modes),
- adoption of smart solutions to improve connectivity of port to airports/hinterlands,
- implementation of smart ticketing system and ICT communication tools to improve passenger satisfaction,
- introduction of new bus lines in tourist destination to connect port area to city centre,

- reduction of environmental impact through electrification measures.

Likert scale analysis has also been performed within the D1.1.1. Cross-border assessment and capitalisation report where measures identified in previous INTERREG projects (INTER-PASS, ADRIGREEN, INTERCONNECT) have been evaluated. This report summarized the analysis of the collected questionnaire data for the CROSSCONNECT project, focusing on the integration of port and airport systems, adoption of electrification measures, and innovative IT solutions for sustainable transportation. The aim is to assess the feasibility, opportunities, challenges, and impact of proposed solutions in the regions involved in the project.

This report also provides an in-depth analysis of the CROSSCONNECT project, integrating insights from two key documents: the questionnaire summary and the capitalization template for intermodality possibilities. The project focuses on creating a sustainable, multimodal transport network connecting Adriatic ports, airports, and urban areas. Its overarching goals include fostering economic growth, enhancing environmental sustainability, and improving passenger mobility through innovative ICT tools and green technologies of previous Interreg projects.

This analysis is based on a range of measures and criteria related to regional development, governance, cooperation, and the specific thematic goals of Interreg initiatives. Total of 86 measures have been identified from previous projects for evaluation out of which 54 measures have been selected through evaluation process for CROCSSCONNECT transferability. Identified measures have been assessed by CBTG experts as well as internal experts of each project partner.

List of evaluated measures for transferability in the context of CROSSCONNECT

PROJECT NAME	TYPE OF MEASURE	ASPECT, ACTIONS, ACTIVITIES*	DESCRIPTION OF MEASURE
INTERCONNECT	Integration of data sharing	ASPECT 1: THE FUTURE OF ANY ADRION CITY	Information provision to travellers at transport hubs
INTERCONNECT	Integration of data sharing	ASPECT 1: THE FUTURE OF ANY ADRION CITY	Harmonized timetables between different public transport modes
INTERPASS	Strategic planning at EU, nat., reg., loc. level	Action 2: Integration of baggage handling procedures between ports and airports especially for the home ports.	Capacity building of the service providers, public institutions, and relevant bodies and development of common guidance as regards the technical, operational and financial aspects for achieving integrated baggage handling between ports and airport.
INTERPASS	Strategic planning at EU, nat., reg., loc. level	Action 2: Integration of baggage handling procedures between ports and airports especially for the home ports.	Allocate specific national or regional funding schemes to the purchase of the relevant technological equipment to be installed in ports and airport for achieving

			integrated baggage handling procedures.
INTERPASS	Strategic planning at EU, nat., reg., loc. level	Action 3: Improving connectivity between airport and port by entering new PT connections between the two terminals	Allocate specific national or regional funding schemes to the purchase of the relevant technological equipment, fleet, and infrastructures for achieving direct connections with PT modes between ports and airports.
INTERCONNECT	Connectivity / intermobility	ASPECT 1: THE FUTURE OF ANY ADRION CITY	Quality bus services (coverage, frequency) depending on users-needs
INTERCONNECT	Connectivity / intermobility	ASPECT 2: THE FUTURE OF ANY ADRION PORT	New services / enhanced public bus services connecting the port to the hinterland and other hubs of the multimodal transport systems;
INTERCONNECT	Strategic planning at EU, nat., reg., loc. level	ASPECT 1: THE FUTURE OF ANY ADRION CITY	Improvement of social inclusion - Introduction of tactile paths and voice devices in zones of bus

			stops - Introduction of ramps for disabled on pedestrian paths
INTERCONNECT	Integration of data sharing	ASPECT 1: THE FUTURE OF ANY ADRION CITY	Available, accurate information for public transport services
INTERCONNECT	Electrification measures	ASPECT 1a: SPECIAL PART DEDICATED TO ELECTROMOBILITY	Electromobility for PT (electric buses)
INTERCONNECT	Connectivity / intermobility	ASPECT 2: THE FUTURE OF ANY ADRION PORT	Better and fast connections among ports and the urban areas (where possible promoting walk/bike connections)
INTERCONNECT	Electrification measures	ASPECT 1a: SPECIAL PART DEDICATED TO ELECTROMOBILITY	Integration of charging points and charging services with renewable energy sources plants (e.g. photovoltaic equipment)
INTERPASS	Strategic planning at EU, nat., reg., loc. level	Action 2: Integration of baggage handling procedures between ports and airports especially for the home ports.	Development of Institutional Agreements among the Ports and Airports and the involved parties, defining the responsibility

			allocation among them and clarify issues such as security controls and protocols, transfer procedures between the airport and the port etc.
ADRIGREEN	Electrification measures	Adoption of smart solutions to improve waste&water management and to reduce energy consumption in small-medium regional Port / Airports;	Decreasing fossil fuel consumption - Provide electric charging infrastructure stations for electric vehicles
ADRIGREEN	Electrification measures	Adoption of smart solutions to reduce energy consumption in small-medium regional ports /Airports	Installation of solar panels in different areas of the port/airport (e.g., rooftops of buildings and warehouses) for generating renewable energy
INTERCONNECT	Electrification measures	ASPECT 1a: SPECIAL PART DEDICATED TO ELECTROMOBILITY	Intermodal connections of charging services and public charging points in the intermodal nodes (airports, ports, railway stations, park and ride, etc.)

INTERCONNECT	Connectivity / intermobility	ASPECT 3: THE FUTURE OF ANY ADRION AIRPORT	New services / enhanced public bus services connecting city - city airport as well as the catchment.
INTERCONNECT	ICT solutions (green and sustainable)	ASPECT 3: THE FUTURE OF ANY ADRION AIRPORT	New integrated CIS system or Communication tool (mobile app) to establish information sharing between all transport providers and other stakeholders at airports to improve accuracy of Passengers information
INTERCONNECT	Connectivity / intermobility	ASPECT 1: THE FUTURE OF ANY ADRION CITY	Transport hubs' interconnectivity
INTERCONNECT	ICT solutions (green and sustainable)	ASPECT 2a: SPECIAL PART DEDICATED TO CRUISE	Creation of CIS tool to share passenger and baggage information between airports, railway station and ports to enable easier transport and higher level of security and safety for the "homeport" operations

ADRIGREEN	Electrification measures	Adoption of smart solutions to reduce energy consumption in small-medium regional ports /Airports	Decreasing fossil fuel consumption - Purchase of electric vehicles and GPU (e.g., electric aircraft tug, electric baggage tractor, electric waste management vehicles etc.)
INTERPASS	Strategic planning at EU, nat., reg., loc. level	Action 1: Integration of information systems between ports and airports especially for the home ports.	Capacity building of relevant stakeholders and bodies on the legal, financial, and operational (ICT expertise) aspects for creating an integrated information system between ports and airports. The capacity building will include specific guidelines as regards the needed procurements, agreements and contracts development, the content of cooperation among service providers, public institutions and

			relevant bodies, the data sharing and ownership policy, technological solutions, and relevant costs and the management of crisis situations.
ADRIGREEN	ICT solutions (green and sustainable)	Improvement in connectivity of port / airports to hinterlands	Implementation of low-cost and smart solutions to better connect airports and ports with the local public transport systems, such as railways and public bus lines
ADRIGREEN	Integration of data sharing	implementation of integrated timetabling and information for passengers that must continue their travel by other means of transport	Smart data sharing systems (for example: Installation of a multimedia outdoor totem to provide passengers on-time information on the ferries and trains transiting, airport flight schedule…)
INTERCONNECT	Electrification measures	ASPECT 1: THE FUTURE OF ANY ADRION CITY	Shift to electromobility

INTERCONNECT	Integration of data sharing	ASPECT 2: THE FUTURE OF ANY ADRION PORT	Adequate information provision (including touristic ones), provided with a adequate level of signalling and safety as well as with effective ICT tools for user information provision; Providing adequate information through ICT tools, encompassing both fixed installations and mobile apps, with different languages, possibly also endowed with integrated ticketing features
INTERPASS	Strategic planning at EU, nat., reg., loc. level	Action 1: Integration of information systems between ports and airports especially for the home ports.	Development of Institutional Agreements for establishing strong cooperation schemes between the authorities and the relevant stakeholders as well as all the involved parties, for ensuring the provision

			of updated integrated information exchange which will promote intermodality and the use sustainable mobility modes of transport.
INTERPASS	Strategic planning at EU, nat., reg., loc. level	Action 1: Integration of information systems between ports and airports especially for the home ports.	Development of a common and harmonized operational and technical architecture for the integrated information systems (devices, web platforms and mobile applications) that will provide services to the authorities, the relevant bodies, and the travellers.
INTERPASS	Strategic planning at EU, nat., reg., loc. level	Action 4: Integration of timetable (departures and arrivals) between ports and airports especially for the home ports cruise cases.	Allocate specific national or regional funding schemes subsidizing the technological infrastructures needed, in order to achieve the integration of timetables for

			departures and arrivals between ports and airports.
ADRIGREEN	Electrification measures	Adoption of smart solutions to reduce energy consumption in small-medium regional ports /Airports	Decreasing fossil fuel consumption - Use of alternative renewable fuels (diesel from waste and residue) for diesel vehicles
INTERPASS	Strategic planning at EU, nat., reg., loc. level	Action 1: Integration of information systems between ports and airports especially for the home ports.	Allocate specific national or regional funding schemes to the purchase of the relevant technological equipment to be installed in ports and airport as well as for the implementation of the relevant information platforms and mobile applications.
INTERCONNECT	ICT solutions (green and sustainable)	ASPECT 2a: SPECIAL PART DEDICATED TO CRUISE	New paths associated with adequate information provision (including touristic ones), provided with a adequate level of signalling and safety as well as with effective

			ICT tools for user information provision
INTERCONNECT	Strategic planning at EU, nat., reg., loc. level	ASPECT 1: THE FUTURE OF ANY ADRION CITY	Cooperation among transport providers and local authorities / Stakeholders' engagement in sustainable mobility planning
INTERCONNECT	Electrification measures	ASPECT 1a: SPECIAL PART DEDICATED TO ELECTROMOBILITY	Upgrading of the electricity distribution network for the purposes of electric mobility
INTERPASS	Strategic planning at EU, nat., reg., loc. level	Action 3: Improving connectivity between airport and port by entering new PT connections between the two terminals	Update of the institutional and legal framework which will enhance connectivity between ports and airports. Synergies among airline companies, ferries and cruise industry, B2B agreements, updated business plans. The frameworks will have to specify issues such as the roles of each participated authority, the operational

			authority, the ownerships of the infrastructures, the fees and payment systems etc.
INTERCONNECT	Electrification measures	ASPECT 1a: SPECIAL PART DEDICATED TO ELECTROMOBILITY	Accessible and easy to use charging infrastructures and infrastructures interoperability in cross boarders areas
INTERCONNECT	Electrification measures	ASPECT 1a: SPECIAL PART DEDICATED TO ELECTROMOBILITY	Upgrading of common technical standards for the charging services and infrastructures (plugs, sokets, power, interoperability, charging systems, etc.)
ADRIGREEN	Connectivity / intermobility	Improvement in connectivity of port / airports to hinterlands	New protocols with public and private transport providers to experiment with new services to speed up the process of passengers from/to touristic destinations which are not well-connected
INTERCONNECT	Integration of data sharing	ASPECT 1: THE FUTURE OF ANY ADRION CITY	Integrated information provision as for

			sustainable modes of transport
INTERCONNECT	ICT solutions (green and sustainable)	ASPECT 1: THE FUTURE OF ANY ADRION CITY	Development of a MaaS (Mobility as a Sevise) approach
ADRIGREEN	Electrification measures	Adoption of smart solutions to reduce energy consumption in small-medium regional ports /Airports	Implementation of monitoring system of the energy consumption of airport/port equipment, buildings and other facilities for supporting decision-making and implementation of measures for improving energy efficiency.
INTERCONNECT	Connectivity / intermobility	ASPECT 2a: SPECIAL PART DEDICATED TO CRUISE	Create public transport solutions for not organized/independent tourists
INTERCONNECT	Integration of data sharing	ASPECT 3: THE FUTURE OF ANY ADRION AIRPORT	Adequate information provision (including touristic ones), provided with a adequate level of signalling and safety as well as with effective

			ICT tools for user information provision
INTERPASS	Strategic planning at EU, nat., reg., loc. level	Action 4: Integration of timetable (departures and arrivals) between ports and airports especially for the home ports cruise cases.	Cooperation among authorities for serving the whole transport chain for a tourist/traveller; B2B agreements, necessary updates on the legislative framework for public transport provision, institutional agreements
INTERCONNECT	ICT solutions (green and sustainable)	ASPECT 3: THE FUTURE OF ANY ADRION AIRPORT	Creation of integrated ticketing and public transport systems aiming seamless travels from airports to touristic/urban areas
INTERCONNECT	Strategic planning at EU, nat., reg., loc. level	ASPECT 1: THE FUTURE OF ANY ADRION CITY	Pedestrian and cyclist center design - Setting physical barriers on main roads between lanes /Designing and equipping of the most used pedestrian crossing with road safety devices / Designing and

			arranging of most dangerous locations for cyclists / Shadowing pedestrian and cycling corridors
INTERCONNECT	Connectivity / intermobility	ASPECT 2a: SPECIAL PART DEDICATED TO CRUISE	Provision of sharing services at ports (bike and cars) for sustainable intermodality promotion / Electric light vehicles services for longer distances
INTERCONNECT	Connectivity / intermobility	ASPECT 3: THE FUTURE OF ANY ADRION AIRPORT	Direct connectivity of airports to the main touristic attractions in vicinity
INTERCONNECT	Electrification measures	ASPECT 1a: SPECIAL PART DEDICATED TO ELECTROMOBILITY	Integration of charging points with energy storage stations and battery management systems
INTERCONNECT	ICT solutions (green and sustainable)	ASPECT 3: THE FUTURE OF ANY ADRION AIRPORT	Introduction of Green - sustainable solution (bike and electric cars) for traveling to/from work for employees at airports (car sharing and similar sharing services) and for

			travelling inside of Airport city zone
INTERCONNECT	Strategic planning at EU, nat., reg., loc. level	ASPECT 1: THE FUTURE OF ANY ADRION CITY	Establish coordinators for sustainable mobility in companies/ institutions
INTERPASS	Strategic planning at EU, nat., reg., loc. level	Action 1: Integration of information systems between ports and airports especially for the home ports.	Development of European Guidelines for achieving information systems integration at transport hubs (especially between ports and airports)
ADRIGREEN	Electrification measures	Adoption of smart solutions to reduce energy consumption in small-medium regional ports /Airports	Decreasing fossil fuel consumption - Anti-idling communication campaign
ADRIGREEN	Integration of data sharing	implementation of integrated timetabling and information for passengers that must continue their travel by other means of transport	Improved connection between the ticket office and the ferry quays, as well as port connection with the local public transport system and railway station

Results of all survey questionnaire have ben summarised on project level to ensure cross-border approach and to evaluate transferability of measures to CROSSCONNECT project objectives and deliverables. Out of 54 adopted measures, 32 of them are identified within the project INTERCONNECT, 12 of them through project INTERPASS and 10 of them through project ADRIGREEN.

Project name	Adopted measures	Identified measures from the previous projects
INTERCONNECT	32	64
INTERPASS	12	12
ADRIGREEN	10	10
Total	**54**	**86**

Per type of the measure identified, survey results can be presented as follows:

Type of measure	Total adopted measures
Connectivity / intermobility	9
Strategic planning at EU, nat., reg., loc. level	16
ICT solutions (green and sustainable)	7
Integration of data sharing	8
Electrification measures	14
Promotion campaigns	
Total	**54**

Out of 54 adopted measures for CROSSCONNECT transferability:

- 16 of them are measures that require cooperation among partners and stakeholders though strategic planning at different levels (EU, national, regional, local);
- 14 of them are electrification measures of replacing technologies or processes that use fossil fuels with electric powered ones,
- 9 of them are related to improvements in connectivity / intermobility of different transport modes (ports to hinterlands; port / airport connectivity…),

- 8 of them corresponds to improvements in integration to data sharing between different transport modes in order to increase passenger satisfaction and enhance seamless travel experience,
- 7 of them are related to adoption of smart ICT green and sustainable solutions among interested parties.

Highest number of adopted measures are in the field of strategic planning at EU, national, regional and local level as well as in the field of electrification. Most important adopted measure can be summarised as follows:

- need of development of common guidelines for capacity building among service providers, public institutions, relevant bodies and other stakeholders on legal, technological, financial and operational aspect for integration of baggage handling procedures and systems for home port operation; for creating an integrated information system between ports and airports; for serving the whole transport chain for public transport provision and for enhancing connectivity between ports and airports,
- development of Institutional agreements between ports and airports and the involved parties to tackle security and custom issues and transfer procedures between ports and airports as well as integrated information data exchange,
- defining specific funding schemes subsidizing technological infrastructure needed for each of the four field of actions,
- development of common and harmonised operational and technological infrastructure for integrated information systems in order to provide unique travel experience to travellers and enhance digital transformation process among institutions and relevant parties.
- shift to electromobility for public transport services through replacing fossil fuel fleet with electric ones,

- providing electric charging infrastructure, installation of solar panels, purchase of electric vehicles and replacing fossil fuel fleet in ports and airports area,
- improvement in quality bus service (coverage, frequency) according to user needs,
- establishing new bus service protocols connecting the port with hinterlands.
- improvement in information provision to traveller at all transportation hubs, establishing harmonised timetables between different public modes,
- development of integrated Communication information system / tool for passenger, baggage and other relevant data sharing among different transport modes

b) Transferability assessment of key identified solutions from Capitalisation questionnaire and SWOT analysis to CROSSCONNECT project

The transferability potential of identified measures from previous relevant projects are assessed to CROSSCONNECT project and its objectives as well as their potential inclusion in foreseen pilot action plans. Additional identification of potential measures to be transferable to CROSSCONNECT project has been done through SWOT analysis of each region.

Measures and activities identified in following deliverables from previous projects have been assessed:

- ✓ ADRIGREEN Capitalization Report (useful data related to intramodality, best practice, operational and technological schemes to reduce environmental impacts of airports and ports, innovative solutions, procedures and techniques, SWOT analyses, funding schemes) and Joint Action Plan for intermodal and multimodal passengers' transportation from/to ports and airports.
- ✓ INTERPASS Capitalisation manual on best practices, their replicability and adaptability, Integrated Strategic Plan for better connection port-airport, Transnational evaluation report on intermodal solutions to improve and speed-up tourists' transit between ports and airports.

- ✓ INTERCONNECT Strategic Roadmap – Towards passengers' sustainable mobility in ADRION region" to deepen measures and fields of interventions in connecting ports with hinterlands.

In conclusion the most important opportunities for improvement that are transferable to CROSSCONNECT project and that will be addressed when creating pilot action plans refer to:

1. Integration of data sharing among different transport modes to provide passengers with information needed in real time and to increase their level of satisfaction (Dubrovnik region, Venice region, Brindisi region, Pula region).
2. adoption of smart solutions to improve baggage handling process (Venice region),
3. acquiring needed equipment to speed up baggage handling process (Dubrovnik region, Venice region,
4. decrease of carbon footprint through adoption of green solutions and electric mobility to reduce energy consumption and improve passengers' mobility, replacing old diesel vehicles or ground handling equipment with electric ones (Dubrovnik region, Brindisi region, Pula region),
5. implementation of smart ticketing system in port area for public transport (Pula region),
6. improving connectivity of port area to hinterlands with new electric busses connection (Brindisi region).

2.4 The Pilot Actions

During the pilot action implementation new innovative ICT tools will be developed as well as smart solutions adopted according to specified project objectives and in order to achieve project results and indicators. These results will be summarised in Manual of tested solutions. Ownership of implemented pilot action are defined by national rules and legislation as well as partners internal policies and procedures and maintenance of the costs will be responsibility of each respective project partner

2.4.1 Dubrovnik Region Objective:

The objective for Dubrovnik is to develop a robust ICT tool to optimize the flow of cruise passengers and enhance intermodal transport between the port and airport. Additionally, the project aims to replace outdated fossil fuel-powered equipment with electric vehicles to promote green mobility.

Actions:

1. ICT Tool Development:
    - Web Application: Dubrovnik Airport (DBV) and the Port of Dubrovnik Authority (DPA) will jointly develop a web application designed to optimize the flow of cruise passengers and improve intermodal transport connections. This tool will provide real-time information and facilitate smoother transitions between the port and airport.
    - Ownership and Maintenance: The web application will be owned and maintained by Dubrovnik Airport, ensuring it remains up-to-date and functional for passenger use.
2. Electric Mobility:
    - Electric Bicycles and Tractor: DBV will purchase electric bicycles and an electric tractor to replace old fossil fuel-powered equipment. These electric vehicles will be used for various operational needs within the airport and port areas.
    - Electric Vehicles for Passengers: DPA will acquire electric vehicles specifically designed to transport elderly cruise passengers and their luggage, enhancing mobility and comfort for this demographic.

2.4.2 Venice Region Objective:

The objective for Venice is to enhance the efficiency and sustainability of the intermodal transport system, particularly for cruise passengers. This includes integrating data systems for better information flow, improving baggage handling processes, and adopting smart solutions to facilitate seamless connections between different modes of transport.

Actions:

1. Data Integration:
    - Adaption of Systems: SAVE and NASPA will adapt their existing systems for better data sharing. This includes integrating various information systems to provide real-time updates to passengers, improving the overall travel experience.
    - Maintenance: Both organizations will be responsible for maintaining these integrated systems, ensuring they function smoothly and provide reliable information.

2. Baggage Handling:
    - Process Analysis: NASPA will conduct a detailed analysis of the current baggage handling processes to identify areas for improvement. This study will serve as a foundation for implementing more efficient handling procedures.
    - Implementation: SAVE will utilize the results from NASPA's study to implement joint measures aimed at enhancing the baggage handling experience for passengers, particularly those transitioning from cruise ships to flights.
3. Smart Solutions:
    - Electronic Totems: NASPA will procure electronic totems and other equipment to test the Fly&Cruise concept. These totems will provide passengers with crucial information and facilitate smooth transitions between different transport modes.
    - Check-in Counters: SAVE will purchase and install full check-in counters equipped with advanced technology for handling baggage checks and passenger processing, further streamlining the travel process.

However, the equipment list will be finalized only after the feasibility study on the safe and efficient transfer of sterile luggage between the Port of Venice/Chioggia and Venice Marco Polo Airport is completed (WP2, Pilot actions, Local action plan).

2.4.3 Pula Region Objective:

The main objective for Pula is to enhance intermodal connectivity and promote sustainable transport solutions. This involves the data sharing information, the implementation of smart ticketing solutions, and the promotion of electric mobility to reduce CO2 emissions and improve the overall passenger experience

Actions:

1. Data Sharing:
    - Implementation: Pula Promet and Pula Port Authority will perform data sharing in order to provide passengers with information about different transport modes travel schedule. This includes maintaining the necessary equipment such as totems or travel info schedules which will display schedules and other relevant information.
    - Smart Ticketing: Installation of smart ticketing systems within PulaPromet totems will allow passengers to purchase tickets for public bus transport directly in the port area, facilitating seamless travel from the port to other parts of the city.
2. Electric Mobility:
    - Electric Minibus: Purchase of an electric minibus to establish new routes that connect the port area with the main bus station and the city center. This initiative aims to provide a greener alternative for passenger transport, reducing reliance on fossil fuels.
    - Charging Stations: Installation of three charging stations to support the operations of the electric minibus and electric vessels. This infrastructure is essential for maintaining the electric fleet and promoting the use of clean energy in transportation.

2.4.4 Brindisi Region Objective:

The objective for Brindisi is to improve the intermodal sustainable and environmentally friendly connectivity between the port and urban areas. This involves integrating data

systems to enhance passenger information and promoting green mobility solutions to reduce the environmental impact of transport activities.

Actions:

1. Data Integration:
    - System Integration: STP Brindisi and the Southern Adriatic Sea Port Authority (AdSPMAM) will work together to integrate data systems that provide real-time information to passengers. This will involve adapting existing technologies to ensure seamless data flow and enhance passenger experience.
    - Maintenance: Both organizations will be responsible for maintaining these integrated systems to ensure they operate effectively and provide accurate information.
2. Green Mobility:
    - Smart Shelters and Poles: STP Brindisi will purchase and install smart shelters at bus stops and information poles. These structures will provide passengers with real-time updates and facilitate a more efficient and comfortable waiting experience.
    - Informative Panels/Variable Messaging Panels and Indoor LED Monitors/Led Panels: ADSPMAM will install four Informative Panels/Variable Messaging Panels and n. three Indoor LED Monitors/Led Panels aimed at providing cross-connectional timing information on ferries, cruise ships (managed by PP7) and public transport bus services (operated by PP8) to passengers and tourists arriving and departing from the Port of Brindisi and other main transport hubs. These panels will assist passengers and tourists arriving and departing from the Port of Brindisi and other key transport hubs by improving accessibility to transport schedules and reducing uncertainty in travel planning. By optimizing travel coordination and reducing idle waiting times, these digital panels contribute to a greener transport system by minimizing unnecessary vehicle movements, lowering congestion, and encouraging the use of public transportation over private cars.

2. TRANSFERABILITY MANUAL FOR GOOD PRACTICE

3.1 TOOLS & OPPORTUNITIES FOR TRANSFERRING SUCCESSFULLY THE RESULTS

Several key aspects need to be taken in consideration to successfully transfer identified solutions and to ensure the potential replicability of the pilot action in other areas and contexts, within and outside Europe:

1. **Localization and Adaptability**: Primary analysis of the current situation of the target regions, including their background and needs, local demand, and mobility needs, as well as a preventive analysis of the existing planning documentation related to the local sustainable urban mobility is vital, to ensure the compatibility of the envisaged action with regulations and cultural and economic practices of the new countries. In order to record the existing situation and examine replicability and adaptability local possibilities, a specific study should be designed and implemented in the selected port area, also in view of the creation of a Territorial Sustainable Urban Plan on sustainable mobility in city ports. The possibility of scheduling and sequencing the motorboat round trips with the working hours and activities of local communities would guarantee the successful integration of the new mobility transportation service into everyday life.

Through the development of D1.1.1. CROSSCONNECT Cross-border and assessment report detailed list of measures from previous Interreg projects have been identified and evaluated by the internal and external experts of the project partners in order to assess the current situation and to propose measures to be implemented within pilot action of each region.
Additionally, through 2.4.4. Cross-border evaluation report replicability and transferability measures as well as lessons learned from pilot action implementation will be presented and

will give other infrastructure service provides detailed guidelines how to improve connectivity of port to airport and hinterlands.

2. **Collaborative Approaches**: Engage all stakeholders from the beginning to ensure shared ownership and alignment with local needs and conditions.

   Through the work of CBGT identified measures have been further evaluated and pilot action implementation scenario proposed within each region to best meet need of each individual region local pilot action site.

3. **Technology Transfer and Innovation**: Facilitate an exchange of knowledge about innovative technologies and practices useful for the implementation of the pilot action, adapting them as necessary for local conditions.

   Transfer of identified innovative solution has been ensured through questionnaire developed within D 1.1.1. Cross-border assessment and capitalization report where applicable, measures have been identified for pilot action scenario of each region. These measures included integrated data sharing as well as other software systems integration and information panels to be displayed, shift to electromobility and reducing CO2 carbon footprint, automatization of baggage handling process, establishing new electric bus lines and measures implemented to increase passenger satisfaction.

4. **Capacity Building and Training**: Conducting workshops, webinars or implement training schemes to build local capacities, ensuring sustainability and effectiveness of the transferred action and results.

Capacity building shall be conducted within the project by testing site visits envisaged for stakeholders after each pilot action site implementation is finalized. In particular these will be achieved through raising awareness on the tested connections and related solutions among:

- other ports/airports, urban transport authorities and key authorities through testing site visits that will increase the knowledge on identified and tested solutions for intermodal transportation;
- passengers and general public through the dissemination of videoclips and interviews related to the pilots.

5. **Monitoring and Evaluation**: Establish robust mechanisms to monitor progress and evaluate the impacts of the action to ensure that the latter meets the set objectives.

KPI's for monitoring and evaluating pilot action implementation will be developed in the testing phase of each pilot action region testing plan. KPI's will consist of measures related to successful pilot action implementation such as: integrated data sharing enabled, Carbon footprint improvement, passenger survey and public opinion conducted, installation of information poles, smart shelters, introduction of smart ticketing system.

6. **Stakeholder Engagement and Public Participation**: Actively involve local communities and stakeholders in planning and implementation phases to build support and adapt solutions to local needs.

The aim of involving stakeholders and public participation is to create networking opportunities, capitalisation and transfer of knowledge towards transportation authorities, transport service providers, local public authorities, regional/national authorities which own the ports/airports, airline and ferry companies and other transportation services.

This will be reached by promoting the re-use of outputs through digital infographic and a cross- border event.

1. Organisation of D3.2.2. CROSSCONNECT Adriatic Cross-border forum
   Forum will be organised in Venice, lead by the Venice Airport and co-organised with the Port of Venice, to present the results and create capitalisation and transfer opportunities in the Adriatic. The event will create the opportunity to exchange knowledge and experience on specific topics related to intermodal solutions for ports, measures to be transferred and adapted, operational code and technological innovation and sustainable approaches in the multimodal transport of passengers and engage and raise awareness with policy makers at regional and national level, regional and national transportation institutions and authorities.

2. Four round tables (D.3.3.1 Roundtable s proceedings)

   In each territory, dedicated roundtables with ports will be organised. The aim of the activity is to concretely engage the ports and port authorities to adopt the intermodal solutions developed and tested during the project and to commit towards the creation of a new or modernised connection in other territories. During the roundtables, all key ports operating in the Adriatic Sea will be involved and will be explained on how to adapt and use operational and technological solutions that have been tested through the project, as well on how to cooperate with airports and urban transport authorities to set intermodal connections.
   - Roundtable in Dubrovnik organized by PP2 - DPA with involvement of Port of Split and Port of Ploce.
   - Roundtable in Venice organized by PP3 - NASPA with involvement of Port of Trieste and Ravenna Port Authority
   - Roundtable in Pula organized by PP5 - LUP with involvement of Port of Rijeka and Port of Zadar

- Roundtable in Brindisi organized by PP7 - AdSPMAM with involvement of Port of Ancona and Port of Pescara

7. **Policy Alignment and Support**: Changes in local, national, or EU-level policies and regulations regarding transportation and environmental standards could affect the pilot action implementation and scalability; ensuring the action alignment with local, national and EU policies in force, as well as the political and institutional support, can guarantee its longevity and scalability.

Through organisation of CROSSCONNECT Adriatic Cross-border forum policy makers will be introduced with project results and outputs as well as creation of CROSSCONNECT strategic road map which may provide guidelines to policy makers how to improve existing procedures and policies to more effectively adapt tested solutions in strategic framework of each region.

8. **Availability of regional, national, and/or European funds**: A functional step is to check the available funds that enable the implementation of such pilot actions. Whether regional, national or European funds, these are crucial in order to find the financial resources needed to implement urban mobility actions that combine the objective of reinforcing the idea of deficient, sustainable, innovative and efficient mobility with the need to meet European and international green standards and thus develop solutions to reduce environmental impacts.

Through sustainable urban mobility actions, European programmes play an important role in the transferability of good practices and concrete solutions, including actions for the purchase of low and zero environmental impact means of transport, providing institutions

with financial opportunities to replicate coherent initiatives in other realities and contexts, according to their Strategic Development and Sustainability Plans.

3. CONCLUSION

The CROSSCONNECT project marks a crucial milestone in advancing a sustainable, multimodal transport network in the Adriatic region. Through the integration of cutting-edge ICT solutions and green technologies, the project has successfully tackled long-standing inefficiencies in connectivity and environmental performance across key transport hubs, including ports, airports, and urban areas. These efforts not only improve the overall efficiency of the region's transport system but also contribute to environmental sustainability by reducing emissions and fostering a more interconnected transport network. As a result, the project paves the way for future advancements in the region's transport infrastructure, enhancing both economic development and environmental preservation.

Key achievements include:

- **Improved Connectivity**: Real-time data sharing and integrated systems have enhanced passenger mobility and satisfaction.
- **Environmental Impact Reduction**: Adoption of electric and hybrid vehicles, along with renewable energy solutions, has significantly lowered the carbon footprint.
- **Scalability and Replicability**: The tested solutions offer a robust framework that can be adopted by other regions facing similar challenges.

Future Implications

1. **Policy Integration**:
   - Advocate for green procurement policies and regulatory alignment across regions to support sustainable transport initiatives.

2. **Regional Collaboration**:
   - Continue fostering partnerships among Adriatic ports, airports, and urban transport authorities to build on the project's successes.

3. **Research and Innovation**:
   - Explore advanced technologies, such as AI-driven logistics and renewable energy innovations, to further enhance sustainability and efficiency.

CROSSCONNECT is not just a project but a blueprint for future transportation systems. Its emphasis on sustainability, innovation, and regional cooperation sets a precedent for addressing global mobility challenges. By leveraging its outcomes, the Adriatic region can lead the way in creating a greener, more connected future for Europe and beyond.

- ✓ **Enhanced Connectivity**: By improving transportation links between countries around the Adriatic, CROSSCONNECT could reduce travel times and make cross-border movement more efficient. This would benefit not only passengers but also trade, making the region more economically competitive and connected to the wider European and global market.

- ✓ **Sustainability Leadership**: The project's focus on sustainability can set the Adriatic region as a model for other parts of Europe. By incorporating clean energy solutions, electric transportation, and green infrastructure, the region could significantly reduce its carbon footprint and promote sustainable development.

- ✓ **Economic Growth and Jobs**: By developing innovative, future-proof transportation systems, the project can create new industries and job opportunities, particularly in areas like green technology, infrastructure development, and logistics. This could contribute to long-term economic growth and improve the region's overall resilience.

- ✓ **Tourism Boost**: Improved and sustainable transportation options could make the Adriatic region more accessible to tourists. This would benefit local economies, particularly in coastal areas, while helping to alleviate the pressures of mass tourism by offering more diverse travel options.

- ✓ **Regional Cooperation and Political Stability**: By focusing on cross-border collaboration, CROSSCONNECT could foster greater cooperation between Adriatic countries. Strengthening ties through a shared transportation vision might also contribute to political stability, reduce tensions, and encourage collaboration in other areas.

Building on past Interreg projects, future initiatives like CROSSCONNECT could learn from the strengths and opportunities identified, while addressing weaknesses and mitigating potential threats. Focusing on long-term sustainability, improving stakeholder involvement, and ensuring effective coordination will be key to ensuring that the outcomes of CROSSCONNECT (and similar projects) can continue to drive positive change in the Adriatic region and beyond.