

Document Control Sheet

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EXECUTIVE SUMMARY

The purpose of this document is to collect results and evaluation of the three training sessions produced in STEP-UP project Work Package 5, Activity 5.1, led by UNITS and involving all the project partners. The document proposes a summary of the three training sessions and a comprehensive overview of the proposed training work for the STEP-UP project.

For each training session this document illustrates the preparation phase, the actual realization and the feedback collected. We included in this document all the lecturers' presentations. Moreover, topics covered, teachers involved, audience and other stakeholders are listed and described, together with links to all the relevant material and to the questionnaires. All the material collected is available through a web repository (www.step-up.training) designed and built within the project activities. Further in this document we explain the structure of the webpage.

At the end of this document we consider all the evaluations and give an overall assessment and conclusions.

The document includes the following chapters:

- Chapter 1, An introduction to the document
- Chapter 2, The aim of the Training Activity
- Chapter 3, Realization of the I Training Session (Report)
- Chapter 4, Realization of the II Training Session (Report)
- Chapter 5, Realization of the III Training Session (Report)
- Chapter 6, Description of web repository of STEP-UP Training Session
- Chapter 7, Overall evaluation and conclusion

1. INTRODUCTION

STEP-UP faces the lack of a real sustainable mobility planning by promoting the multimodality in the Programme area. The geographical characteristics of some areas i.e. presence of islands and rural areas, make also integrate connections necessary with focus on inland connections to the coast. Moreover, existing transport connections are often inefficient to answer modern life needs and manage touristic flows mostly during peak season. STEP-UP will transfer the ICT/ITS applications also during low season in other scenarios (e.g. info-mobility system). Since Croatia joined to EU, commercial relationship between these two countries has increased consistently.

STEP-UP solution uses different transport modes and combines them to provide a seamless solution. The mobility platform has great potential: it will be ready to collect and integrate other services such as booking&ticket purchase and moreover, including territorial information.

To enhance the effectiveness of STEP-UP, it has been crucial to strengthen the knowledge on rather new scenarios and topics.

Some STEP-UP main goals had to be taken into account during the development of WP5:

- promote multimodal passenger mobility;
- facilitate the access to the services offered;
- combine in a global vision transport and tourism aspects;
- capitalize efforts and the outputs reached from INTERMODAL project.

These has been the meanings and aims of WP5 Activity 5.1, led by UNITS and involving all the project partners.

1.1 Target audience

The target audience of this report is the STEP-UP partners and their technicians (if necessary) to allow performing of the STEP-UP platform.

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City of Sibenik	Petar Misura	Email: petar.misura@sibenik.hr
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2. The aim of the Training activity

WP5 Activity 5.1 TRAINING ACTIVITIES

INSTRUCTIONAL DESIGN

Andragogy – Adult Learning Theory (Knowles)

- Since adults are self-directed, they should have a say in the content and process of their learning.
- Because adults have so much experience to draw from, their learning should focus on adding to what they have already learned in the past.
- Since adults are looking for practical learning, content should focus on issues related to their work or personal life.
- Additionally, learning should be centred on solving problems instead of memorizing content.



European Regional Development Fund

1
2

In accordance with STEP-UP specific objective 3, the training activity aims to spread knowledge among the partnership and general audience and promoting a **network** of contacts including academy, industry, leading experts and the project partners, which will become one of the **sources of the information** deployed in the training sessions.

The set of training sessions will bring together partners and (future) professionals in the field of transport. The main goal is to educate on mobility and travel planner aspects focalizing in multimodal transport, sharing and managing transport data.

Transferring knowledge is understood both in space and in time, by **creating a network of experts** and information and by **making the information obtained available to all interested stakeholders along the time**. In fact, each training session will be available as a podcast later to all interested stakeholders.

Activity 5.1 →
Training Activities

Set of TRAINING SESSION
recorded and available on a
WEBPAGE

The key words of the WP5 Activities are “**Capitalize means to transfer knowledge**”, and this Work Package means especially to create a sustainable future for the project and the field of sustainable tourism through the enhancement of the knowledge.



Figura 1 www.business2community.com

The design of the Training Sessions kept in mind the principles of Instructional design, and in particular Adult Learning Theory (Knowles):

- Since adults are self-directed, they should have a say in the content and process of their learning.
- Because adults have so much experience to draw from, their learning should focus on adding to what they have already learned in the past.
- Since adults are looking for practical learning, content should focus on issues related to their work or personal life.
- Additionally, learning should be centered on solving problems instead of memorizing content.

In the following scheme is graphically showed the chosen method to delineate the Training Sessions development. The proposed scheme looks like an inverted pyramid, starting from **Broad** and arriving to **Specific**, starting from the top:

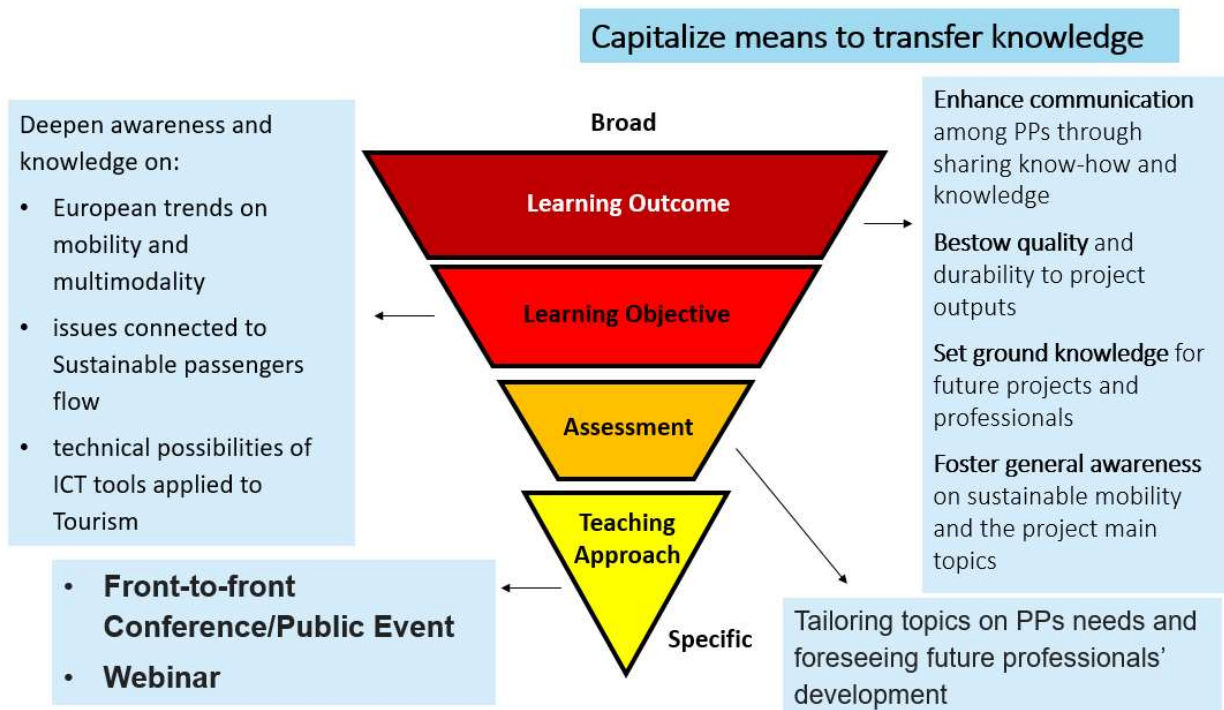
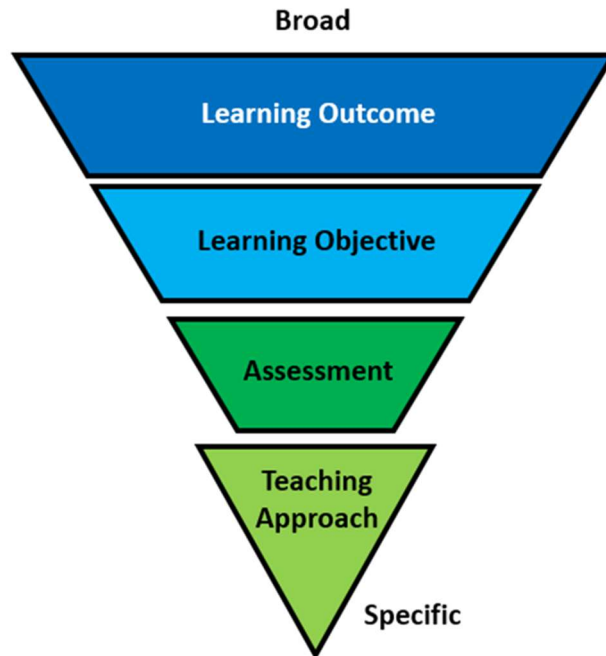
Learning Outcome: consist in bring together partners and (future) professionals in the field of transport and in educate on mobility and travel planner aspects.

Learning Objective are brief statements that describe what students will be expected to learn by the end of school year, **course**, unit, **lesson**, project, or class period.

Assessment is the systematic process of documenting and using empirical data on the knowledge, skill, attitudes, and beliefs to refine programs and improve student learning.

Teaching Approach compares of the **principles and methods used** by teachers to enable student learning. These strategies are determined partly on subject matter to be taught and partly by the nature of the learner.

In the case of STEP-UP Project, the following schema represent starting from the general and arriving to specific the purpose of training sessions, in the context of the overall project aims.



Each session focuses on research for topics and expert speakers who can transfer knowledge to the audience in order to meet the needs of knowledge of project partners and to inform on the topics of the project step up all stakeholder in general. Feedback will be collected for each session, that will be useful to give the bases for the next similar activities applied to projects with similar objectives.

We have chosen an information structure including three training sessions.

I Training Session	Front-to-Front Conference / Public Event
II Training Session	Webinar
III Training Session	Front-to-Front open dialogue Public Event

The aims of the Training Sessions organized by UNITS are multiple:

- to share knowledge within the partnership;
- to spread awareness of STEP-UP topics and INTERREG, EU, ERDF funded projects among the broadest audience possible;
- to keep available materials and knowledge to foster the development of future possible professionals.

To fulfil this aims, the I Training Session targeted different Target Groups at the same time. This was taken into account during the design of the contents, the organization and especially during the communication activities. The realization of training sessions contemplates that before each training session a preliminary analysis will be performed to identify audience, topics, teachers or expert and modalities of the session.

3. Realization of the I Training Session (Report)

3.1 Preparation activities for the realization of the I Training Session

3.1.1 I Training Session: Identification of the Audience

To **identify audience** and **organize** the training session the most adequately, a preliminary analysis was performed. The First Training Session is intended as a Training Activity and also as the first shared appointment with the STEP-UP Training Actions. For this reason, a session was proposed in the form of a live Conference Session. This was done to create a network among the **project partners**, between the **local authorities, all the interested parties** and **the citizenship**, and to introduce and describe the nature of the lessons. The most direct approach to educating the audience is the face-to-face approach.

Training sessions will be useful for the amplest range of audience, the aim of the training session is to inform on the themes related to multimodality, as the main objective. Therefore, the audience was intended to include both people with some level of knowledge and people who did not have any competence in the suggested themes, and it will include citizens and university students.

Description of the different targets:

i. **Project Partners**

Each partner has expertise on specific topics, thanks to their institutional field of action, the support of their Technical Assistance and the know-how gained through previous projects.

We asked the partnership to communicate some areas of expertise they own and we involved a representative as speaker at the Training Session.

We also requested the areas where they wanted to improve their knowledge. They mostly were interested in all the topics we suggested.

ii. **Stakeholders**

We invited some stakeholders to the training sessions and involved some of them as speakers (e.g. Port Authority of Trieste). Obviously, the stakeholders are active in the transportation or mobility field, so they already own some know-how. Although their knowledge might be positively task driven, they may lack some ground basis or some more technically specific knowledge. Addressing to stakeholders is therefore

particularly tricky, since there must be a balance between concrete facts and accuracy. Topics must be captivating and useful for their daily work.

iii. Students

Students best represent the future professionals in the field of transport. The job offer environment is changing seamlessly and especially the field of transport and mobility. It is of crucial importance that students who are about to choose their career are aware of trends that are happening and will lead to future changes, so that they will be more informed and prepared professionals in the future.

iv. Citizenship

Citizenship is called to respond to various responsibilities including participating in political processes and undertaking economic, social and cultural roles according to accepted norms, laws and regulations. Inform citizenship is important also in the themes of the project in fact the development of the main objective of STEP-UP will have repercussion in the way of thinking mobility both in the exceptional cases in which the citizen becomes a tourist but also in the everyday life in which the citizen moves within his city or the neighboring places for the care of himself or for work. Multimodality request an evolved way of thinking and citizenship are the first kind of audience directly involved in the concrete change that the development of multimodality will bring.

In particular, we involved:

- Target Group 8: Education and training organizations as well as universities and research institutes

A university is partner in the project and will provide training sessions, also broadcasted as live streaming, that will be attended by both project partners and all stakeholders interested on multimodal topics. Following those sessions, any other education or training organizations as well as other universities or research institutes, could replace similar initiatives, obviously with a previous agreement with the first university concerning the use of training materials.

- Target Group 1: General public

The end users are necessary to guarantee the reliability of the project after the end and they are the main target group who will give important feedback in terms of User Interface, User experience, reliability and ease to use the pilot tools. Main categories of general public identified as the most interested to the project outputs will consist of working people and tourists, but also all others citizens could obtain benefit from STEP-UP implementation.

- Target Group 2: Local, regional and national public authorities

Local, regional and national authorities, within IT-HR Programme Area, have to be considered fundamental because they represent the most important figures able both to increase the awareness

about ecofriendly transportation and sustainable tourism among different subjects (potential suppliers and potential service providers) and to promote their effective realization, through the definition of useful policy initiatives and operational activities. They are amply represented in the partnership.

- Target Group 3: Regional development agencies.

Regional development agencies, as operative branches of Regional authorities, are in charge of implementing theoretical regional policies, into actual actions. For example, Regions and local authorities draws up specific Regional/Urban Mobility Plans and foresees detailed guidelines which include the increase of multimodal transport, but the risk that those indications could remain not applied is tangible if regional agencies do not take care of those guidelines.

- Target Group 5: Transport associations

Target group Transport Associations Description: Transport associations can have a primary role promoting and incentivizing the diffusion of multimodal transport systems among their participants, but often, that associations do not know enough about multimodal themes and their benefits. So, they will be addressed in particular during WP5 implementation. They will be encouraged to participate in training activities in order to improve knowledge and data analysis on multimodal transport sector.

3.1.2 I Training Session: Modality of the session

The I Training Session was designed as a conference.

When choosing this modality, one decisive factor was the consideration that it would better reach the different audience targets and would better convey the knowledge to very different targets with a different level of awareness. Moreover, it would have been better for dissemination purposes.

The presentations of the speakers have been distributed throughout the day and interspersed with brief coffee breaks. All the project partners, the Croatian and Italian authorities, have been invited to participate.

The room has been equipped with a hundred chairs for the guests with a podium for the speaker and a projector with which the lecturer was able to show the supporting material for the presentation on his topic. A camera resumed the entire conference, the images and the audio of the live have been adequately transmitted live via the GoToMeeting software to allow even those unable to participate physically to follow the whole conference and ask questions via chat attached to the software.

3.1.3 I Training Session: Identification of the Topics

Work Package 5 responsible partner deemed it important to share with the partnership the definition of the topics for the session.

An initial analysis, considering the project expected outputs and pilot sites' implementation, led to a preliminary list of topics which was submitted to the partners to receive their feedback and better define the most appropriate topics.

The macro topics proposed to the partners are listed below in bullet points. For some of them a short descriptive sentence has been added to give more suggestions.

- 1. Multimodality, Inter-modality, Co-modality. Intermodal, multimodal public transport**
- 2. European Projects concerning Mobility and Tourism**
- 3. Touristic routes and connections between Italy and Croatia. Passengers transport and innovative systems. History, data, overview.**
- 4. Data standardisation and harmonisation in the transportation field.**
- 5. Big-data for transportation and tourism. Data fusion**
- 6. ICT Platforms for touristic purpose.**
- 7. ETA**
- 8. Unified ticket, dynamics and governance. E-Ticketing.**
- 9. E-mobility, E-cars.**

STEP-UP List of Topics

1. Multimodality, Intermodality, Co-modality. Intermodal, multimodal public transport

To look up to Multimodality is a necessary step to improve the quality, safety and environmental sustainability of marine and coastal transport services and nodes. This topic includes an introduction and an overview on mobility new perspectives e.g. Maas Mobility as a Service.

1.1 Quality, safety and environmental sustainability

- Impact of the transport sector on the energy consumption and on climate change. Improve air quality and to promote good practices to significantly reduce pollution and to promote intermodality, in order to foster the use of different means of transport.
- Public transport with low carbon dioxide emission.

1.2 Marine and coastal transport services and nodes

- Innovative and alternative ways to optimize the carriage of persons and goods specially in our touristic coastal area.
- Presence of islands and rural areas, make also integrate connections necessary with focus on inland connections to the coast

1.3 New perspectives e.g. MaaS Mobility as a Service

1.4 Connecting urban/suburban rail/road

- Seamless solution: using all transport modes (train, ferry, public transport, flexible transportation – Demand Responsive Transport, etc.)

1.5 Intermodal mobility

- A resource for tourism development and encourage joint actions of the cross sector international partnerships aimed at developing new solutions for sustainable environmental development and intermodal transport

1.6 Tourism development prediction

Analysis of the last years' trends and near future trends forecast.

2 European Projects concerning Mobility and Tourism

An overview on European funded projects on Mobility and Tourism. European new perspective, trends and goals on multimodality, sustainability, e-mobility, enhancing waterways and making road flows lighter.

2.1 Intermodal in European strategies 2030 and 2050

2.2 Mentioned EU Project:

- 4PILLARS
- TISAR
- EASEWAY
- ECOMOBILITY
- MOSES
- ...

3 Touristic routes and connections between Italy and Croatia.

Passengers transport and innovative systems.

History, data, overview.

This topic aims to deepen the knowledge on the Programme Area, to understand the already existing connections and traffic flow between the two Countries involved in the project. An in-depth analysis on geographical, economical and historical features of tourism and passengers' flow in the Adriatic area. This overview will underline the importance of tourism for social and economic development.

The overview can include in a multidisciplinary approach a variety of aspects such as:

- Urbanization, economic and entrepreneurial development, utilities, social welfare, education, traffic.

4 Data standardisation and harmonisation in the transportation field.

In a multimodal travel planning platform, many travel aggregators receive property descriptions and availability data from different transport service providers. Each data provider may have its own data

schema and structure that must be standardized before it can be used. This topic wants to propose an overview on the main requirements and characteristics of data storing and standardisation. Furthermore, an excursus on specific standards will be given: Standard GTFS (General Transit Feed Specification), SIRI (European Standard for real-time information), DATEX II, and other standards connected to MaaS.

The lesson aims to:

- Better understand the data standardization as a data processing workflow that converts the structure of disparate datasets into a Common Data Format. Data Standardization can also be thought of as the transformation rules engine in Data Exchange operations.
- Better understand how data standardization enables the data consumer to analyse and use data in a consistent manner. Standardizing data helps you make the source data internally consistent; that is, each data type has the same kind of content and format.
- Give the fundamental knowledge towards the creation of a common communication protocol between different systems (ICT platforms) and services.
- Collect data in INTERMODAL projects.
- Work on a system based on standard/protocols for different objective and scenarios managed: tourists' and travellers' needs including those for existing citizens.

5 Big-data for transportation and tourism.

Data fusion

Big data refers to data sets that are too large or complex for traditional data-processing application software to adequately deal with. The topic proposes an overview:

- on Big Data concept;
- on the potential of Big Data applied to transportation and tourism;
- on Big Data characteristics (Volume, Variety, Velocity, Veracity);
- on Big Data Architecture. "5C architecture" (connection, conversion, cyber, cognition, and configuration);
- on the concept of Big Data applied to transportation and tourism. An overview on Big Data.

5.1 Collecting, sharing and managing transport data

5.2 Algorithms for the optimization of multimodal transport

The lesson aims to:

- Better understand the algorithms for the optimization of multimodal transport, and on collecting, sharing and managing transport data

6 ICT Platforms for touristic purpose.

This topic presents an overview on ICT Platforms for touristic purpose. Focusing on:

6.1 ICT Platforms for touristic purpose. State of the art on existing platforms.

- Example of existing platform (e.g. Transport for London).
- Local ICT platform.

6.2 High level platform design.

6.3 APPs and info-mobility data for tourism

6.4 Weather data integrated to ICT Platforms

The lesson aims to:

- Evidence the main requirements and possibilities, such as database creation with useful and relevant mobility data including the real-time information thanks the integration with AVM system.
- Design and developing of added modules such as booking & ticketing to offer a complete solution according to a global vision.
- Develop high quality level of services, improve the ITS level at Regional level, make the current services more reliable and attractive.
- transfer the ICT/ITS applications also during low season in other scenarios (e.g. info-mobility system)
- Permits both citizens and tourists, will be able to have benefits in terms of a better travel planning (more sustainable and with less time spent finding best solutions or purchasing tickets thanks to the ICT channel)

7 ETA

Estimated Time of Arrival, requirements and how to integrate this added module to the platform.

8 Unified ticket, dynamics and governance. E-Ticketing.

This topic presents an overview on:

8.1 Unified ticket as added module fundamental to increase platform efficiency and impact.

8.2 Main requirements and strategies. Examples of virtuous existing

8.3 e-roaming?

Tourist information useful for an extended mobility services such as e-roaming that enables additional visibility and promotion of multimodal transportation across inland (network of electric vehicles and electric bicycles)

9 E-mobility, E-cars.

This topic presents an overview on E-mobility, E-cars, Multimodality integrated with E-Mobility.

9.1 Eco – Mobility

To better tailor the training sessions on the overall needs the list was shared with all PP, to give them the possibility to provide comments on the topics, or suggest new ones.

Submission of the list to the Project Partners was also useful to **analyse their internal expertise**, possibly to be shared with the other partners during the Training Sessions, to **analyse their needs**, the areas where their knowledge or level of expertise needed to be improved through Training Sessions.

Follows the message sent to the partners to invite them to participate actively with suggestions and requests to enrich the panorama of knowledge on the issues pertaining to the STEP-UP project.

“

Dear STEP-UP partners,

As WP5 leaders, we at UNITS think the Steering Committee Meeting is a great chance to start the training session activity, sharing first of all the knowledge among the partners.

At this regard, you find in attachment a list of topics ("STEP-UP_ListOfTopics"), selected according to the project expected outputs and pilot sites' implementation. Some of them will be exploited in a first session of lectures on the 7th of May, the others in further webinars.

To better tailor the training sessions on the overall needs, we ask you to read the attachment AND:

- provide comments on the topics, or suggest new ones. For your convenience we also attach the excel file "STEP-UP_TOPICS_Comments&Experts_PartnerName". You can rename it after your PP Name and fill it with the comments, otherwise provide the comments in the form that is more suitable for you (e-mail, word document etc.);*
- point out who of your internal technical team would participate with an approx 20 minutes (max 30) presentation. Please write name, expertise and contacts;*
- recommend any external expert whom you think has the credentials to give a lecture on one of the proposed topics.*

”

This aspect, the involvement of the Project Partners was particularly important to enhance the **effectiveness of the Training Sessions**.

3.1.4 I Training Session: Identification of the Teachers and Experts

For the first training session, were searched and selected speakers who could offer a general overview of the topics of the STEP-UP project.

For each seminarian invited to intervene as an expert, the curriculum information of each speaker and the contents of the proposed topic are indicated below. A brief description of his actual professional role is indicated (if they are Project Partner also is specified) and brief biography fulfills the desire to

understand in a few lines the professional position and the training path of each speaker and how kind of competence can conduce a person to be defined as expert in determined arguments.

A brief introduction follows to each selected speaker with a short biography highlighted on them in gray:

The lecturer **Valeria Corina**, in the role of Technical Assistance of Marche Region, was chosen to present STEP-UP project in order to offer an overview on the project to the audience, taking into consideration that some people in the audience were external to the project.

Valeria Corina

Sinergia, Technical Assistance of Marche Region (STEP-UP project Lead Partner)

Valeria Corina graduated in Building Engineering-Architecture at Polytechnic University of Marche Region. She has 5 years' experience in assisting in the preparation and management of R&D projects at international level, as well as in assisting in the management and financial reporting of European Projects, of European Transnational Cooperation Projects, Research and Innovation Projects promoted by national, regional and European Commission, Regional projects for active labour policies promoted by national bodies. She works at SINERGIA consulting from Pesaro since 2016 and presents a good knowledge of the transport and mobility context thanks to the projects managed for various national and private structures.

With a view to sustainability and in relation to climatic changes and the transnational multimodal transport, it was decided to invite the expert **Cinzia de Marzo**, Lawyer specialized in European Union Law & International Sustainable Tourism expert.

Cinzia De Marzo

Lawyer, specialized in European Union Law & International Sustainable Tourism Expert

Cinzia de Marzo, a lawyer specialised in EU Law and economy, is dedicated to sustainable tourism within the European Union. For several years now, she has been worked on the ETIS system, as an EU national expert at the Commission and as one of the people deeply involved in the implementation of EUSAIR (Adriatic-Ionian) EU Strategy. She talked with Stefan Lazic about the need for quality measurement for sustainable tourism and why is it important to work together to secure a brighter future.

To feed the network between projects active in themes similar to those of the step up project, **Massimiliano Angelotti**, member of the Central Department of Infrastructures and Territory, Friuli Venezia Giulia Region was invited to offer an overview of the MOSES project.

Massimiliano Angelotti

Central Department of Infrastructures and Territory, Friuli Venezia Giulia Region

Massimiliano Angelotti works at the Central infrastructure and territory management of Friuli Venezia Giulia Region in Italy, where Mr. Angelotti holds an Organizational position on the coordination of national and community monitoring and programming activities.

Furthermore, a general overview of the European Projects that the Port Network Authority of the Eastern Adriatic Sea – Port of Trieste participated, as lead partner as well as project partner enriches the conference thanks to the intervention of **Valentina Boschian**.

Valentina Boschian

Dott. Ing, Ph.D.

Port Network Authority of the Eastern Adriatic Sea – Port of Trieste, Digital Port Area

Dott. Ing. Valentina Boschian, Ph.D., works at the Port Network Authority of the Eastern Adriatic Sea – Port of Trieste, in the Digital Port Area. Since 2008, her expertise is focused on consultancy activities related to the analysis of ICT impact on new business cases, mainly in the field of transport and logistics. After obtaining a degree in Management Engineering and a PhD in Computer Science Engineering, she worked as a project manager in several international research projects. She is also expert in business model innovation.

Main skills: Analysis and modelling of processes; Assessment analysis (based on KPIs definition); Management of complex systems with analytical models; Analysis of business scenarios, Use Case identification and User Requirement definition; Project management, ICT applications in logistics and transportation management.

Education

- *Dottorato (Ph.D.) in Information Technology Engineering, University of Trieste (2012)*
- *Degree in Management Engineering and Integrated Logistics (graduation with first class honours, "110/110 e lode"), University of Trieste (2008)*
- *Degree in Management Engineering (graduation with first class honours, "110/110 e lode"), University of Trieste (2003).*

In the role of Technical Assistance of Marche Region, STEP-UP project Lead Partner, **Daniela Vasari**, proposing an overview of MaaS, Mobility as a Service, principle at the basis of mobility in general, and **Giorgia Fanesi**, presenting the intermodality for a seamless solution.

Daniela Vasari

Project manager, solution designer in ITS projects and International cooperation, Pluservice, Technical Assistance of Marche Region (STEP-UP project Lead Partner)

Daniela Vasari graduated in Computer Engineering, in March 2009. She works in PluService since 2009 as Solution Designer for ITS in Passenger Transportation and since 2014 as Senior Project Manager. She is involved in EU-International-National projects on topics such as Demand Responsive Transport, Multi-modal Traveller Information Systems, Automatic Vehicle Monitoring systems. She is the Project Manager of several European funded projects.

Giorgia Fanesi

Software analyst and project manager, Pluservice, Technical Assistance of Marche Region (STEP-UP project Lead Partner)

After her Master Degree in industrial engineering at the University of Bologna and an internship at IRU, Giorgia Fanesi has worked on ICT projects for PluService s.r.l. and is currently Software Analyst and Project Manager at myCicero.

Petar Mišura, with the role of Senior Associate for Development and EU projects, City of Šibenik (STEP-UP project Partner), contribute in the enrichment of the knowledge base with concrete ideas presenting new ideas and methods to ensure sustainable mobility in order to improve passengers' mobility.

Petar Mišura

Senior Associate for Development and EU projects, City of Šibenik (STEP-UP project Partner)

Petar Mišura graduated on the faculty of Economics and enrolled postgraduate studies in "Finance and Banking" at the Faculty of Economics and Business in Zagreb. After graduation, Petar Mišura enrolled Ph.D. "Economics" at the Faculty of Economics and Business in Split. At the beginning of his career, he worked at the Central Bureau of Statistics. After his experience, he started to work at the Jadranska Banka and soon after, at the Croatian Telecom (Hrvatski Telekom) where he completed the additional education in the field of the project management. In 2011 he became the first head of the newly established administrative department of the city of Šibenik for the Economy, Entrepreneurship, and Development, where he remains working until today. From 2013 to 2018 he worked as the assistant to the Head of the office and from 2018 he works as the acting chief of the office.

To deepen what concerns tourist flows and cultural routes have been invited and bring their very valid point of view and contribution **Vanja Lipovac**, Consultant for EU Projects, Zadar Airport (STEP-UP project Partner) presenting cultural routes and, in relation to them, potential for info-mobility services. **Laura Schiff**, Director for Quality of Touristic Areas, Emilia Romagna Region (STEP-UP project Partner), presenting the inter-modality as an opportunity to encounter the small villages and **Sara Carciotti**, Architect, PhD at Engineering and Architecture Department at the University of the Studies of Trieste, that creates the basis for identifying a city as one Smart Cruise Destination, highlighting the need to manage tourist flows with a view to the well-being of the city itself and of the tourists at the same time.

Vanja Lipovac,

Consultant for EU Projects, Zadar Airport (STEP-UP project Partner)

Vanja Lipovac has master degree in cultural sociology (2015). Shortly after, he started an internship in Zadar County department for EU projects and development, where he participated on preparation and implementation of several national and international EU projects. After finishing a year of internship he started working as a project manager for „Foster children rights“ project, financed from European social funds. After the project ended, he started working as a consultant for EU project for Driope. He is mostly focused on projects regarding urban mobility, intermodality, info-mobility and sustainable development.

Laura Schiff

Director for Quality of Touristic Areas, Emilia Romagna Region (STEP-UP project Partner)

Laura Schiff is graduated in Agricultural Sciences in 1977 at the University of Bologna, with specialization in territorial planning. She held the positions of Manager of the Planning Office of the Mountain Community of the Appennino of Bologna and that of Head of the floriculture sector and public green. From 1991 to 2017, she was the urban quality manager of the tourist resorts at the Tourism Department of the Emilia-Romagna Region. From 1991 to 2017 he designed and managed numerous projects - both at the regional and European level - for sustainable development of tourist areas for the creation and enhancement of new tourist products. From 2017 she directs the Communication, promotion, coordination of European projects and special projects of the Emilia-Romagna Region; is coordinator for the Italin Regions for managing important projects financed by the Ministry of Tourism, with the purpose of deloping the Network of Italian Historic Villages, Landscapes and Accessible Tourism.

Sara Carciotti

Architect, PhD at Engineering and Architecture Department at the University of the Studies of Trieste

Sara Carciotti is a young Italo-Slovenian architect specialized in exhibit design. After her master degree she has worked in the Architectural industry for a long period. Her international experience covers a wide range of projects and competitions from home units, commercial and retail mixed-use projects to urban design and sustainable strategy planning. After Venice, Paris and Ljubljana she has started the PhD program at the University of Trieste where actually works with the group of the prof. Ukovich. She is mostly focused on projects regarding urban mobility, people mobility and tourist's wellbeing.

Thanks to the contribution of **Maria Pia Fanti**, Full professor of System and Control Engineering, Department of Electrical and Information Engineering of the Polytechnic University of Bari, the conference organized on the occasion of the first training session of the STEP-UP project broadens the horizons to the new electric transport vehicles, that are revolutionizing the way of thinking and organizing mobility within the cities and beyond.

Maria Pia Fanti

*Full professor of System and Control Engineering,
Department of Electrical and Information Engineering of the Polytechnic University of Bari*

Maria Pia Fanti is full professor of System and Control Engineering at the Department of Electrical and Information Engineering of the Polytechnic of Bari (Italy). She received the Master degree in Electronic Engineering from the University of Pisa (Italy), in 1983. She has been visiting researcher at the Rensselaer Polytechnic Institute of Troy, New York, in 1999. Since 1983 she has worked in the Department of Electrical and Electronic Engineering of the Polytechnic of Bari (Italy), where she has been Assistant Professor from 1990 till 1998 and Associate Professor from 1990 till April 2012. Maria Pia Fanti is IEEE fellow for contributions to modeling and control of discrete event systems. Her research interests include Discrete event systems, Petri net, consensus algorithms, networked and control systems, management and modeling of logistic systems, automated manufacturing systems, automatic guided vehicle systems, traffic networks, and healthcare systems. Maria Pia Fanti is author of 2 books and 280+ papers, 85 journal papers, 11 book chapters and many conference proceeding papers.

3.1.5 I Training Session: Presented Topics

The final topics were chosen in collaboration with the lecturers invited to participate in the first training session. Below is the summary of the selected titles, followed by the presentations offered during the conference.

- 1. Sustainable destination management plans fostering climate change mitigation in the tourism sector, including transnational multimodal transport.**
- 2. STEP UP INTERREG IT-HR Project.
An overview of STEP-UP Project, INTERREG IT-HR.**
- 3. Improving maritime and multimodal transport services between Italy and Croatia: the experience in MOSES project and the expectations from ICARUS project.**
- 4. The role of Mobility as a Service**
- 5. Electro-mobility integrated into transport and mobility networks**
- 6. Intermodality for a seamless solution**
- 7. Improving passengers' mobility, new ideas and methods to ensure sustainable mobility**
- 8. Smart Cruise Destination**
- 9. The beauty of small villages. Intermodality: the path to encounter it.**
- 10. Cultural routes – potential for info-mobility services**
- 11. EU projects of the Port of Trieste: several tools for a smart port**

3.1.5.1 Sustainable destination management plans fostering climate change mitigation in the tourism sector, including transnational multimodal transport. [Cinzia de Marzo]

*Sustainable tourism destination management plans,
focusing on climate change mitigation and multimodal transport*



▶ Trieste, 07th May 2019

▶ Cinzia De Marzo, EU legal advisor & international sustainable tourism expert

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Index

First part

- ❖ The 2030 Agenda for Sustainable Development
- ❖ Paris climate Agreement to fight climate change
- ❖ Manila Declaration
- ❖ COP24 Katowice Declaration
- ❖ European Action for sustainability
- ❖ New European Consensus on development
- ❖ Clean Planet for all
- ❖ Towards a sustainable Europe by 2030

International principles

European policy
framework

Slide 2/36

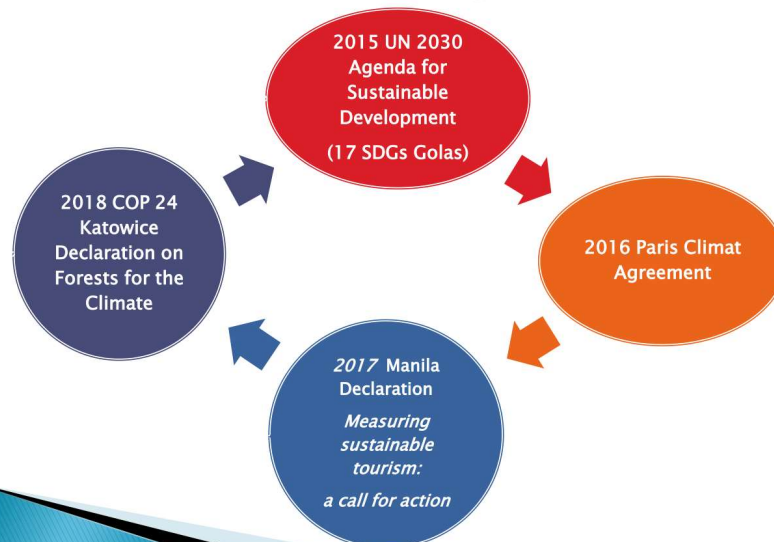
Introduction

- ▶ Tourism can entail **long-term negative transformations on local economies, societies, resource management and ecosystems**, especially in view of the growing challenges of international arrival of tourist in the world (from 1,32 billion in 2017 up to 2 billion in 2030).
- ▶ A **well-designed and managed tourism sector** can help preserve the natural and cultural heritage assets upon which it depends, empower host communities, generate trade opportunities and foster peace and intercultural understanding. Due to the lack of common frameworks, is fundamental to capture, aggregate and report on the full **economic, social and environmental impacts of tourism**.



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Overview on international principles for a global sustainability commitment and climate mitigation



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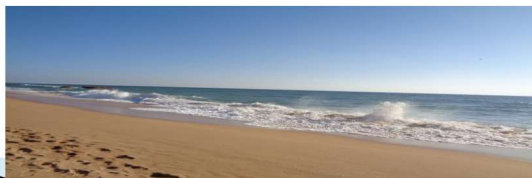
Overview on European policy measures towards sustainable Europe by 2030 and clean planet for all



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Paris Agreement 2016 A global plan to fight against climate change

- ▶ The **Paris Agreement** establishes for the first time a **global goal** with the aim to enhance capacity, climate resilience and reduce climate vulnerability
- ▶ The Paris Agreement builds upon the **Convention** and - for the first time - brings all nations into a common cause to undertake take ambitious efforts to combat climate change and adapt to its effects, with enhanced support to assist developing countries to do so.
- ▶ The Paris Agreement central aim is to strengthen the global response to the threat of climate change by **keeping a global temperature rise this century well below 2 degrees Celsius** above pre-industrial levels and to pursue effort its to limit the temperature increase even further to 1.5 degrees Celsius.
- ▶ The **Paris Agreement entered into force on 4 November 2016**, thirty days after the date on which at least 55 Parties to the Convention accounting in total for at least an estimated 55 % of the total global greenhouse gas emissions have deposited their instruments of ratification, acceptance, approval or accession with the Depositary.



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UN Agenda 2030 for sustainable development



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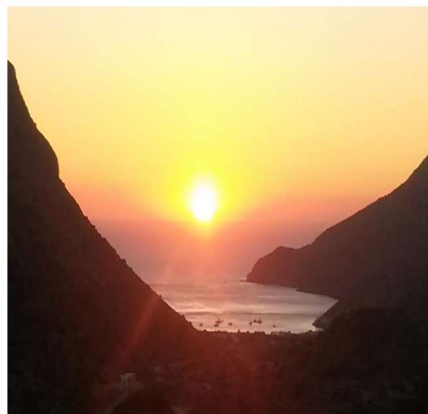
The 5P principles of UN Agenda 2030 People–Planet– Prosperity– Peace– Partnership

The **2030 Agenda is Universal** applying to all countries. It set out a **comprehensive vision** of what needs to be achieved.

From a **global perspective**, the 17 SDGs Goals and targets, will stimulate action over the next 15 years, in areas of critical importance for humanity and the planet

SDG9 'Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation'

SDG13 'Take urgent action to combat climate change and its impact'



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Sustainable transport

The EU focuses on monitoring progress in strengthening R&D and innovation and in fostering sustainable transports



- ▶ CO2 emissions from new passenger cars *in 2017* 118.5 g of CO2 per km



- ▶ Collective passenger transport *in 2016* 17.1 % of total inland passenger-km



- ▶ Rail and waterways freight transport *in 2016* 23.6 % of total inland freight tonne-km

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Manila Declaration

A call for action on measuring sustainable tourism



- ▶ 6th UNWTO International Conference on Tourism Statistics: *Measuring Sustainable Tourism*, organized in Manila by the Government of the Philippines and the World Tourism Organization (UNWTO) **on 21-23 June 2017 and on the occasion of the International Year of Sustainable Tourism for Development, 2017.**
- ▶ **Advocate for the development of a Statistical Framework for Measuring Sustainable Tourism** (MST Framework) that extends the current frameworks beyond their primarily economic focus, in order to incorporate environmental, social and cultural dimensions, across commonly agreed spatial levels (global, national and sub-national) and paying attention to temporal considerations.
- ▶ **Call upon all actors** to facilitate the necessary means and resources for the development and subsequent in-country implementation of an MST Framework, noting the opportunities to tap into the richness of data currently available and identifying gaps for producing any additional data that may be needed.

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COP24 Katowice Declaration



Twenty-fourth session of the Conference of the parties (COP24) of the **United Nations Framework Convention on Climate Change**, held in **Katowice, in December 2018**

There is no future without addressing climate change, and **forests are a key component to achieve the goals of the Paris Agreement**;

The forests play an important role as reservoirs of greenhouse gases, **in mitigating climate change**

There is a **need for reducing emissions from deforestation** and forest degradation and conservations, **sustainable management of forest**.

Non party stakeholders including cities, regions, businesses and investors, should continue to display **their ambition and commitment in their forestry related climate actions**

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QUESTIONS & ANSWERS



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Sustainability as European Brand

- ▶ Commission Communication (2016) 739 final
 - ▶ *European action for sustainability*

EU's commitment to sustainable development

The EU is fully committed to be a frontrunner in implementing the **UN Agenda 2030 and its 17 SDGs**, together with Member States and in line with the principle of subsidiarity .

Sustainable development is an issue of **governance** and requires the **right instruments** to ensure policy coherence across thematic areas, as well as between the EU's external action and its other policies.

Key actions and governance elements

The Commission launched in 2017 a **multi-stakeholder Platform** with a role in the follow-up and exchange of best practices on **SDG implementation across sectors**, at Member State, Regional, local and EU Level, mobilizing expertise of key sectors (including tourism).

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Political commitment at EU level

Joint statement by the Council and the representatives of the Member States, the European Commission and the Parliament (2017) 0626

The EU and its Member States must respond to current global challenges and opportunities in the light of the **2030 Agenda**. Implementation will be closely coordinated with the implementation of the **Paris Agreement on Climate Change** and other international commitments.

Council conclusions (2017) 1038/17

- ▶ *A sustainable European future:*
 - ▶ *The EU response to the 2030 Agenda for Sustainable Development*

The European Council states that **URGES** the Commission to elaborate, **by mid-2018**, an **implementation strategy** outlining timelines, objectives and concrete measures to reflect the 2030 Agenda in all relevant EU internal and external policies, taking into account the global impacts of the EU's domestic actions .

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The New European Consensus on Development our World, our Dignity, our Future COM (2016) 740 final

- ▶ **Principles and values guiding**
 - ▶ *democracy, the rule of law, the universality and indivisibility of human rights and fundamental freedoms, respect for human dignity, the principles of equality and solidarity*
- ▶ **Building resilience and sustainability** is indispensable for lasting solutions to complex global challenges with a common vision:
- ▶ **The EU and its Member States will:**
 - ▶ support the design, construction and operation of **urban infrastructures that are more resource efficient**;
 - ▶ support the development of **sustainable, interconnected and secure transport networks** and other resilient infrastructure to promote growth, trade and investments;
 - ▶ enhance **joint programming in development cooperation** in order to increase their collective impact by bringing together their resources and capacities;
 - ▶ **integrate environment and climate**, including mitigation and adaptation, throughout its development cooperation strategies



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Clean planet for all

A European strategic long-term vision for a prosperous, modern, competitive and climate neutral economy

COM (2018) 773 final

- ▶ **The urgency to protect the planet!**
- ▶ **Climate change is a serious concern for Europeans**
- ▶ The last two decades included 18 of the warmest years on record. The trend is clear.
- ▶ **Immediate and decisive climate action is essential!**
- ▶ Overall, failing to take climate action will make it impossible to ensure Europe's sustainable development and to deliver on the globally agreed UN Sustainable Development Goals
- ▶ **Transport is responsible for around a quarter of greenhouse gas emissions in the EU. 7**
- ▶ All transport modes therefore need to contribute to the decarbonisation of the mobility system. This requires a **system-based approach**. In all modes is the first prong of this approach. Just as for renewable energy in the previous Low and zero emission vehicles with highly efficient alternative powertrains decade, the automotive industry already today heavily invests in the emergence of zero and low emission vehicle technologies, such as electric vehicles.
- ▶ A combination of **decarbonised, decentralised and digitalised power**, more efficient and sustainable batteries, highly efficient electric powertrains, **connectivity and autonomous driving offers prospects to decarbonise road transport** with strong overall benefits including clean air, reduced noise, accident-free traffic, altogether generating major health benefits for citizens and the European economy. Electrification of short sea shipping and inland waterways is also an option, where the power to weight ratio makes it feasible.

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Climate change impacts in Europe

Arctic region

Temperature rise much larger than global average
 Decrease in Arctic sea ice coverage
 Decrease in Greenland ice sheet
 Decrease in permafrost areas
 Increasing risk of biodiversity loss
 Some new opportunities for the exploitation of natural resources and for sea transportation
 Risks to the livelihoods of indigenous peoples

Atlantic region

Increase in heavy precipitation events
 Increase in river flow
 Increasing risk of river and coastal flooding
 Increasing damage risk from winter storms
 Decrease in energy demand for heating
 Increase in multiple climatic hazards

Mountain regions

Temperature rise larger than European average
 Decrease in glacier extent and volume
 Upward shift of plant and animal species
 High risk of species extinctions
 Increasing risk of forest pests
 Increasing risk from rock falls and landslides
 Changes in hydropower potential
 Decrease in ski tourism

Coastal zones and regional seas

Sea level rise
 Increase in sea surface temperatures
 Increase in ocean acidity
 Northward migration of marine species
 Risks and some opportunities for fisheries
 Changes in phytoplankton communities
 Increasing number of marine dead zones
 Increasing risk of water-borne diseases

Boreal region

Increase in heavy precipitation events
 Decrease in snow, lake and river ice cover
 Increase in precipitation and river flows
 Increasing potential for forest growth and increasing risk of forest pests
 Increasing damage risk from winter storms
 Increase in crop yields
 Decrease in energy demand for heating
 Increase in hydropower potential
 Increase in summer tourism

Continental region

Increase in heat extremes
 Decrease in summer precipitation
 Increasing risk of river floods
 Increasing risk of forest fires
 Decrease in economic value of forests
 Increase in energy demand for cooling

Mediterranean region

Large increase in heat extremes
 Decrease in precipitation and river flow
 Increasing risk of droughts
 Increasing risk of biodiversity loss
 Increasing risk of forest fires
 Increased competition between different water users
 Increasing water demand for agriculture
 Decrease in crop yields
 Increasing risks for livestock production
 Increase in mortality from heat waves
 Expansion of habitats for southern disease vectors
 Decreasing potential for energy production
 Increase in energy demand for cooling
 Decrease in summer tourism and potential increase in other seasons
 Increase in multiple climatic hazards
 Most economic sectors negatively affected
 High vulnerability to spillover effects of climate change from outside Europe



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Short break



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Index Second part

- ▶ Coastal and Maritime tourism for more growth and jobs
- ▶ European Strategy for Adriatic and Ionian Region
- ▶ Blue economy (Blue Growth) in the Mediterranean
- ▶ Global Sustainable tourism Council Criteria: D12 Low - Impact transportation
- ▶ European Tourism Indicator System
- ▶ Criteria D1: Reducing transport impact

EU strategies and interregional cooperation

EU and international Destination management tools

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2014 Coastal and maritime tourism strategy COM (2014) 86 final

To boost competitiveness and sustainability, unlock its potential for growth and jobs

4 pillars, 14 actions at EU level, need for joint implementation:

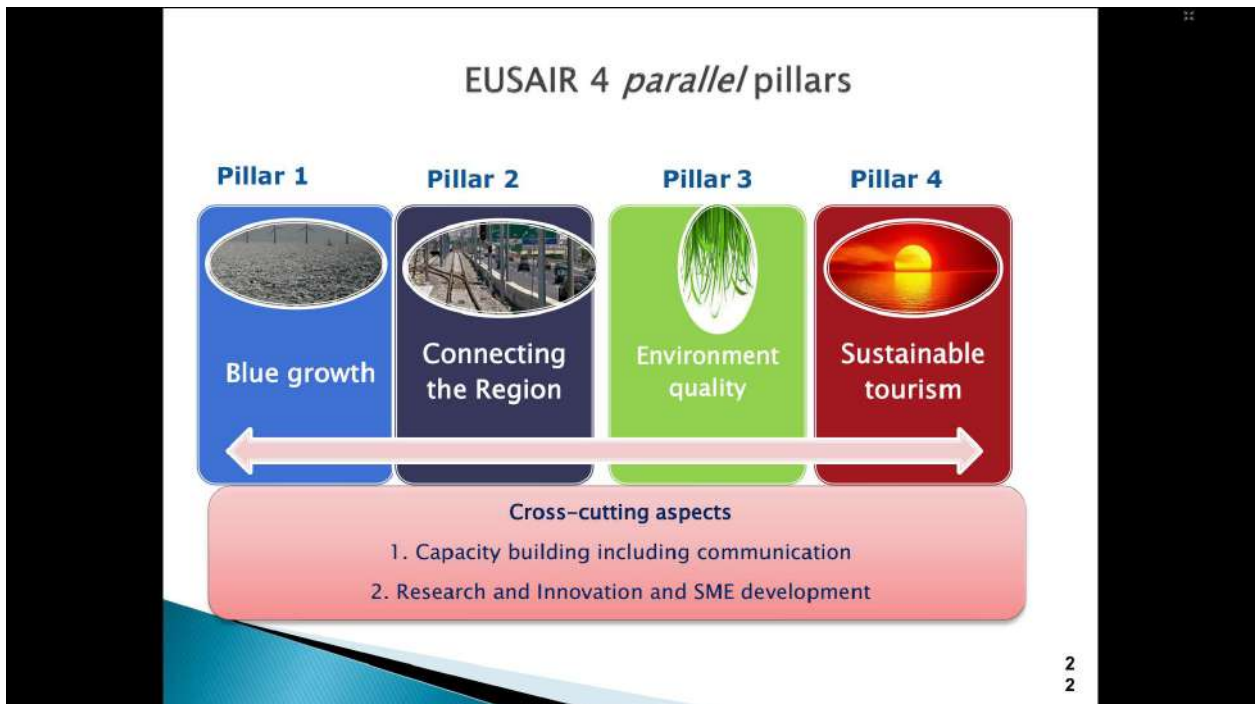
- ✓Stimulate performance and competitiveness
- ✓Promoting skills and innovation
- ✓Strengthening sustainability
- ✓Maximize available EU funding



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Topics under Pillar I 'Connecting the Region'

- ▶ **1. Maritime transport**
 - ▶ **Motorways of the sea:**
 - ▶ Number of intermodal port terminals in the A-I sea basin equipped with state-of-the-art
 - ▶ Improving/upgrading road and rail infrastructure linking ports to the hinterland and port traffic management system
 - ▶ km of upgraded rail infrastructure linked to ports in the A-I sea basin

- ▶ **2. Intermodal connections to the hinterland**
 - ▶ **Border crossing**
 - ▶ – % of border crossings in the Region with simplified procedures;
 - ▶ – Average time spent at border crossings in the Region;

- ▶ **3. Energy networks**
 - ▶ Improving cross-border electricity interconnections
 - ▶ Number of cross-border electricity interconnectors across the Region

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Key challenges for CMT in EUSAIR

- Putting ends together
- Fully integrate with ongoing initiatives – (sub-) regional dialogue(s)
- Improving data and information – use 'clustering' and cooperation structures
- Maritime security
 - European Maritime Security Strategy (EUMSS) and Action Plan adopted in 2014
 - Ensure safe and secure transport, trade, coastal development
 - Also important for tourism!



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Blue economy (Blue Growth)

- ▶ Commission Communication COM (2017) 183 final - *'Initiative for the sustainable development of the blue economy in the Mediterranean'*, which aims at increasing safety and security, promoting **sustainable blue growth and jobs** and **preserving ecosystem and biodiversity** in the mediterranean Region.

- ▶ **Three main goals:**

1. Safer and more secure maritime space
2. Smart and resilient blue economy
3. Better governance of the sea

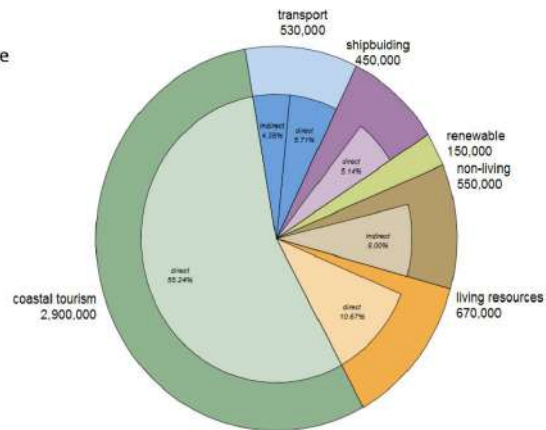
- ▶ **Making blue growth strategy**

- ▶ **fit for future challenges -**

- ▶ **today's trends**

- ▶ **in the blue economy**

- ▶ Commission Report on the blue growth strategy
- ▶ SWD (2017) 128 final



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The international monitoring tool

Global Sustainable Tourism Council

Global Sustainable Tourism Council (known as the **GSTC** or the **Council**) was formally constituted in the 2010 as independent body for establishing and **managing standards for sustainable tourism**. At the heart of its work are the **Global Sustainable Tourism Criteria and Indicators** (which are neither a definitive set nor are they all-inclusive and they can be applied to a broad range of destinations type) are organized around the **four sections**:

- (1) *demonstrate effective sustainable management;*
- (2) *maximizing economic benefits to the host local community and minimize negative impacts;*
- (3) *maximize benefits to communities, visitors, and culture: minimize negative impacts;*
- (4) *maximize benefits to the environment and minimize negative impacts.*



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GSTC Criteria D12 Low-impact transportation

- ▶ Criteria- The destination has a system to increase the use of low-impact transportation, including public transportation and active transportation
- ▶ Indicators
 - ▶ D.12.a. Program to increase the use of low-impact transportation
 - ▶ D.12.b . Program t make sites of visitors interest more accessible to active transportation (e.g. walking and cycling)



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A focus on ETIS Methodology What is the European Tourism Indicator System

Legal basis: Action 11 COM (2010) 352

A management tool, which supports the destinations to measure tourism impacts (economic, socio-cultural and environmental), based on **43 core indicators** and a set of **supplementary indicators**

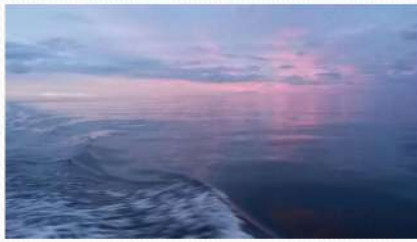
A monitoring system easy to use for collecting data and detailed information and to follow destination's own performance from one year to another

An information tool (**not a certification scheme**), useful for policy makers, tourism enterprises and other stakeholders,

The EU eco-management and audit scheme (EMAS) is a **voluntary tool and certification scheme**, which aims to help its users to achieve enhanced environmental performances

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ETIS toolkit



- ▶ 43 ETIS core indicators
 - (quantitative)

Section A: Destination management
Section B: Economic value
Section C: Social and cultural impact
Section D: Environmental impact



- ▶ 3 core indicators (D.1.1, D.1.2, D.1.3), which enable the measurement of the impact of transport
 - ▶ D.1.1 Percentage of tourists and same-day visitors using local/soft mobility /public transport services to get around the destination
 - ▶ D.1.2. Average travel (km) by tourists and same-day visitors from home to the destinations
 - ▶ D.1.3 Percentage of tourists and same-day visitors from home to the destinations

Criteria D.1 'Reducing transport impact'

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ETIS DESTINATIONS BY TYPE



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Successful experiences at destination level across Europe



Visit **South Sardinia**, a successful ETIS destination achiever, awarded by the European Commission in 2016



- 7 transnational Cultural Routes certified by the Council of Europe, implemented ETIS in 2016,
 - focusing on the cultural governance model
 - Via Frangigena, Iter Vitis,
 - Santiago de Compostela, Saint Martins of tours,
 - Olive Trees, among others

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ETIS award ceremony Bruxelles, 30th April 2016



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ETIS experience in Southern Sardinia

ETIS promotes:

Visibility as
sustainable
destination

sustainability
communication

Challenges to Overcome



Collecting data from SMEs is a key tool
to monitor sustainable tourism
destination

Destination Sustainability
Policies and Investments
as **Marketing Strategic
Levels**

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QUESTIONS & ANSWERS



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*Alone we can do so little;
together we can do so much.*
[Helen Keller](#)

The engagement of public-private partnership and inter-regional and inter-sectorial cooperation is fundamental to turn vision into reality, by developing new green business and eco-friendly models with a circular, interdisciplinary and inter-sectoral approach (tourism, culture, environment, transport and mobility, waste management).

Managing sustainable destinations with the ability to measure the tourism impact on climate mitigation, is not a trend, it is the **unique way to create a responsible and balanced eco-system for the planet** and to respect the social-cultural dimension of the territories.

*Things do not happen. Things are
made to happen.*

John F. Kennedy



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Thank you for your attention!



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mailto:cinziademarzo11@gmail.com

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3.1.5.2 STEP UP INTERREG IT-HR Project. An overview of STEP-UP Project, INTERREG IT-HR. [Valeria Corina]

STEP-UP

Sustainable Transport E-Planner to Upgrade the IT-HR mobility

- INTERREG IT-HR project -

STEP-UP | Marche Region

STEP-UP Training sessions – New scenarios on multimodal mobility | Trieste | 7 May 2019
Regione Marche

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Interreg Italy-Croatia Programme PA-SO

- ❖ Priority Axis 4 - Maritime Transport
- ❖ Specific Objective 4.1. - Improve the quality, safety and environmental sustainability of marine and coastal transport services and nodes by promoting multimodality in the Programme area

Category	Color
Blue innovation	Dark Teal
Safety and resilience	Medium Teal
Environment and cultural heritage	Light Teal
Maritime transport	Very Light Teal

➤ **18 months (01/01/2018 - 30/06/2019) + three-month extension -> 30/09/2019**

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Partnership

LP - MARCHE REGION (IT)
 PP1 - EMILIA ROMAGNA REGION (IT)
 PP2 - MUNICIPALITY OF LECCE (IT)
 PP3 - UNIVERSITY OF TRIESTE (IT)
 PP4 - COUNTY OF SPLIT-DALMATIA (HR)
 PP5 - CITY OF SIBENIK (HR)
 PP6 - ZADAR AIRPORT LTD. (HR)



➤ 18 months (01/01/2018 - 30/06/2019) + three-month extension -> 30/09/2019



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Budget

PP/WP	WP0	WP1	WP2	WP3	WP4	WP5	TOTAL	Distribution per country	%
MARCHE	5.000,00 €	82.700,00 €	23.750,00 €	24.050,00 €	100.800,00 €	3.450,00 €	239.750,00 €	609.871,00 €	64,07
EMIRO	2.000,00 €	30.248,00 €	30.273,00 €	13.301,00 €	70.658,00 €	4.996,00 €	151.476,00 €		
LECCE	1.000,00 €	11.630,00 €	17.950,00 €	12.070,00 €	53.025,00 €	3.220,00 €	98.895,00 €		
UNITS	2.000,00 €	16.625,00 €	15.175,00 €	1.725,00 €	5.175,00 €	79.050,00 €	119.750,00 €	341.960,00 €	35,93
SDC	2.000,00 €	13.225,00 €	11.135,00 €	41.475,00 €	45.290,00 €	6.875,00 €	120.000,00 €		
SIBENIK	2.000,00 €	15.640,00 €	28.030,00 €	4.950,00 €	60.650,00 €	8.950,00 €	120.220,00 €		
ZAIR	1.000,00 €	20.240,00 €	14.280,00 €	7.020,00 €	47.720,00 €	11.480,00 €	101.740,00 €	ERDF	809.056,35 €
TOTAL	15.000,00 €	190.308,00 €	140.593,00 €	104.591,00 €	383.318,00 €	118.021,00 €	951.831,00 €		
%	1,58%	19,99%	14,77%	10,99%	40,27%	12,40%			



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Objectives

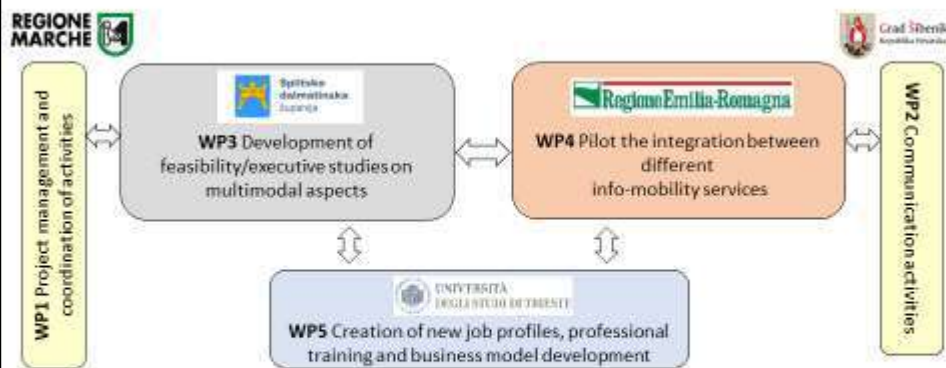
- ❖ Promote multimodal passenger mobility
 - improve the multimodal travel planner platform adding new local travel planner;
- ❖ Facilitate the access to the services offered
 - share experiences to avoid/reduce common technical and organizational problems thanks the foreseen training sessions;
- ❖ Combine in a global vision transport and tourism aspects
 - plan the feasibility studies allowing each partner to analyze specific topics and critical points;
- ❖ Capitalize efforts and the outputs reached from INTERMODAL and TISAR project
 - creating new business models to guarantee the sustainability of the project.



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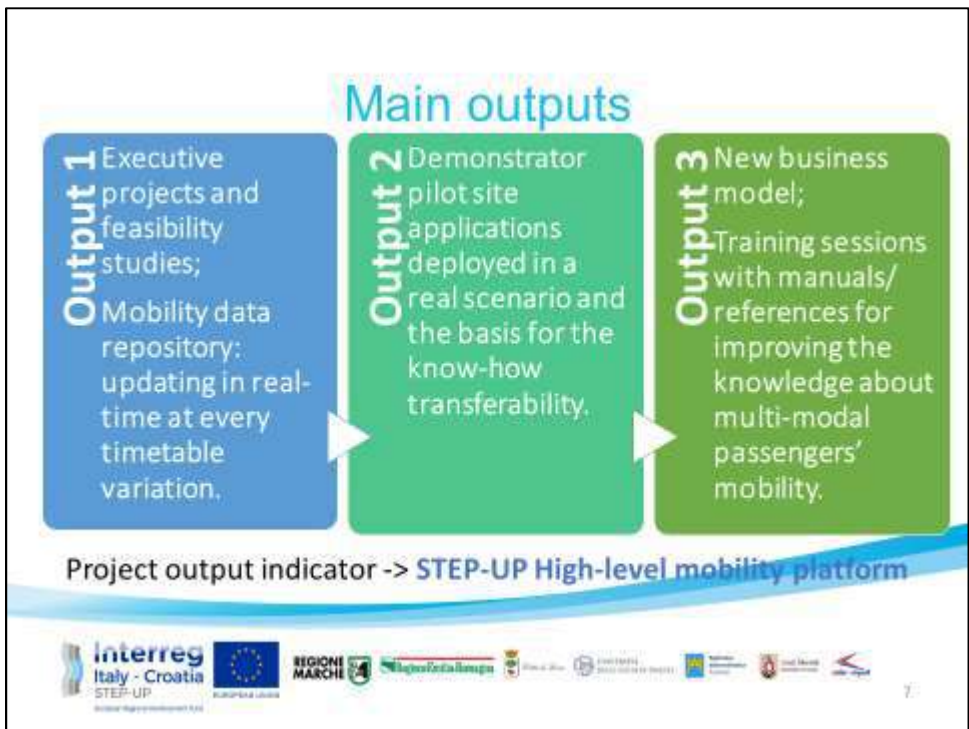
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Work Packages



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Pilots

Pilot	Description
Marche Region	Integration between multimodal and cross-border travel platform and info mobility system for a complete information to the end-users on public transport, trips and delays.
Emilia-Romagna Region	Improvement of the accessibility to some touristic zones with public transport and identify alternative modes of intermodal transport solutions.
Municipality of Lecce	Strengthening the competitiveness of the territory by providing the city with an integrated system including information and mobility services.
County of Split-Dalmatia	Installation of e-chargers for electric vehicles at 30 km intervals across the hinterland to increase electric vehicles access to all parts of the Split-Dalmatia County.
City of Sibenik	Establishment of new intermodal links from the City to regional airports (Zadar Airport and Split Airport) and promotion of intermodality and connection with the existing links to the regional ports (Zadar, Split).
Zadar airport	Improvement information distribution to better accomodate passengers and to increase the speed of intermodal transition.



Slide 9/11

Target Groups

- Entrepreneurs
- Universities, research institutes and other education or training organisations
- Tourists Transport operators associations and NGOs
- Local, regional and national authorities
- Logistic hubs, Infrastructure providers

Slide 10/11

Target Groups

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3.1.5.3 Improving maritime and multimodal transport services between Italy and Croatia: the experience in MOSES project and the expectations from ICARUS project. [Massimiliano Angelotti]

Improving maritime and multimodal transport services between Italy and Croatia: the experience in MOSES project and the expectations from ICARUS project.

Trieste | May 7th, 2019

European Regional Development Fund

Slide 1/34

MOSES - Maritime and multimodal transport Services based on Ea Sea-way project



PROJECT MAIN DATA

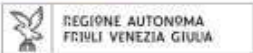
Partners: 5

- Friuli Venezia Giulia Region
- Molise Region
- Fondazione Istituto sui trasporti e la logistica - ITL
- Region of Istria
- Primorje - Gorski Kotar County

DURATION: 18 months (01/2018-09/2019)

TOTAL BUDGET: 1.175.085,00 euro

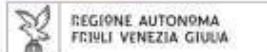


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Slide 2/34

MOSES MAIN GOAL

The project aims at improving maritime and multimodal transport services between Italy and Croatia, through the capitalisation of the results of EA SEA-WAY, towards quality and sustainable cross-border connections.



3

Slide 3/34

Where did we started from?



Europe Adriatic Sea Way

Strategic project co-financed within IPA

Adriatic 2007 – 2013 Cross border co-operation project with 20 partners, representing 8 countries.



4

Slide 4/34

What was done in Ea Sea-Way?

“Pilot actions” main activities:

- Realization of physical infrastructures, strengthening of ports for passenger transport;
- Establishment of “short-sea ferry/fast Ferry/hydrofoil” passenger lines across Adriatic;
- Integration of Adriatic ports with hinterland and improve services for passengers

MOSES MAIN OBJECTIVES

- Offering alternatives to individual car travelling between Italy and Croatia to overcome problems created by congestion, pollution, lack of accessibility and connectivity;
- Creating favorable conditions for people to choose maritime against individual car transport as it represents a convenient and environmental friendlier way to travel;
- Improving multimodal connections to hinterland for maritime passengers to allow sustainable journeys to final destinations.

MOSES PILLARS

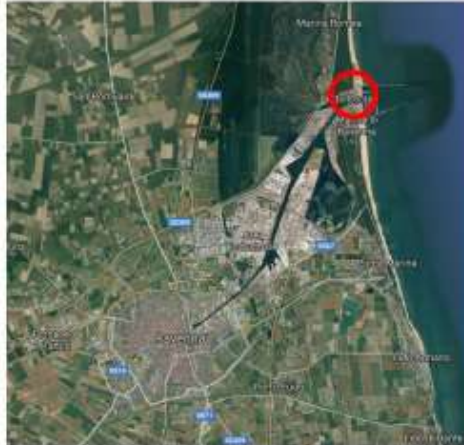
- Setting up the framework for successful pilot activities
- Piloting new connections and improving services
- Ongoing and ex post evaluation and take up of results

Ravenna Pilot

Increase the attractiveness of Ravenna port and its hinterland by fostering an efficient transport system guaranteeing sustainable connections between the cruise passenger terminal in Porto Corsini and Ravenna historical city center.



Ravenna Pilot



The Ravenna Cruise Terminal is 20 minutes drive from Ravenna city center (12km).

Nowadays tourists reach the city center mainly with shuttle services organized by the cruise companies.

Independent travelers can reach the city center with public transport (bus service) but stops are not close to the cruise terminal

Ravenna Pilot



Key challenges:

Improve multimodal transport chains between port and city center;

Offer sustainable and innovative transport solutions for cruise tourists (mainly independent travelers);

Guarantee the Moses service beyond the end of the project

Ravenna pilot in numbers

- 18 electric bikes;
- 1 electric tricycle for people with disabilities;
- 19 GPS;
- 20 helmets and security lock systems;
- 1 container transformed into a "Mobile Hub";
- Moses project graphic communication/advertising materials.

Ravenna Pilot

Why a Mobile Hub?

- ❖ Mobile to meet seasonal characteristics of the cruise services;
- ❖ Mobile to provide services in different points;
- ❖ Mobile to allow the transferability to other Adriatic ports.



Ravenna Pilot

Why electric bikes for intermodality promotion?



- ❖ More than 50 km of autonomy;
- ❖ Easy to charge batteries;
- ❖ Easy to use;
- ❖ No license needed;
- ❖ Low cost compared to others sustainable transport solutions.

Ravenna Pilot

- The 100% of users declare to be very satisfied of the electric bikes free rental service;
- The 80% of the users declare electric bikes is the best way to move in port surroundings;
- The 70% of users declare to use an electric bike for the first time in their life;



Ravenna Pilot



The tourists monitored mainly use the Moses electric bikes to reach touristic attractions within 2 km.

However, several tourists reached the Ravenna city center thanks the electric bikes (more than 30 km). This is a big news for key local public and private stakeholders.



Ravenna Pilot

MANAGING SOLUTIONS:

ITL Foundation signed an agreement with the Ravenna Cruise Terminal manager company. With this contract the cruise terminal manager have committed to:

- Managing the e-bike sharing service during all the test activities providing the e-bikes for free to tourists (Summer 2018);
- Carry on the electric bike rental service beyond the project duration.

The terminal manager is very satisfied of the service and he decided to buy the Moses bikes and equipment in order to continue the service also in the next years.

Friuli Venezia Giulia Pilot n.1

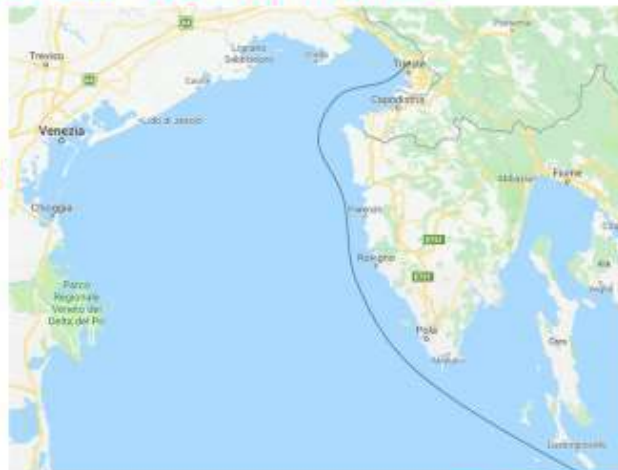
Pilot action for a maritime fast-line transport service for passengers for directly link Trieste to Region of Istria and to Primorje - Gorski Kotar County (Mali Lošinj and Susak)



Friuli Venezia Giulia Pilot n.1

MAIN GOAL:

Extend the existing summertime line to connect Trieste directly to Istria and to Primorje Gorski Kotar County, linking after many years Trieste to Mali Lošinj and Susak, including a day dedicated to the new line in the weekly schedule.



Friuli Venezia Giulia Pilot n.1

MAIN CHALLENGES:

The market offers of maritime lines connecting Italy, Slovenia and Croatia are poor and not satisfactory;

Activate a maritime lines service during the summer is fundamental in order to tackle relevant congestion and pollution problems faces these cross borders areas during the summer period;

Since 2004, Regional public authority provide their financial and institutional support in order to activate such a services. A specific legislative and policies framework was defined.



1
9

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Friuli Venezia Giulia Pilot n.1

Design of the new line: main steps

1. Checking with Liberty Lines and stakeholders the feasibility of the new destinations;
2. Defining an appropriate sailing schedule in agreement with the two Croatian counties.



2
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2018 sailing schedule

LIBERTY LINES

Trst - Istra - Mali Lošinj

Red plovidbe za 2018. godinu

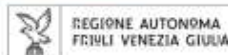
u razdoblju od 28.06. do 09.09.

Ponedjeljak		Utorak	Srijeda		Četvrtak		Petak		Subota & Nedjelja	
LUKA	VRUJEME		LUKA	VRUJEME	LUKA	VRUJEME	LUKA	VRUJEME	LUKA	VRUJEME
Trst	o. 09:00	b e z p l o v i d b e *	Trst	o. 08:30	Trst	o. 09:00	Trst	o. 09:00	Trst	o. 09:00
Pula	d. 11:15		Rovinj	d. 10:00	Poreč	d. 10:00	Rovinj	d. 10:30	Piran	d. 09:30
	o. 11:25			o. 10:10		o. 10:10		o. 10:40		o. 09:40
Mali Lošinj	d. 13:15		Piran	d. 11:20	Piran	d. 11:00	Mali Lošinj	d. 12:40	Poreč	d. 10:30
	o. 16:15			o. 11:30		o. 11:10		o. 16:50		o. 10:40
Pula	d. 18:05		Trst	d. 12:00	Trst	d. 11:40	Rovinj	d. 18:50	Rovinj	d. 11:10
	o. 18:15			o. 17:00		o. 17:00		o. 19:00		o. 18:00
Trst	d. 20:30		Piran	d. 17:30	Piran	d. 17:30	Trst	d. 20:30	Poreč	d. 18:30
				o. 17:40		o. 17:40				o. 18:40
			Rovinj	d. 18:50	Poreč	d. 18:30			Piran	d. 19:30
				o. 19:00		o. 18:40				o. 19:40
			Trst	d. 20:30	Trst	d. 19:40			Trst	d. 20:10

o.= odlazak

d.= dolazak

*= bez plovidbe u utorak iz razloga tjednog održavanja



2
1

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Friuli Venezia Giulia Pilot n.1

2018 overall main results:

MOSES line main results:

Total Passengers Numbers		
2018	TOT. Embarked passengers	TOT. Disembarked passengers
Trieste	5.034	5.079
Piran	1.849	1.736
Poreč	963	856
Rovinj	1.994	2.185
Pula	152	153
Mali Lošinj	535	518
TOTAL	10.527	10.527

MOSES LINE		
2018	TOT. EMB.	TOT. DIS.
Trieste	1247	1134
Rovinj	447	576
Pula	152	153
Mali Lošinj	535	518
TOTAL	2381	2381



2
2

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The expectations from ICARUS project.

ICARUS - Intermodal Connections in Adriatic-Ionian Region to Upgrowth Seamless solutions for passengers

Partnership



ICARUS in a nutshell

- Objective: create new intermodal solutions taking in consideration passengers' mobility needs and allowing the maximum level of flexibility for users.
- Promotion of intermodal connections in the Adriatic Ionian Region
- Focus on innovative technologies to adapt smart mobility, sustainable multimodal and seamless transport solutions, pilot/test actions
- ICARUS is a policy and authorities targeted project



1st January 2019
30th June 2021



2.2 M€

Approach of the project

- Implementing MaaS concept: citizens should be allowed to get from A to B using different means of transport.
- Integrated and intelligent technological system, e.g. integrated billing system.
- Pilot & testing

ICT/MaaS



- Transport services and facilities to foster multimodality
- Harmonization of timetables of different public transport means will also represent a key project topic

Transport services and Multimodality



- Actions and strategies for a behavioural change which complement services development and integration.
- Only with behavioural changes actions, the project can achieve its results.
- Behavioural change campaigns

Behavioural Change



Challenges

- **Bottlenecks** in multimodal connections and governance
- **Lack of efficient multimodal networks** (road, rail, air, water transport), as well as low connectivity and mobility of peripheral areas
- **Link in the transport chain** which integrates intermodal transport with technological solutions and changes behaviours



Objectives (1/2)

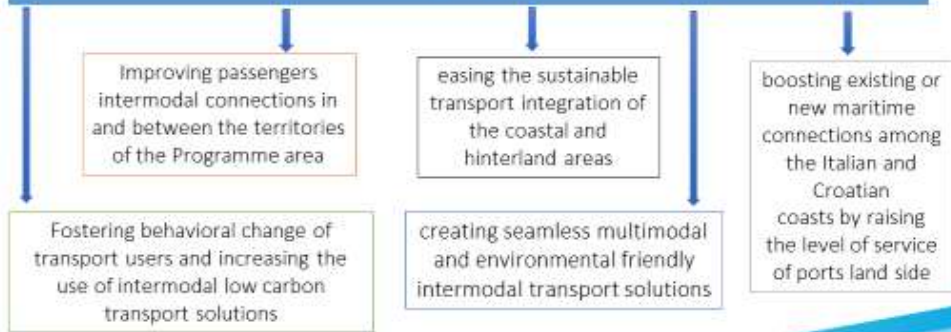
- **Objective 1: ICARUS activates a transnational policy learning dialogue and improves the awareness of private transport operators and users in order to foster a behavioural change and create the conditions for a mobility concept change.**
- **Objective 2: change mobility behaviours, by educating people about sustainability related issues and enhancing the sense of community as a consequence of the use of intermodal transport solutions and sharing mobility.**

Objectives (2/2)

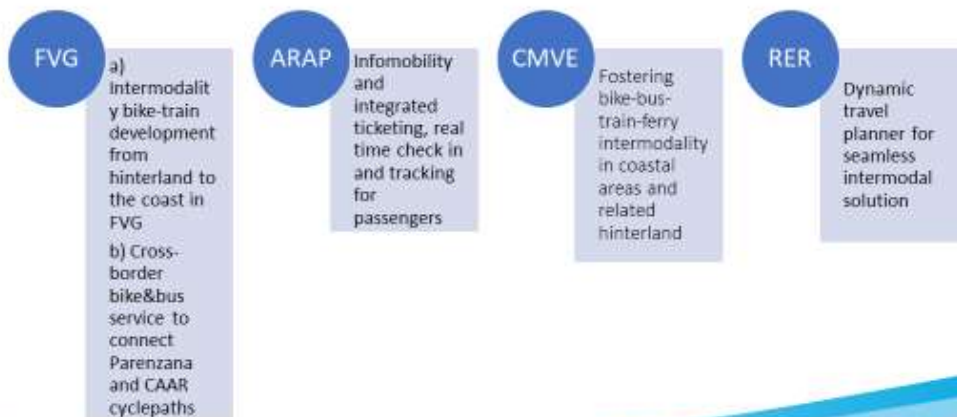
- **Objective 3: Long-term vision & regional policy planning in intermodal mobility**
 - ICARUS will deliver improved policy making for intermodal seamless mobility planning in the area.
- ICARUS will develop a transnational process of roll-out and transfer of its results and build a transnational strategy for intermodal seamless solutions

Main expected results of the project

Improvement of capacities of the public sector & related entities for low-carbon intermodal mobility in the project area.



Pilots & Case study (1)



Pilots & Case study (2)

VIU

Bike+train+ ferry transnational Corridor in north Adriatic axis

HŽPP

Integrated ticket system in HR: ticket price, integrated intelligent ticketing systems, web/mobile applications and connecting software systems

IDA

Sustainable intermodal solutions between coast and hinterland area in Istria with main focus on bike and train

KIP

Boosting intermodal solutions through ICT Web/mobile application for the promotion of intermodal passenger transport



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Thank you for your attention!

Autonomous Region of Friuli Venezia Giulia
Massimiliano Angelotti

📍 Via Carducci, 6 – Trieste (Italy)

✉ massimiliano.angelotti@regione.fvg.it

☎ 040 3774720

🌐 www.italy-croatia.eu/moses



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3.1.5.4 The role of Mobility as a Service [Daniela Vasari]

Interreg Italy - Croatia STEP-UP

PLUSERVICE.NET
Integrated Information System for Mobility

The role of Mobility as a Service

Pluservice srl
| Training Session | Trieste | 7^o May 2019

European Regional Development Fund

Slide 1/12


PLUSERVICE.NET
Integrated Information System for Mobility

Outline

- What is MaaS?
- Why MaaS?
- Benefits
- Add value of MaaS
- Topology of MaaS

Slide 2/12


What is MaaS?



MaaS ALLIANCE


Mobility as a Service (MaaS) is the integration of various forms of transport services into a single mobility service accessible on demand. To meet a customer's request, a MaaS operator facilitates a diverse menu of transport options, be they public transport, ride-, car- or bike-sharing, taxi or car rental/lease, or a combination thereof. For the user, MaaS can offer added value through use of a **single application to provide access to mobility**, with a single payment channel instead of multiple ticketing and payment operations. For its users, MaaS should be the **best value proposition**, by helping them meet their mobility needs and solve the inconvenient parts of individual journeys as well as the entire system of mobility services.

The aim of MaaS is to provide an **alternative to the use of the private car** that may be as convenient, more sustainable, help to reduce congestion and constraints in transport capacity, and can be even cheaper.

Interreg Italy - Croatia STEP-UP  **PLUSERVICE.NET**
Integrated Information System for Mobility

Slide 3/12


What is MaaS?



MaaS ALLIANCE

MaaS Advantages

- Open to all service providers
- High flexibility for eventual changes during the journey
- Provide citizens personalized transport services
- More efficient use of the transport system
- Choose your journey depending on the factors that matter to you
- New registration opportunities and markets for data analysis
- Receive real-time information on transport status
- Access to new sales channels and untapped customer demand
- Value for all users
- Simplified user account and payment management
- Contribute to low-carbon transport and mobility
- Participate in the sharing economy
- New business opportunities in the growing market
- Convenient payment system
- Door-to-door mobility
- More effective policy making as a result of improved insight into traveler needs

Interreg Italy - Croatia STEP-UP  **PLUSERVICE.NET**
Integrated Information System for Mobility

Slide 4/12

Why MaaS?

- Cities are growing and traffic problems increase
- New modes of transport & mobility services are emerging
- Transport demand is changing
- Technological development, increased Internet usage
- MaaS can offer new ways and means for better mobility everywhere

Tailored mobility services

Pay as you go

New markets

Slide 5/12

Benefits

There are many benefits of MaaS for users, the public sector and businesses:



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Added value of MaaS

MaaS does not just involve the integration of mobility. In many cases, MaaS entails the introduction of new forms of transportation, such as bicycle sharing and car sharing, or innovative forms of demand-responsive transport, supplementary to the existing range of public transport systems, booking and payment systems.



Ref. Netherlands Institute for Transport Policy Analysis (KIT)

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Typology of Mobility-as-a-Service

Typology of **Mobility-as-a-Service** with levels (left) and examples (right) *(derived from Sochor et al. 2017)*.

4	Integration of societal goals Policies, incentives, et cetera	
3	Integration of services offered Bundling/passes, contracts, et cetera	
2	Integration of booking and payment Single trip – find, book, and pay	
1	Integration of information Multi-modal travel planner, price information	
0	No integration	

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Typology of Mobility-as-a-Service

Examples of MaaS initiatives by level of integration
(derived from Sochor et al. 2017)

Name	Location	Status	Mode of transport*	Integration level
moovel	Hamburg and Stuttgart, Germany	Operational (2015-)	Car sharing, taxi, urban PT, regional PT	Level 2 (partially, payment integrated)
myCicero	Italy	Operational (2015-)	Urban PT, regional PT, international PT, parking, access to urban congestion charging zones	Level 1 (partially, payment integrated)
NAVIGo	Dundee and North East Fife regions, Scotland, UK	Operational (2017-)	Car sharing, taxi, urban PT, regional PT	Level 2 (partially, payment integrated)
ODISS	France	Operational (2017-)	Car rental, taxi, valet parking	Level 2 (partially, payment integrated)
TaaS	Turku region, Finland	Operational (2018-)	Car sharing, bicycle sharing, taxi, urban PT, DRT	Level 2 (partially, payment integrated), ticketing integration under development
Hastowemobil	Hannover, Germany	Operational (2012-)	Car sharing, taxi, urban PT, regional PT	Level 2
EHMA (TAM)	Montpellier, France	Operational (2013-)	Bicycle sharing, car sharing, urban PT, parking	Level 2
Business passes: NS Business Card, MobilityMax, Radus, Total Mobility, et others	Netherlands	Operational (national coverage with effect from 2013)	(Car sharing, parking, fuel costs, e-car charging, taxi, car rental), bicycle sharing, urban PT, regional PT	Level 2 (Business to Business), partially level 1
Seile	Vienna, Austria	Pilot (2016-2017)	Bicycle sharing, car sharing, taxi, urban PT, regional PT, parking	Level 2
WienMobil Lab	Vienna, Austria	Operational (2017-)	Bicycle sharing, car sharing, taxi, urban PT, parking	Level 2
SHIFT	Las Vegas, US	Planned (2017-2018)	Bicycle sharing, car sharing, taxi, DRT, valet parking	Level 3
UBIGO	Gothenburg, Sweden	Pilot (2013-2014), version 2.0 in preparation	Bicycle sharing, car sharing, car rental, taxi, urban PT	Level 3



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Slide 10/12

Documentations and Links

- <https://maas-alliance.eu/>
- <https://maas.guide/>
- https://en.wikipedia.org/wiki/Mobility_as_a_service



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Thank you for your attention!

Daniela Vasari



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3.1.5.5 Electro-mobility integrated into transport and mobility networks [Maria Pia Fanti]



STEP-UP Training Sessions

NEW SCENARIOS ON MULTIMODAL MOBILITY

INFOMOBILITY FOR SUSTAINABLE PASSENGERS' FLOW
BETWEEN ITALY AND CROATIA

Electro-mobility integrated into transport and mobility networks

Maria Pia FANTI

Polytechnic University of Bari, Italy



Savoia Excelsior Palace Hotel - Trieste, 7th May 2019



Slide 1/33

Electro-mobility

Electromobility is a major factor towards transport decarbonisation

Open problems

- **Interoperability of electromobility** services among eRoaming platforms
- **Lack of a common data and information** for objects and services
- **Lack of standardisation** for information exchange and services provision
- Need for open system to **integrate existing ICT services**
- Need for access to large data to appropriately **forecast demand** and efficiently optimise charging
- **Minimise impact** to the electric grid network



2

Slide 2/33

Two in progress European H2020 projects for eletromobility



Call identifier: H2020-GV-2015

NeMo: Hyper –Network for Electro Mobility

EC funding: 7836827,04 €

Duration: October 2016 – September 2019

5 test sites

1 cross-country demonstration

Supported by eM3.EUCAR, BMW Group



Slide 3/33

Two in progress European H2020 projects for eletromobility



Call identifier: H2020-GV-2017

ELVITEN: Electrified L-category Vehicles Integrated into Transport and Electricity Networks

EC funding: 7,840,648.75 €

Duration: November 2017 – October 2020

Demonstrations in Six European Cities



4

Slide 4/33

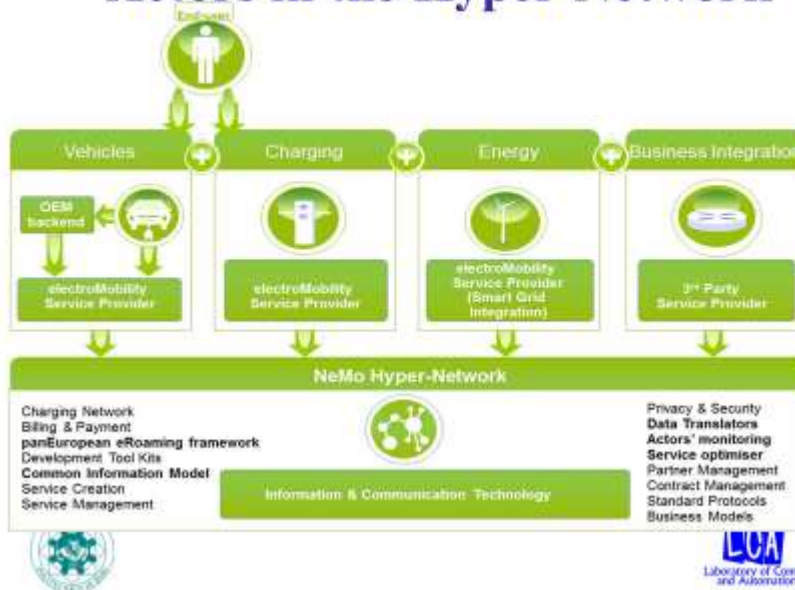
NeMo Strategic Objectives

- Develop a **Hyper-Network** for the provision of seamless and interoperable electromobility ICT services (for all users and actors)
- Create **Common Information Models** for objects, data and services
- Introduce a set of **ICT interfaces**, to facilitate the communication and data access for all actors
- Develop a **Core system** capable of providing ICT services
- Develop a set of **horizontal services** to facilitate the creation of innovative and smart services
- Develop a **pan European eRoaming framework**
- Develop **new business models** and scenarios for all actors



Slide 5/33

Actors in the Hyper-Network



Slide 6/33

ELVITEN Strategic Objectives (1)

- Develop replicable usage schemes of EL-Vs for owners, sharers and light goods deliverers based on the deployment of :
 - EL-Vs innovative parking and charge services (including e-charging hubs, integration of public and private charge points in Brokering service , interoperable eRoaming platform)
 - EL-Vs sharing and rental services
 - Support ICT tools to facilitate the usage of EL-Vs (Brokering service to book and pay, Management system for the e-charging hubs) and support ICT tools to motivate the usage (Serious Game app, Incentives Management Smart Card).
 - Appropriate policies and incentives
- Organise long-term demonstrations of the ELVITEN usage schemes in 6 Cities



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ELVITEN Strategic Objectives (2)

- Create a big data bank of real driving and usage data and users' experiences and opinions
- Derive guidelines towards EL-V manufacturers and Planning Authorities
- Develop business models for EL-V sharing, rental, parking and charge services
- Demonstrate the transferability of the ELVITEN usage schemes in 50 Follower Cities or areas
- Achieve a mind-shift among users, so that they become e-Owners, e-Sharers or e-Deliverers, to create an e-World.



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Some developed ICT tools for electro-mobility: Virtual Sensors

- VVs are **software sensors** that provide indirect measurements of abstract conditions, by **combining sensed data from heterogeneous physical sensors**
- Necessary services** for EV users
- Estimate EV parameters**, manage battery technology, vehicle control, **charging and power grid issues**, estimation of **faults**
- Ensure **vehicles stability and reliability**
- cost of sensing devices, difficulty to measure key parameters by physical sensors



Slide 9/33

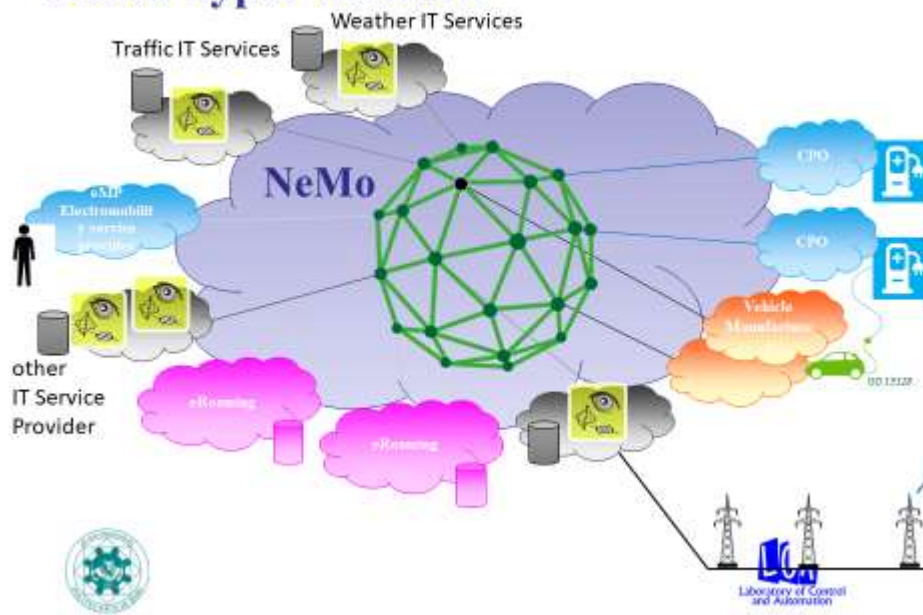
Some developed ICT tools for electro-mobility: Virtual Sensors

- A **VS logically reproduces one or more physical sensors** in the cloud platform, facilitating and increasing their functionalities, being capable of performing kinds of tasks that cannot be accomplished by physical sensors
- VVs are used in different fields of research such as **energy, healthcare, mobility**, etc., to estimate or predict information/parameters values from the distributed physical instrumentation measurements



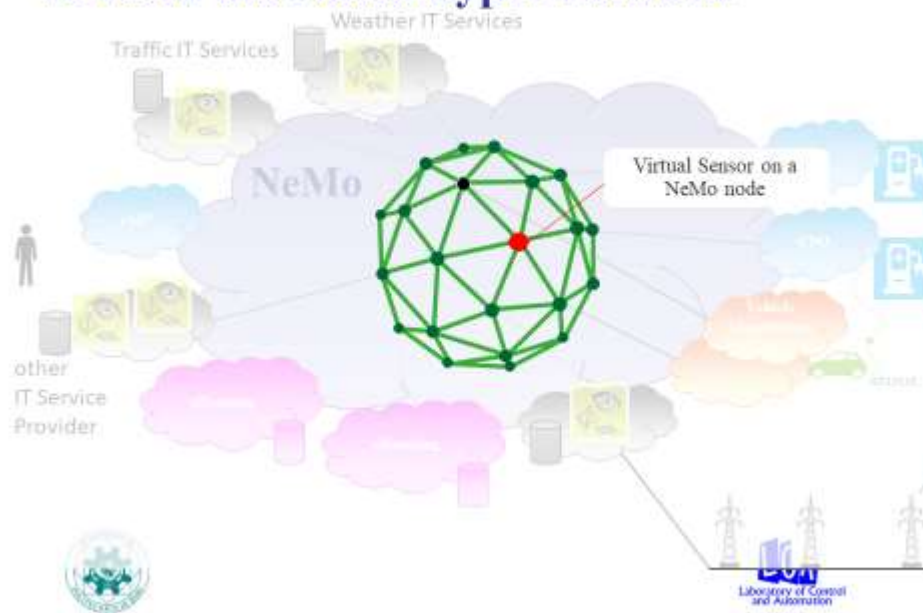
Slide 10/33

NeMo hyper-network



Slide 11/33

A VS in the NeMo hyper-network



Slide 12/33

VSS implementation methodology



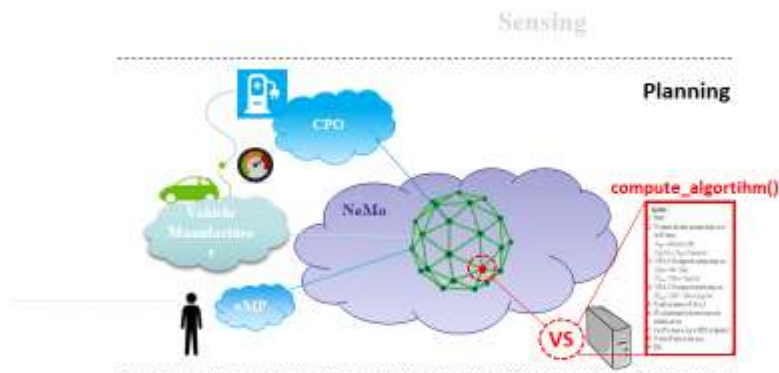
1° Sensing phase:

- gathering data from external data sources, wired and wireless sensors;
- data are used by internal algorithms in order to produce the VS output.



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VSS implementation methodology



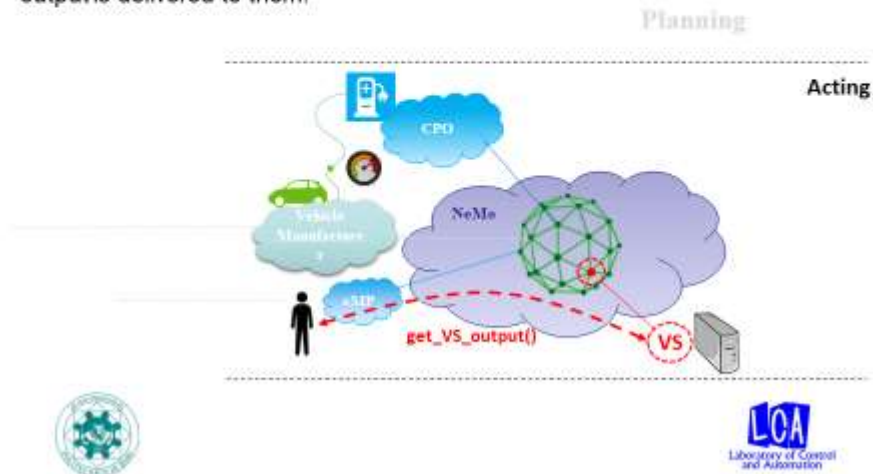
2° **Planning phase:** the collected data from external sources, together with the internal state of vehicle, are used to update the indirect sensing measurement.



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VSS implementation methodology

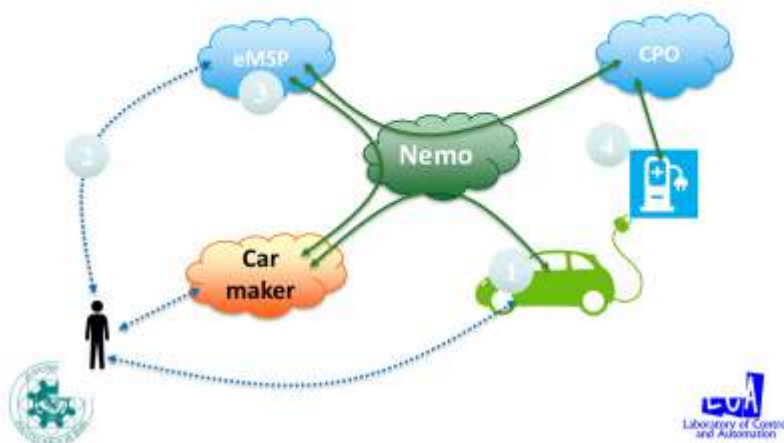
3° Acting phase: the most recent computation of the VS is asked from external users or other services, and the corresponding most updated output is delivered to them.



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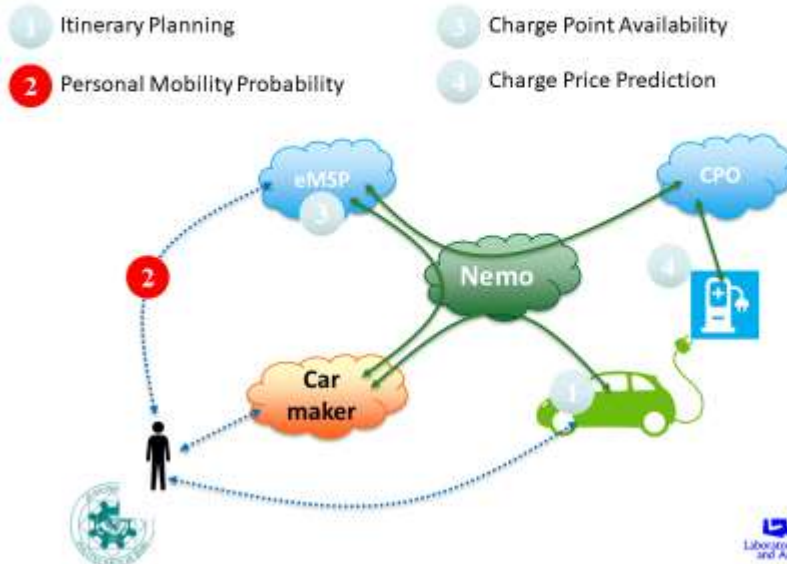
Virtual sensors for electromobility

- 1 Itinerary Planning
- 2 Personal Mobility Probability
- 3 Charge Point Availability
- 4 Charge Price Prediction



Slide 16/33

Virtual sensors for electromobility



Slide 17/33

Personal Mobility Probability

- Use statistical algorithms and past trip history data to derive **the driver most probable routes during the next calendar day** with respective probabilities.
- Each route is a spatial-temporal path composed by the interpolation of **Point Of Interest (POI)**.
- The POI are the following:
 - Start point (SP)
 - Charge/other intermediate stops
 - End point (EP)

Each POI of the trip will be described by six values

(latitude, longitude, arrival_timestamp, departure_timestamp, arrival charge, departure charge).



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Personal Mobility Probability

Output example (1/2)



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Personal Mobility Probability

Output example (1/2)



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Personal Mobility Probability

Output example (1/2)



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Personal Mobility Probability

Output example (1/2)



Slide 22/33

Personal Mobility Probability

Output example (2/2)



Slide 23/33

Personal Mobility Probability

Output example (2/2)



Slide 24/33

Personal Mobility Probability

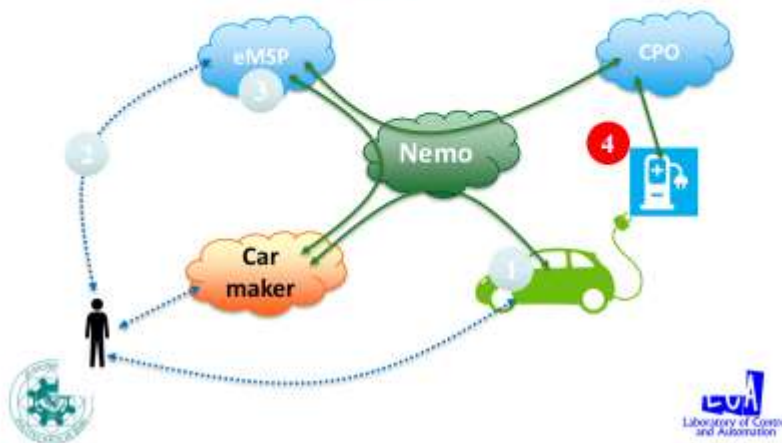
Output example (2/2)



Slide 25/33

Virtual sensors for electromobility

- 1 Itinerary Planning
- 2 Personal Mobility Probability
- 3 Charge Point Availability
- 4 Charge Price Prediction



Slide 26/33

Charge Price Prediction

- Provide information about charge stations (*latitude, longitude, tariff, power, distance, status*), related to a **specific time horizon** (e.g. next 24 hours) **and the area of interest** of a given driver.
- Predict **charge session cost** for the given driver selecting a specific charge point (€).

Require:

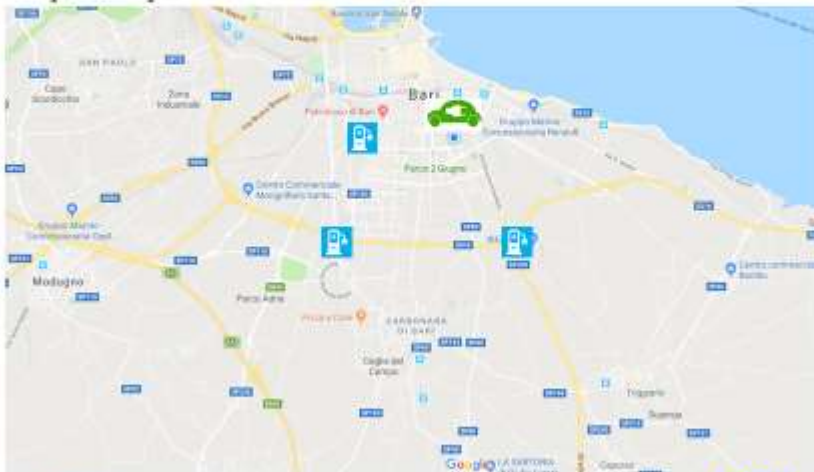
- Charge point dynamic status
- Charge detail record
- Charge point tariff
- Personal/Vehicle mobility need, EV position
- EV charge level
- Desired charge level



Slide 27/33

Charge Price Prediction

Output example



Slide 28/33

Charge Price Prediction

Output example



Slide 29/33

Charge Price Prediction

Output example



Slide 30/33

Charge Price Prediction

Output example



Slide 31/33

Conclusions

Electromobility for transport decarbonisation

NeMo and ELVITEN provide solutions for electromobility open problems by:

- New services integrated with existing ICT services
- New networks for data and information exchange
- Information and data standardisation
- New sensors and virtual sensors to **forecast demand**, optimise charging, **minimise impact** to the electric grid network

Future H2020 calls:

- improving the recharge operations
- smart charging stations



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Slide 32/33



STEP-UP Training Sessions

NEW SCENARIOS ON MULTIMODAL MOBILITY

**INFOMOBILITY FOR SUSTAINABLE PASSENGERS' FLOW
BETWEEN ITALY AND CROATIA**

Thank you for your attention!!

Prof. Maria Pia FANTI
mariapia.fanti@poliba.it



Savoia Excelsior Palace Hotel - Trieste, 7th May 2019



3.1.5.6 Intermodality for a seamless solution [Giorgia Fanesi]

Interreg Italy - Croatia STEP-UP

EUROPEAN UNION

PLUSERVICE.NET
Integrated Information System
for Mobility

Intermodality for a seamless solution

STEP-UP | Marche Region
First training session | Trieste | 7 May 2019

European Regional Development Fund

This slide features a white background with a large, stylized blue wave graphic at the bottom. The wave is composed of three horizontal bands of varying shades of blue. The text is centered and uses a clean, sans-serif font.

Slide 1/15

Outline

- Definition of intermodality
- Google Transit as example of intermodality
- Definition of interoperability
- Model of integration
- Three different example of integration models
- Impacts

Interreg Italy - Croatia STEP-UP

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Integrated Information System
for Mobility

2

This slide features a white background with a large, stylized blue wave graphic at the bottom. The wave is composed of three horizontal bands of varying shades of blue. The text is centered and uses a clean, sans-serif font. A map of Italy is shown in the background, with several regions highlighted in different colors (red, green, blue, yellow) and connected by dashed lines, representing integration models.

Slide 2/15

Intermodality

Intermodality is the door to door passengers movement by several modes of transport (more than one) where each of these modes have a different transport provider or entity responsible for them.

The aim of intermodal technology is to facilitate efficient and comfortable use of compatible transport modes.



Intermodality

Key factors

End-users

- Citizens
- Vulnerable users
- Young
- Students
- Tourists

Conscious behavior of the users.

Sustainable and green choice

Infrastructure

Infrastructure and services help people to combine modes of transport and swiftly pass from one to another mean.

Mobility Data

Understanding and monitoring the complete network of available transportation modes represent a major opportunity for the travelers and for businesses.

Intermodality



Slide 5/15

Google transit

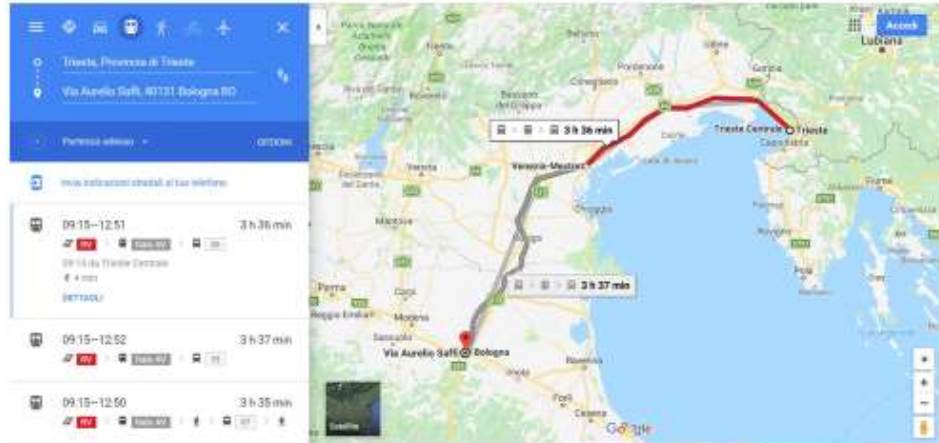
Intermodal system where users can search door to door travel solutions.



Slide 6/15

Google transit

Integration of different modes of transport: train, bus, tram, metro.

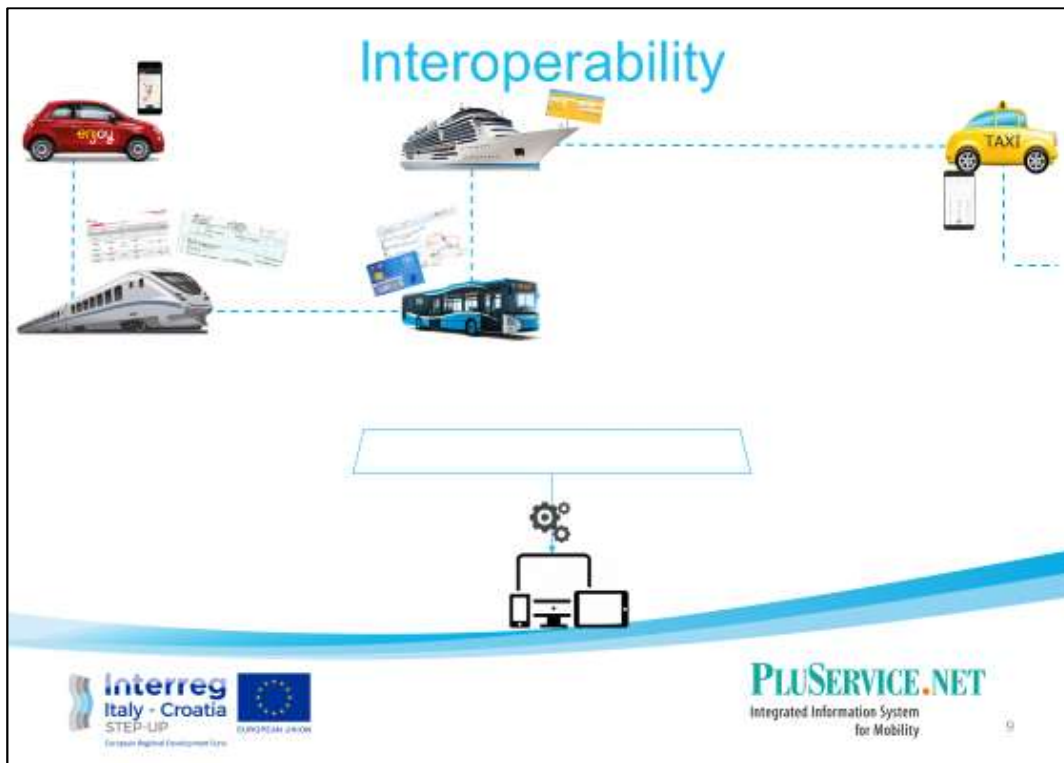


Interoperability

Interoperability, in the field of passengers transport, means that all travellers can move thanks to transport modes through one device and unique user travel experience. The scope of the interoperability is reached by the integrated services on different nature that operate together in the same environment.

The integrated services aim at making easier the requests of users:



- Travel planning solution
- Booking (related to the previously research)
- Ticket issue
- Payment
- Ticket validation



Slide 9/15

Model of integration

Scheme	Area	Integration type					Mode	Tourism services
		Ticket	Pay	ICT4M	ICT4T	Pack		
TfL – Oyster	London	X		X			Bus, metro, taxi, train, bike sharing, car sharing	
Moovel	Hamburg	X	X	X			Bus, tram, car rental, taxi, train	
Hannovermobil	Hanover	X	X	X			Bus, train, taxi, car sharing, car rental	
myCicero	Italy	X	X	X	X		Bus, metro, tram, train, bike sharing	Tourism information
UbiGo	Stockholm	X	X	X		X	Bus, tram, train, ferry, v-sharing, car rental, taxi	
Whim	Helsinki, Birmingham, Antwerp	X	X	X		X	Public transport, car rental, bike sharing, taxi, car sharing	

Slide 10/15

Transport for London - Oyster

Interoperable system in a card



Slide 11/15

myCicero

One-stop mobility shop - Example of Mobility-as-a-Service in Italy

Jumping in and out of a metro, bus, ferry, train or v-sharing and pay the right amount or the best fare calculated has become much easier for users.



Slide 12/15

WHIM

It is the most complete example of Mobility-as-a-Service because it includes mobility package.

The screenshot shows the WHIM app interface. On the left, the 'Plan Journey' screen displays three travel options for a route from 'Rheinstraße 1, Antwerpen' to 'Rheinstraße 2, Antwerpen'. The first option is a train (18 min), the second is a bus (21 min), and the third is a taxi (23 min). On the right, the 'TAXI' screen shows a 'Request Taxi' button and an estimated fare of 42.29 €. Below the app screenshots are two promotional cards: 'Whim Unlimited' for €499/month and 'Whim to Go' (pay as you go).

Whim Unlimited
€499 / month
Unlimited access to car, taxi, public transport, and city bike.
[read more](#)

Whim to Go
Pay as you go
Each trip is paid separately with no subscription fee.
[read more](#)

Slide 13/15


Impacts



Slide 14/15

Thank you for your attention!

Giorgia Fanesi

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 Giorgia.fanesi@pluservice.net

 +39 347 7488730



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for Mobility

15

Slide 15/15

3.1.5.7 Improving passengers' mobility, new ideas and methods to ensure sustainable mobility [Petar Mišura]

Interreg
Italy - Croatia
STEP-UP

EUROPEAN UNION

IMPROVING PASSENGERS' MOBILITY, NEW IDEAS AND METHODS TO ENSURE SUSTAINABLE MOBILITY

STEP-UP | City of Šibenik, Department of economy, entrepreneurship and development | Petar Mišura

STEP-UP Training Session | Trieste | 7th of May 2019

European Regional Development Fund

Slide 1/14

Five conditions to sustainable urban mobility

- Having a well-communicated and accepted vision on the development of the town
- Good governance
- Approving and supporting local initiatives
- Equal partners of technological companies
- Initiate, evaluate, terminate or implement experiments (pilots)

2

Slide 2/14

Master plan of sustainable urban mobility

- ❑ The basis for the implementation of projects in the field of transport



Slide 3/14

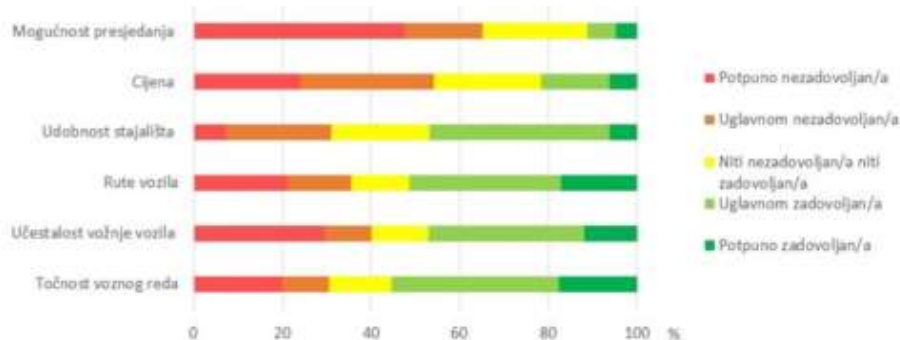
Key challenges in developing sustainable urban mobility

- ❑ Approximately 90 % of city residents do not use public bus transport
- ❑ Ship transport is characterized by poor port infrastructure and old ships (app. 40 years old)
- ❑ Lack of parking space due to special morphological structure of the city and narrow streets
- ❑ Opportunity – The development of intermodal point



Slide 4/14

Results of the survey about satisfaction of respondents in certain aspects of public transport service



How can we improve passengers mobility?

- Project UrbEco
- Urban Escalator (project desing)
- Cable cars (project idea)
- Public parking garage
- Development of intermodal point
- Cross-border cooperation projects (STEP-UP, INTERMODAL, etc.)

UrbEco

- ❑ The goal: To establish intermodal bus and ship public transport based on innovative and ecological solutions



Urban escalator and cable cars

- ❑ Modern means of transport connecting cultural and historical monuments



Project INTERMODAL

- ❑ First public bicycle system in Dalmatia
- ❑ Delivery of goods by electric vehicles in old city centre



9

Slide 9/14

Project STEP-UP

- ❑ All available transport data standardized in GTFS format
- ❑ The development of E-Planner for the purpose of multimodal travel planning
- ❑ Realization of pilot project: Connecting Šibenik with two international airports with direct bus lines



Slide 10/14

The development of intermodal point

- ❑ Passenger port, freight port, bus terminal, public bicycle system and railway station within 500m distance



1
1

Slide 11/14

New city square „Poljana”

- ❑ Remodel of main city square „Poljana”
- ❑ Three storey underground garage
- ❑ 256 new parking spaces



1
1

Slide 12/14

City of Šibenik new pilot project: Ship line in the bay



13/14

Slide 13/14

Thank you for your attention!

City of Šibenik
Petar Mišura

📍 Address: Petra Grubišića 1, 22000 Šibenik

✉️ petar.misura@sibenik.hr

☎️ +385 22 431 085

🌐 www.italy-croatia.eu/step-up



14/14

Slide 14/14

3.1.5.8 Smart Cruise Destination [Sara Carciotti]



SMART CRUISE DESTINATION: a network between territory and cruise tourism

University of Trieste | Sara Carciotti

Trieste | 07 May 2019

European Regional Development Fund

Slide 1/21

CRUISE TOURISM



2

Slide 2/21

CRUISE TOURISM



Venice, Italy



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Regione Emilia-Romagna

Città di Lamezia

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Spettro

Grad Šibenik

Inter Airport

2

Slide 3/21

WORLD CRUISE SUPPLY EVOLUTION



25.8 million cruise passengers worldwide in 2017,
30 million are estimated for 2020



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Grad Šibenik

Inter Airport

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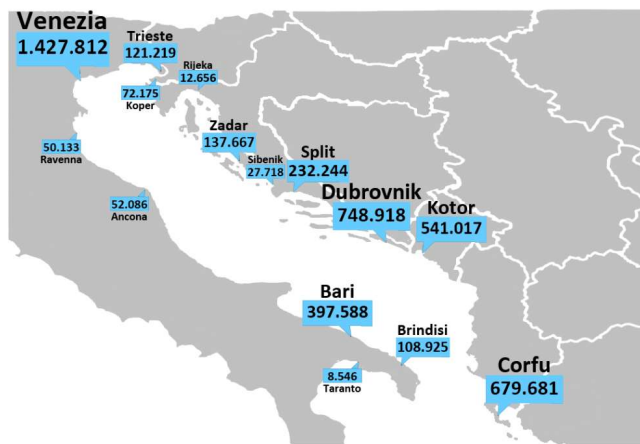
Slide 4/21

MEDITERRANEAN CRUISE TRAFFIC OVERVIEW



Graphical elaboration of data - resource Cruise Activities in MedCruise Ports, 2017 statistics

ADRIATIC CRUISE TRAFFIC OVERVIEW



Graphical elaboration of data - resource Cruise Activities in MedCruise Ports, 2017 statistics

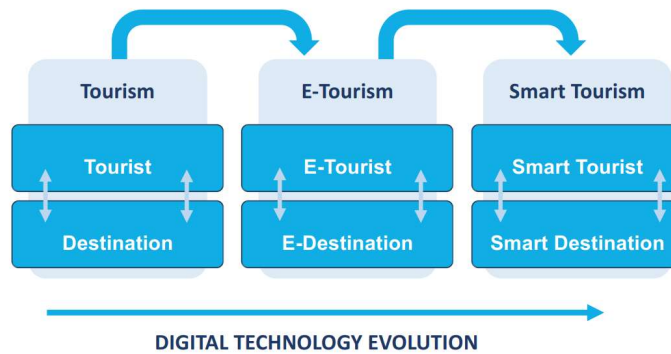
CRUISE TOURIST AND TERRITORY



People pollution refers to the point at which the carrying capacity of a port is exceeded (Baekkelund, 1999)

HOW TO
MANAGE
?

EVOLUTION IN THE TOURISM INDUSTRY



SMART CRUISE DESTINATION CONCEPT

smart CRUISE destinations

«an innovative space, accessible for all, established on a cutting edge **technology** infrastructure which guarantees sustainable development of the land, facilitates the interaction and integration of the visitor with the surroundings and increases the quality of their experience in the destination, as well as the quality of life of residents».



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Grad Šibenik

Adriatic

9

Slide 9/21

Destination is not about
functions and even services

Destination itself
is a service



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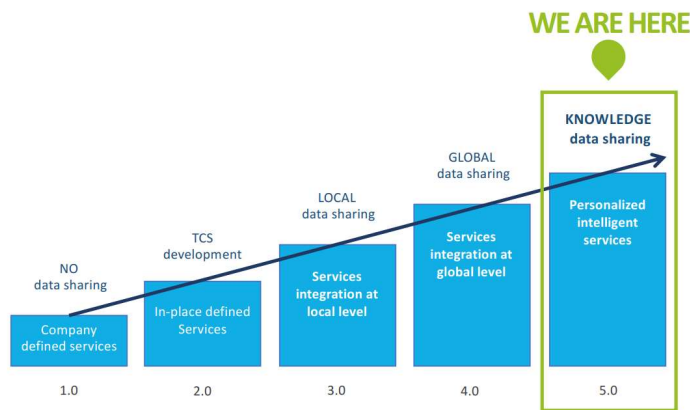
Grad Šibenik

Adriatic

10

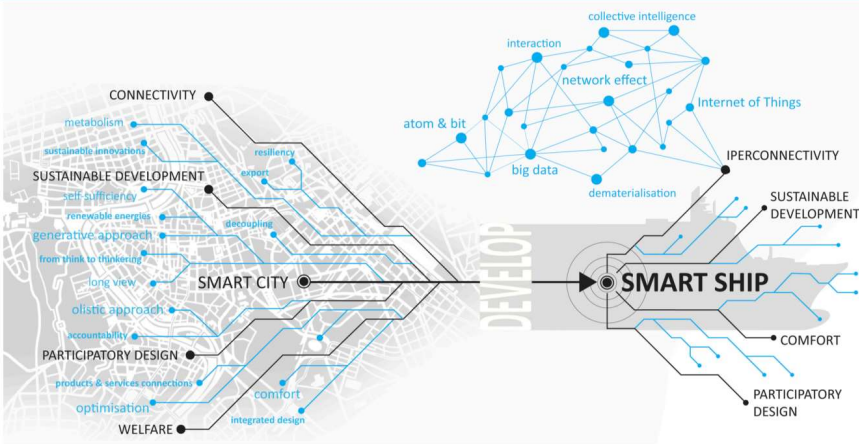
Slide 10/21

TOURISM SERVICES EVOLUTION



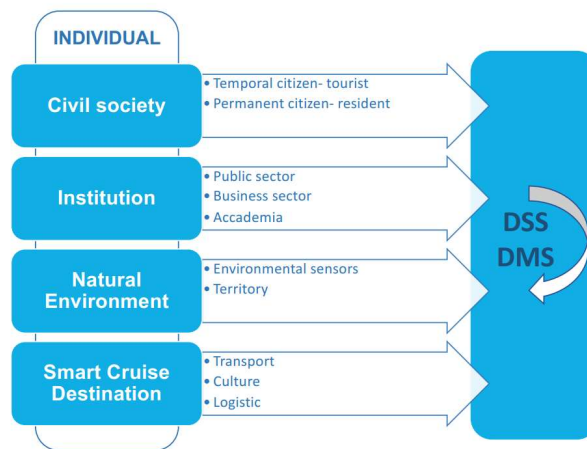
Slide 11/21

NETWORK CONFIGURATION

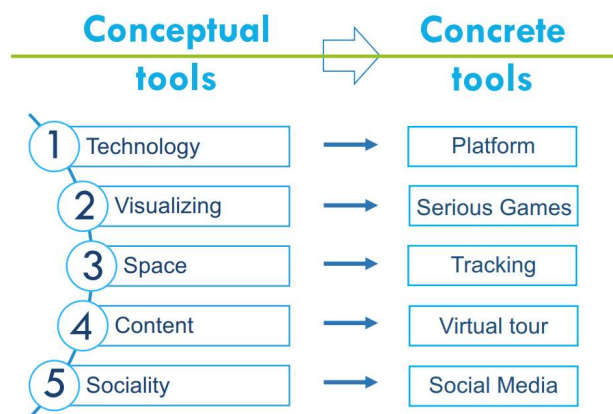


Slide 12/21

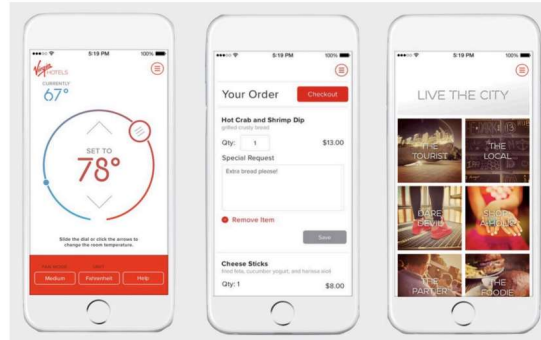
MULTIPLE ACTORS CONNECTION



FIVE MANAGEMENT TOOLS



One – access
A smart device
to control
everything



Example: Virgin Lucy App

Providing
tourists with
shortcuts to
best
experiences

Zip through the best of Hong Kong in 24 hours

Waking up to a delicious breakfast
I'm served breakfast in a special food box. Warm and bursting with flavours, it gets me started for the day.

Taking a refreshing dip in my terrace pool
I take a plunge into the blue beauty. No dragging, but the views are quite impressive.

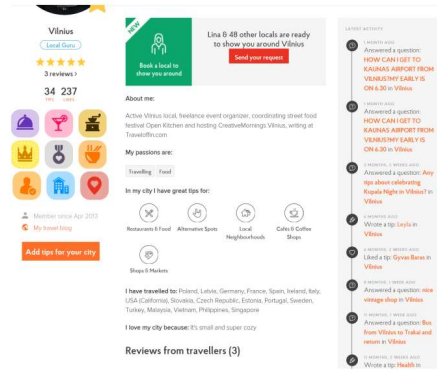
Being greeted in the hotel lobby
The staff warmly sees goodbye as I step out to start my adventures.

Admiring handmade steamers at Tai Chong Shum Kee
There's a curious 81 pace round the corner that fascinates me. It's the last remaining bamboo steamer company in town.

Street art gazing in Sheung Wan
Walking through streets where the walls are a canvas and imagination runs wild, it's colourful and full of surprises.

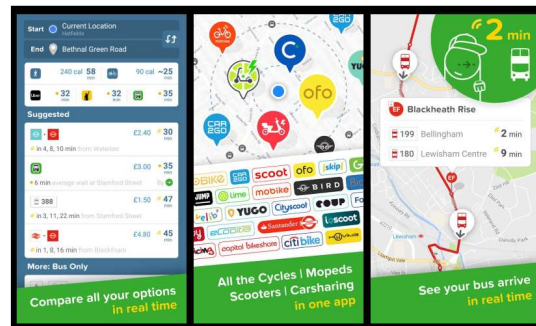
<https://www.hoteltjen.com/hongkong/westerndistrict/cityguide/>

Locals are the new tour guides

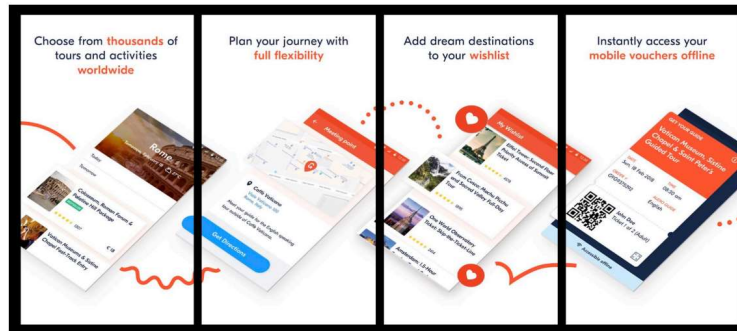


Slide 17/21

Sustainable mobility for tourists and residents alike



Slide 18/21



User generated | Personalization | Satisfaction

Slide 19/21

CONCLUSIONS



Slide 20/21


THANK YOU FOR THE ATTENTION

University of Trieste
Sara Carciotti

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 0039 3400534166

 www.italy-croatia.eu/step-up



3.1.5.9 The beauty of small villages. Intermodality: the path to encounter it. [Laura Schiff]

WP5 Trieste 7 Maggio 2019 Training Sessions
Laura Schiff
Direzione generale
economia della conoscenza, del lavoro e
dell'impresa.
Regione Emilia-Romagna

The great beauty of the small villages

Intermodality: the road to meet it



European Regional Development Fund

Slide 1/10

WP5 Trieste 7 Maggio 2019 Training Sessions
Laura Schiff
Direzione generale economia della conoscenza, del lavoro e dell'impresa. Regione Emilia-Romagna

HISTORICAL VILLAGES:

- They are small jewels that tell history, architecture and culture of Italy
- They are widespread in the territory, mostly located on hills and mountains
- They play an important role in overseeing internal territories and their hydrogeological control
- They constitute an important opportunity for tourism development for areas that have been marginal



2

Slide 2/10

BORGHI VIAGGIO ITALIANO



A national project, coordinated by Emilia Romagna Region, funded by the Ministry of

It is aimed at promoting the great heritage of the in an internationally coordinated manner

The Italian Village Network has been created: it includes about 1000 villages of the 20 Regions



Slide 3/10

BORGHI VIAGGIO ITALIANO

Hundreds of small villages spread over the



Slide 4/10

THE JOURNEY TO THE VILLAGES IS THE PROBLEM

- Due to their urban layout, often of medieval origin, the small villages do not allow the reception of large numbers of cars
- The influx of private vehicles would still cause pollution problems and would ruin the atmosphere of quality of life and serenity that is their greatest characteristic
- The access roads are often narrow and steep, and not always easily accessible by bicycle
- Public transport connections are often scarce and inadequate



PORTICO SAN BENEDETTO

Slide 5/10

A POSSIBLE SOLUTION Intermobility

- Create or increase public links between the areas of maximum tourist influx of the coast and the villages of the hinterland
- Create connections between car or bicycle park exchangers on the plains and public bus lines that reach small hill towns
- Make tourists aware of using public transport by offering them discounts and personalized offers

Slide 6/10

WP5 Trieste 7 Maggio 2019 Training Sessions
 Laura Schiff
 Direzione generale economia della conoscenza, del lavoro e dell'impresa. Regione Emilia-Romagna

THE STEP-UP INITIATIVE LA LINEA DEI BORGHI

An innovative project that allow to visit villages of the Val Marecchia from the Romagna coast by public




REGIONE MARCHE | Regione Emilia-Romagna | FIDUCIA | CANTIERI REGIONALI DI LAVORO | Regione Lombardia | Locali Urbani |

7

Slide 7/10

WP5 Trieste 7 Maggio 2019 Training Sessions
 Laura Schiff
 Direzione generale economia della conoscenza, del lavoro e dell'impresa. Regione Emilia-Romagna

Where: from Rimini to Verucchio and San Leo, and back



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8

Slide 8/10

La linea dei Borghi



When

every Sunday from May 5th until June 9th
every Thursday from June 13th to September 12th

How

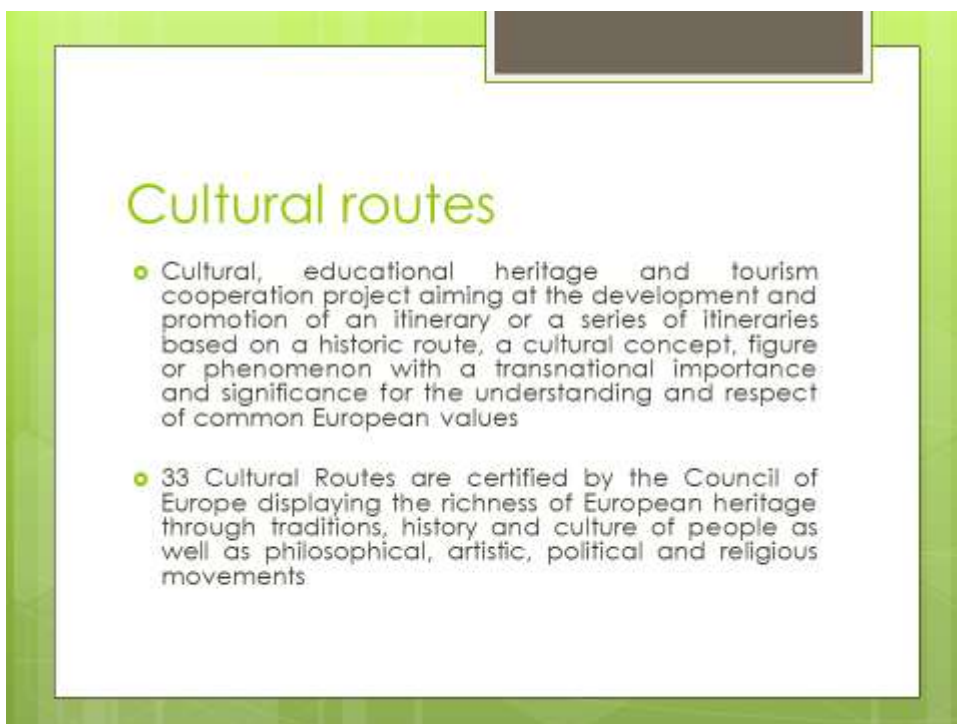
with a free shuttle bus available to tourists
with an email reservation and a dedicated number

Upon arrival in the villages, tourists will be welcomed by guides who will accompany them for free to visit the main places.

STEP – UP

A step in the right direction:
from the coast to the small villages
without car.

3.1.5.10 Cultural routes – potential for info-mobility services [Vanja Lipovac]



Cultural routes

- Cultural Routes have an extensive network of 735 members consisting, between others, of stakeholders from cities or municipalities, associations, sites, cultural organizations, tourism stakeholders and scientific organizations
- Stakeholders from the tourism sector such as tourism operators, tourism enterprises and tourism agencies should be added as members to increase the expertise on tourism destination management.

Slide 3/13



Slide 4/13

Why cultural routes?

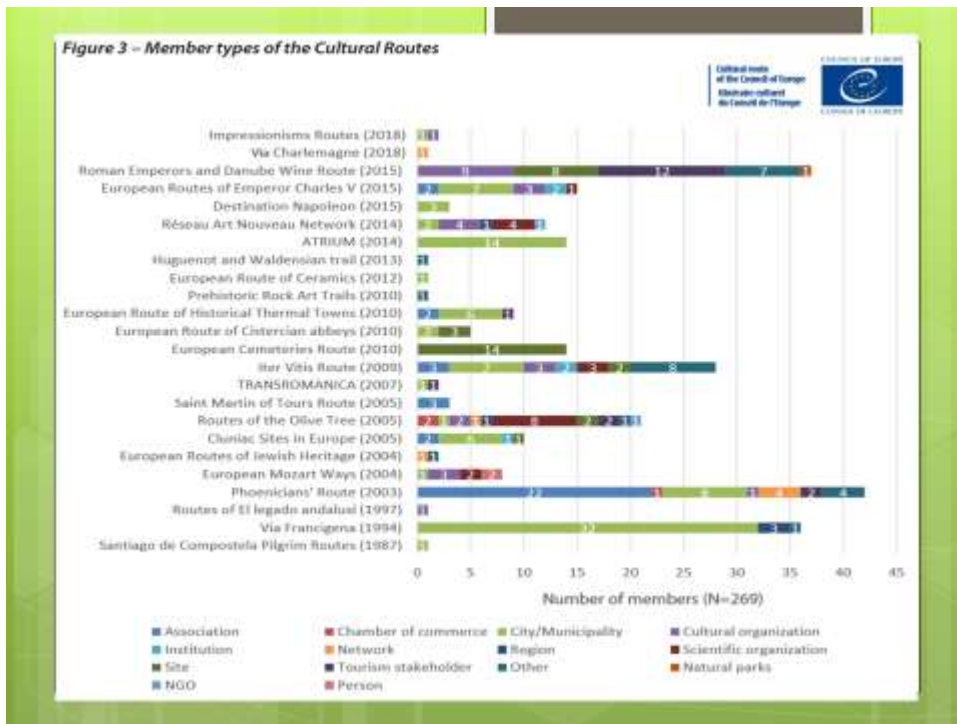
- **Europe is the world's No 1 tourist destination** with 50% of the world's total of international tourists' arrivals and leads steady growth of 4% in absolute terms
- Cultural tourism can be described as tourism offering cultural destinations, processes and products.
- Cultural heritage is a job creator not only in the cultural heritage sector, but also in companies providing goods and services for the cultural sector

Slide 5/13

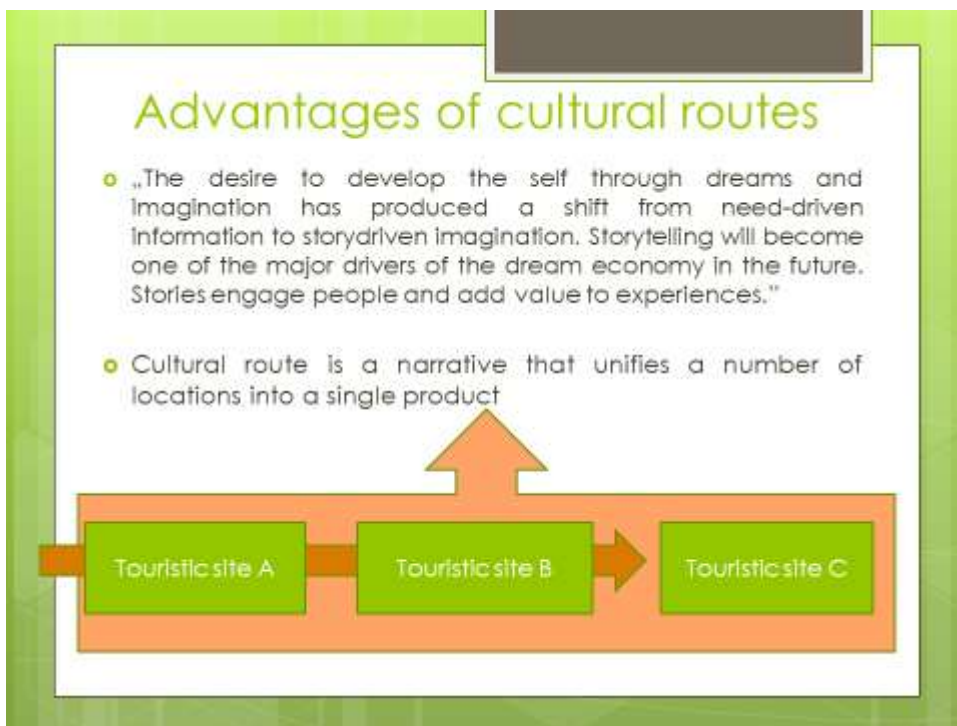
Why cultural routes?



Slide 6/13



Slide 7/13



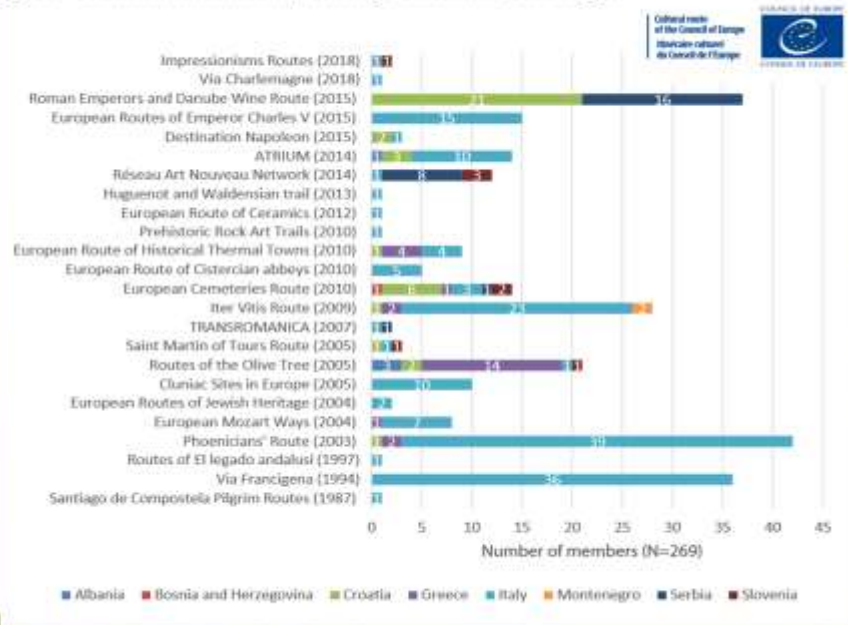
Slide 8/13

Info-mobility services

- Info-mobility services provide an opportunity to enhance the unification of a cultural routes
- One route, one trip easily purchased at designated site
- Ease of access, responsive to tourist demands
- Info-mobility services are one of the developmental priorities for cultural routes

Slide 9/13

Figure 2 – Cultural Routes members per country of the Adriatic-Ionian Region



Slide 10/13

Info-mobility services

- Demand for cultural tourism and cultural routes as a niche tourism on the rise; favorable touristic trends
- Supported by the EU long term strategies and touristic trends
- Available to develop from multiple positions
- Can be newly developed or integrated to existing ones

Slide 11/13

Info-mobility services

- Transport lets users consume the product, and info-mobility makes it approachable
- Cultural routes still need to be fully recognized, so promotion should be one of the priorities
- Info-mobility services still need to be fully accepted by the public and the stakeholders?

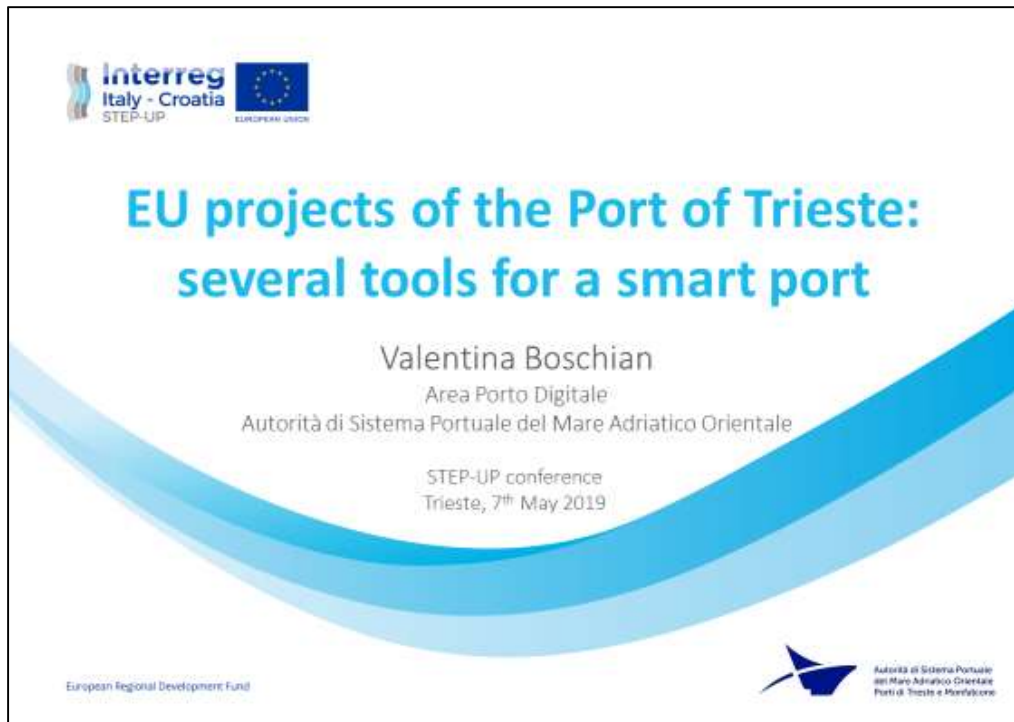
Slide 12/13

Cultural routes - potential for info-mobility services

- Sources:

- <https://www.coe.int/en/web/cultural-routes/resources>
- <https://rm.coe.int/1680706995>
- <https://rm.coe.int/16808ecc0a>

3.1.5.11 EU projects of the Port of Trieste: several tools for a smart port [Valentina Boschian]



Interreg
Italy - Croatia
STEP-UP

EUROPEAN UNION

EU projects of the Port of Trieste: several tools for a smart port

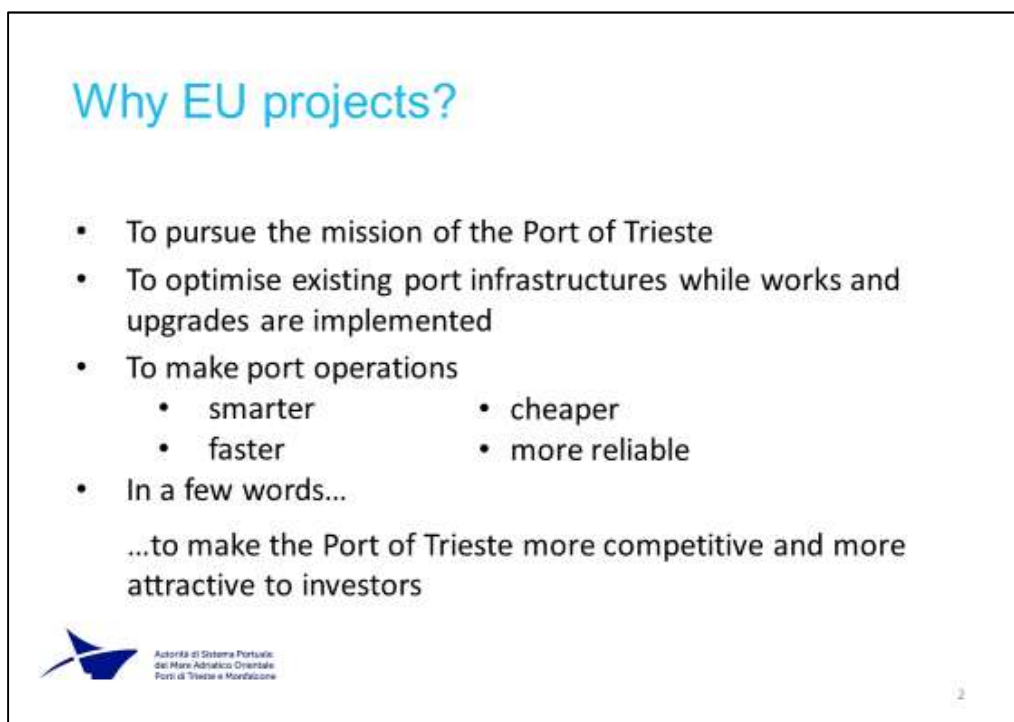
Valentina Boschian
Area Porto Digitale
Autorità di Sistema Portuale del Mare Adriatico Orientale

STEP-UP conference
Trieste, 7th May 2019

European Regional Development Fund

Autorità di Sistema Portuale
del Mare Adriatico Orientale
Porti di Trieste e Monfalcone

Slide 1/16



Why EU projects?

- To pursue the mission of the Port of Trieste
- To optimise existing port infrastructures while works and upgrades are implemented
- To make port operations
 - smarter
 - faster
 - cheaper
 - more reliable
- In a few words...
...to make the Port of Trieste more competitive and more attractive to investors

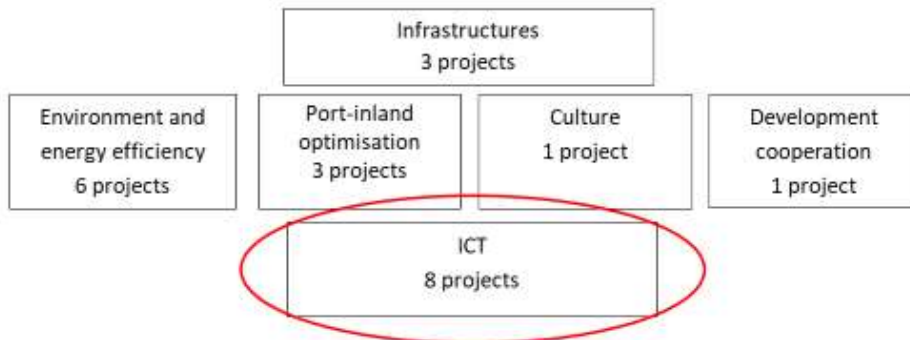
Autorità di Sistema Portuale
del Mare Adriatico Orientale
Porti di Trieste e Monfalcone

2

Slide 2/16

Ongoing EU projects in the Port of Trieste

The port of Trieste is involved in 22 co-funded projects, for an overall budget of 126.7 mln euros and an EU contribution of 32.3 mln euros in the following domains:



Slide 3/16

ICT-related projects



Slide 4/16

ICT EU projects of the Port of Trieste

Maritime access



Slide 5/16

INTESA



Objective: To improve quality, safety and sustainability of maritime transport services in Italy and Croatia

Funding Programme: Interreg Italy-Croatia

Total project budget: 2,896,480 euros

Project duration: 01/2019-06/2021

Role of the Port of Trieste: electronic and smart monitoring of the natural harbour of the port of Trieste; integration of port's PSC with PMIS-2 (Port Management Information System); ferry pre-clearing



6

Slide 6/16

ICT EU projects of the Port of Trieste

Road access



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del Mare Adriatico Orientale
Porti di Trieste e Monfalcone

Slide 7/16

PORTIS



Objective: to design, demonstrate and evaluate integrated sets of sustainable mobility measures in five major port cities on the North Sea (Aberdeen and Antwerp), the Mediterranean Sea (Trieste), the Black Sea (Constanta), and Baltic Sea (Klaipeda).

Funding Programme: H2020

Total project budget: 17,678,400 euros

Project duration: 09/2016-08/2020

Role of the Port of Trieste: development of an ICT control system to regulate the road access to the port area, controlling traffic generated in the port, thanks to increased inter-operability with the port terminals



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del Mare Adriatico Orientale
Porti di Trieste e Monfalcone

8

Slide 8/16

Ursa Major neo

URSA MAJOR^{★★} neo

Objective: to integrate IT systems of motorways and ports as to monitor and plan more efficient routes for freight transport

Funding Programme: CEF

Total project budget: 150 mln euros

Project duration: 02/2017-12/2020

Role of the Port of Trieste: management of the transit permits, interoperability with DATEX II development of an interoperable system with Italian motorway concessionaires to exchange data about the locations of trucks between the border with Austria and the Port of Trieste



Autorità di Sistema Portuale
del Mare Adriatico Orientale
Porti di Trieste e Monfalcone

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Slide 9/16

ICT EU projects of the Port of Trieste

Railway access and fast corridors



Autorità di Sistema Portuale
del Mare Adriatico Orientale
Porti di Trieste e Monfalcone

Slide 10/16

AlpInnoCT



Objective: to improve processes and cooperation in combined transport networks and to integrate innovative approaches fostering modal shift from road to rail

Funding Programme: Interreg Alpine Space

Total project budget: 3,088,271.93 euros

Project duration: 11/2016-10/2019

Role of the Port of Trieste: Data exchange with RUs concerning: position of the wagon in the train, wagon number, container plate number, type of good, semi-trailer/container, mass, tare, unladen weight, gross mass, seal number, integration with PIL SSH



11

Slide 11/16

PROMARES



Objective: to enhance cross-border maritime and multimodal freight between Italy and Croatia through the use of ICT

Funding Programme: Interreg Italy-Croatia

Total project budget: 2,778,200 euros

Project duration: 01/2019-06/2021

Role of the Port of Trieste: enhancing international fast corridor; feasibility study for the extension of Sinfomar to the Port of Monfalcone



12

Slide 12/16

SMARTLOGI



Objective: To enhance the operational and institutional cooperation between Italy and Austria as to increase modal shift of freight from road to rail, thus decreasing the environmental impact of freight transport

Funding Programme: Interreg Italy-Austria

Total project budget: 1,300,000 euros

Project duration: 01/2018-12/2019

Role of the Port of Trieste: creation of a logistic corridor between the Port of Trieste and the RRT of Fürnitz, data exchange related to train composition as to fasten train entry/exit and custom clearance



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del Mare Adriatico Orientale
Porti di Trieste e Monfalcone

13

Slide 13/16

COMODALCE



Objective: to enhance coordination of multimodal freight transport stakeholders in Central Europe through innovative ICT solutions

Funding Programme: Interreg Central Europe

Total project budget: 1,959,750 euros

Project duration: 04/2019-03/2022

Role of the Port of Trieste: upgrade of the train module of the PCS with the full digitisation of the railway consignment note, as well as the component related to the controls of the Customs Agency and Finance Police as to streamline rail cargo flows



Autorità di Sistema Portuale
del Mare Adriatico Orientale
Porti di Trieste e Monfalcone

14

Slide 14/16

FENIX



Objective: Establish a federated network of transport and logistics actors across Europe, enabling sharing of information and services needed to optimise TEN-T corridors from economic, environmental and asocial perspectives.

Funding Programme: CEF

Total project budget: 60,863,464 euros

Project duration: 04/2019-03/2022

Role of the Port of Trieste: Sharing with the FENIX federative platform the available data from Sinfomar PCS regarding the relevant services, guaranteeing reliability and in a seamless way; upgrade of an international fast corridor with Austria



15

Slide 15/16

Thank you for your kind attention!

Valentina Boschian

vboschian@porto.trieste.it
+39 040 6732462

Area Porto Digitale
Autorità di Sistema Portuale del Mare Adriatico Orientale



Slide 16/16

3.2 I Training Session: 7 May 2019

3.2.1 Venue



The first training session took place on the 7th of May 2019. The chosen venue was Savoia Excelsior Palace, Riva del Mandracchio 4, Trieste. The Savoia Excelsior Palace Hotel is an historical building, and a very high quality hotel. It is placed on the seaside facing the sea, in the very centre of Trieste, very close to the main square and the townhall. PP3 considered this venue for the prestige it would give to STEP-UP project and the meaning of the historical relevance, connected to the sea and travelling (it also faces the Maritime Station).

For the session UNITS rented a room with wi-fi, a service for projecting the presentations, for monitoring the audio quality and some technicians to follow the entire realisation and who shot a video for documenting the conference.

3.2.2 Agenda

At the arrival, the audience was offered a welcome coffee during the registration operations.

The conference was introduced by a brief introduction and the greetings from the scientific tutor for STEP-UP at the University of Trieste, Professor Fulvio Babich. Two institutional greetings were given by the assessor for Tourism of the Municipality of Trieste, ms. Francesca De Santis and by the Consul of Croatia in Trieste, mrs. Gordana Simic.

The speeches were divided in two parts, divided by a coffee break.

In the agenda sent by PP3 to the partners, partners found useful information on the venue location and were offered further assistance when needed.

Below some pictures from the conference:





Below the final agenda proposed:



STEP-UP Training Sessions – Final Agenda

NEW SCENARIOS ON MULTIMODAL MOBILITY

INFOMOBILITY FOR SUSTAINABLE PASSENGERS' FLOW BETWEEN ITALY AND CROATIA

Savoia Excelsior Palace Hotel - Trieste, 7th May 2019

- 08:40 – 09:00** Registration of participants and Welcome Coffee
- 09:00 – 09:15** **Welcoming on behalf of University of Studies of Trieste**
Institutional greetings
- 09:15 – 10:15** **Sustainable tourism destination management plans, focusing on climate change mitigation and multimodal transport**
Cinzia De Marzo, Lawyer, specialized in European Union Law & International Sustainable Tourism Expert
- 10:15 – 10:30** **STEP UP INTERREG IT-HR Project**
Valeria Corina, Head of Local Public Transport, Logistics and Viability Department, Marche Region (STEP-UP project Lead Partner)
- 10:30 – 10:45** **Improving maritime and multimodal transport services between Italy and Croatia: the experience in MOSES project and the expectations from ICARUS project**
Massimiliano Angelotti, Direzione centrale infrastrutture e territorio, FVG Region
- 10:45 – 11:00** **The role of Mobility as a Service**
Daniela Vasari, Project manager, solution designer in ITS projects and International cooperation, Pluservice, Technical Assistance of Marche Region (STEP-UP project Lead Partner)
- 11:00 – 11:15** **Electro-mobility integrated into transport and mobility networks**
Maria Pia Fanti, Full professor of System and Control Engineering, Department of Electrical and Information Engineering of the Polytechnic University of Bari
- 11:15 – 11:30** Coffee Break
- 11:30 – 11:45** **Intermodality for a seamless solution**
Giorgia Fanesi, Software analyst and project manager, Pluservice, Technical Assistance of Marche Region (STEP-UP project Lead Partner)
- 11:45 – 12:00** **Improving passengers' mobility, new ideas and methods to ensure sustainable mobility**
Petar Mišura, Municipality of Šibenik (STEP-UP project Partner)
- 12:00 – 12:15** **Smart Cruise Destination: a network between territory and cruise tourism**
Sara Carciotti, Architect, PhD Student, University of Trieste, Engineering and Architecture Department (STEP-UP project Partner)
- 12:15 – 12:30** **The great beauty of the small villages. Intermodality: the road to meet it**
Laura Schiff, Director for Quality of Touristic Areas, Emilia Romagna Region (STEP-UP project Partner)
- 12:30 – 12:45** **Cultural routes – a potential for info-mobility services**
Vanja Lipovac, Consultant for EU Projects, Zadar Airport (STEP-UP project Partner)
- 12:45 – 13:00** **EU projects of the Port of Trieste: several tools for a smart port**
Valentina Boschian, Port Network Authority of the Eastern Adriatic Sea
- 13:00 – 13:15** **Closing remarks**

VENUE

Hotel Savoia Excelsior Palace

Riva del Mandracchio, 4, 34124 Trieste TS

+39 040 77941

Note on accommodation: the chosen venue is placed in the main centre of Trieste. In the surroundings of the venue there are several hotel and B&Bs of any level. Since the STC Meeting is approaching and the season will be almost high, we recommend to book an accommodation as soon as possible. We can give further assistance when needed.



Contacts:

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Margherita Cipriano mcipriano@units.it

Paolo Ferrari pferrari@units.it

Chiara Gelmini cgelmini@units.it

3.2.3 Attendance I Training Session

STEP-UP I Training Session Trieste, Savoia Excelsior Palace, 7 may 2019
 NEW SCENARIOS ON MULTIMODAL MOBILITY
 INFOMOBILITY FOR SUSTAINABLE PASSENGERS' FLOW BETWEEN ITALY AND CROATIA

Surname	Name	ORGANISATION	Signature for GDPR agreement	Signature
Angelotti	Massimiliano	REGIONE PV 6	<i>Massimiliano Angelotti</i>	<i>Massimiliano Angelotti</i>
Babich	Fulvio	UNIVERSITY TRIESTE	<i>Fulvio Babich</i>	<i>Fulvio Babich</i>
Boschian	Valentina	PORTO TRIESTE	<i>Valentina Boschian</i>	<i>Valentina Boschian</i>
Bressanutti	Furio	/	/	/
Bučan	Martin	SDC	<i>Martin Bučan</i>	<i>Martin Bučan</i>
Buqi	Raol	UNIVERSITY TRIESTE	<i>Raol Buqi</i>	<i>Raol Buqi</i>
Carciotti	Sara	UNIVERSITY OF TRIESTE	<i>Sara Carciotti</i>	<i>Sara Carciotti</i>
Čarić	Damir	/	/	/
Casonato	Letizia	/	/	/
Castellucci	Matteo	REGIONE EMILIA- ROMAGNA	<i>Matteo Castellucci</i>	<i>Matteo Castellucci</i>
Čeko	Maja	CITY OF SIBENIK	<i>Maja Čeko</i>	<i>Maja Čeko</i>
Cipriano	Margherita	UNITS	<i>Margherita Cipriano</i>	<i>Margherita Cipriano</i>
Conficoni	Mauro	REGIONE EMILIA ROMAGNA	<i>Mauro Conficoni</i>	<i>Mauro Conficoni</i>
Contento	Giorgio	/	/	/

STEP-UP I Training Session Trieste, Savoia Excelsior Palace, 7 may 2019
 NEW SCENARIOS ON MULTIMODAL MOBILITY
 INFOMOBILITY FOR SUSTAINABLE PASSENGERS' FLOW BETWEEN ITALY AND CROATIA

Surname	Name	ORGANISATION	Signature for GDPR agreement	Signature
Corina	Valeria	Adelma Couvo	<i>Valeria Corina</i>	<i>Valeria Corina</i>
De Marzo	Cinzia	SELF EMPLOYED	<i>Cinzia De Marzo</i>	<i>Cinzia De Marzo</i>
De Santis	Francesca	COMUNE TRIESTE	<i>Francesca De Santis</i>	<i>Francesca De Santis</i>
Fanesi	Giorgia	Plusevice.net	<i>Giorgia Fanesi</i>	<i>Giorgia Fanesi</i>
Fanti	Maria Pia	F. de Leonis di Bari	<i>Maria Pia Fanti</i>	<i>Maria Pia Fanti</i>
Ferrari	Paolo	UNITS	<i>Paolo Ferrari</i>	<i>Paolo Ferrari</i>
Gelmini	Chiara	UNITS	<i>Chiara Gelmini</i>	<i>Chiara Gelmini</i>
Goatti	Ana	SDZ	<i>Ana Goatti</i>	<i>Ana Goatti</i>
Grdinić	Nevenka	/	/	/
Lipovac	Vanja	Airport Zadar	<i>Vanja Lipovac</i>	<i>Vanja Lipovac</i>
Locatelli	Alberto	UNITS	<i>Alberto Locatelli</i>	<i>Alberto Locatelli</i>
Marchese	Paolo	/	/	/
Mazzotti	Alberto	STJUNA NOTICIA	<i>Alberto Mazzotti</i>	<i>Alberto Mazzotti</i>
Mininel	Stefano	PORTO TRIESTE	<i>Stefano Mininel</i>	<i>Stefano Mininel</i>
Mišura	Petar	CITY OF SIBENIK	<i>Petar Mišura</i>	<i>Petar Mišura</i>
Molinaro	Andrea	STUDIO PAVOSO	<i>Andrea Molinaro</i>	<i>Andrea Molinaro</i>
Montironi	Cinzia	/	/	/



STEP-UP I Training Session Trieste, Savoia Excelsior Palace, 7 may 2019
 NEW SCENARIOS ON MULTIMODAL MOBILITY
 INFOMOBILITY FOR SUSTAINABLE PASSENGERS' FLOW BETWEEN ITALY AND CROATIA

Surname	Name	ORGANISATION	Signature for GDPR agreement	Signature
Panteca	Francesco	/	/	/
Paoletti	Antonio	/	/	/
Peloso	Fabrizio	Studio Pèso e DS	f. peloso	f. peloso
Rusich	Andrea	/	/	/
Schiff	Laura	Regio Emilia-Romagna	Laura Schiff	Laura Schiff
Simic	Gordana	Gordana Simic	G Simic	G Simic
Španja	Stipe	/	/	/
Ukovich	Walter	UMITS	Walter Ukovich	Walter Ukovich
Vasari	Daniela	PLUSERVICES	D Vasari	D Vasari



STEP-UP I Training Session Trieste, Savoia Excelsior Palace, 7 may 2019
 NEW SCENARIOS ON MULTIMODAL MOBILITY
 INFOMOBILITY FOR SUSTAINABLE PASSENGERS' FLOW BETWEEN ITALY AND CROATIA

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PINTO	MORENA	/			
LAURI	GIULIO	/			
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VENARZZO	ALICE	PROMOTURISMO FVG	alice.venarizzo@promot.fvg.it	Alice Venarizzo	Alice Venarizzo
FERANTE	ENRICO	AUTOVIE VENETE	enrico.ferante@autovie.it	E Ferante	E Ferante
GELMINI	GIORGIO	CITIZEN		G Gelmini	G Gelmini





3.2.4 Dissemination


3.2.4.1 Publication on University of Trieste official website

The screenshot shows the official website of the University of Trieste. The browser address bar displays the URL: <https://www.units.it/news/nuovi-scenari-sulla-mobilita-multimodale-0>. The website header includes the university logo and name, "UNIVERSITÀ DEGLI STUDI DI TRIESTE", and a search bar. A navigation menu at the top lists "Futuri Studenti", "Studenti", "Laureati", "Ricerca", "Impresa", and "Ateneo".

Nuovi Scenari sulla Mobilità Multimodale

Data evento: Da 07/05/2019 A 07/05/2019

CONDIVIDI    

Stampa 

Il DIA - Dipartimento di Ingegneria e Architettura dell'Università degli Studi di Trieste organizza la conferenza:

STEP-UP: NEW SCENARIOS ON MULTIMODAL MOBILITY

INFOMOBILITY FOR SUSTAINABLE PASSENGERS' FLOW BETWEEN ITALY AND CROATIA

Nuovi Scenari sulla Mobilità Multimodale.

Info-mobilità per un flusso passeggeri sostenibile tra Italia e Croazia

che si terrà il giorno **martedì 7 maggio 2019**, dalle ore 9:00 alle ore 13:00, presso il Savoia Excelsior Palace, Riva del Mandracchio 4, Trieste.

La CONFERENZA in oggetto si inserisce nel progetto STEP-UP dell'ambito INTERREG ITALIA-CROAZIA, finanziato dai Fondi Regionali Europei per lo Sviluppo, intende promuovere la conoscenza di campo del turismo, della multimodalità e dei sistemi ICT applicati ai flussi passeggeri, e portare l'attenzione sui progetti di sviluppo che coinvolgono l'area adriatica tra Italia e Croazia.

Alla conferenza, che si terrà in lingua inglese essendo questa la lingua ufficiale del progetto, seguiranno altre due sessioni di formazione su temi quali l'infomobilità e la prospettiva europea nell'ambito dei trasporti e del turismo. Le sessioni saranno gratuite e in formato webinar.

Alla conferenza, che si terrà in lingua inglese essendo questa la lingua ufficiale del progetto, seguiranno altre due sessioni di formazione su temi quali l'infomobilità e la prospettiva europea nell'ambito dei trasporti e del turismo. Le sessioni saranno gratuite e in formato webinar.

Il PROGETTO STEP-UP "Sustainable Transport E-Planner to Upgrade the IT-HR mobility" è un progetto europeo con l'obiettivo di agevolare la mobilità multimodale dei passeggeri nell'area del Programma attraverso servizi ICT e di infomobilità. L'obiettivo finale è la realizzazione di un Travel Planner, ossia una piattaforma fruibile da cittadini e turisti, che permetta di integrare servizi e modalità di trasporto tra i territori di Italia e Croazia nel rispetto della sostenibilità. Il progetto prevede sei azioni pilota (tre nell'area italiana del programma e tre in Croazia), nelle quali gli obiettivi di STEP-UP troveranno una realizzazione concreta. Lead Partner del progetto è la Regione Marche che promuove il progetto insieme a tre partner italiani e tre partner croati: la Regione Emilia Romagna, il Comune di Lecce e l'Università di Trieste, la Contea di Spalato-Dalmazia, la Città di Sebenico e l'Aeroporto di Zara.


La PARTECIPAZIONE alla conferenza è libera ma, visto il numero limitato di accessi alla sala e le esigenze organizzative, sarà possibile assistervi solo previa registrazione al seguente link: <https://step-up-new-scenarios.eventbrite.it> oppure inviando una mail a info@step-up.training entro lunedì 6 maggio.


Si può partecipare alla conferenza anche in streaming, scaricando la app GoToMeeting e collegandosi al link: <https://global.gotomeeting.com/join/275565149>

Università degli Studi di Trieste - Dipartimento di Ingegneria e Architettura

Contatti: Prof. Walter Ukovich, ukovich@units.it Dott.ssa Margherita Cipriano mcipriano@units.it Arch. Paolo Ferrari pferrari@units.it Dott.ssa Chiara Gelmini, cgelmini@units.it

Download:





3.2.4.2 Press Release I Training Session



Il DIA – Dipartimento di Ingegneria e Architettura dell'Università degli Studi di Trieste organizza la conferenza:

**STEP-UP: NEW SCENARIOS ON MULTIMODAL MOBILITY
INFOMOBILITY FOR SUSTAINABLE PASSENGERS' FLOW BETWEEN ITALY AND CROATIA**
Nuovi Scenari sulla Mobilità Multimodale.
Info-mobilità per un flusso passeggeri sostenibile tra Italia e Croazia

che si terrà il giorno **martedì 7 maggio 2019**, dalle ore 9:00 alle ore 13:00, presso il **Savoia Excelsior Palace**, Riva del Mandracchio 4, Trieste.

LA CONFERENZA in oggetto si inserisce nel progetto STEP-UP dell'ambito INTERREG ITALIA-CROAZIA, finanziato dai Fondi Regionali Europei per lo Sviluppo, intende promuovere la conoscenza di campo del turismo, della multimodalità e dei sistemi ICT applicati ai flussi passeggeri, e portare l'attenzione sui progetti di sviluppo che coinvolgono l'area adriatica tra Italia e Croazia.

Alla conferenza, che si terrà in lingua inglese essendo questa la lingua ufficiale del progetto, seguiranno altre due sessioni di formazione su temi quali l'infomobilità e la prospettiva europea nell'ambito dei trasporti e del turismo. Le sessioni saranno gratuite e in formato webinar.

IL PROGETTO STEP-UP "*Sustainable Transport E-Planner to Upgrade the IT-HR mobility*" è un progetto europeo con l'obiettivo di agevolare la mobilità multimodale dei passeggeri nell'area del Programma attraverso servizi ICT e di infomobilità. L'obiettivo finale è la realizzazione di un Travel Planner, ossia una piattaforma fruibile da cittadini e turisti, che permetta di integrare servizi e modalità di trasporto tra i territori di Italia e Croazia nel rispetto della sostenibilità. Il progetto prevede sei azioni pilota (tre nell'area italiana del programma e tre in Croazia), nelle quali gli obiettivi di STEP-UP troveranno una realizzazione concreta. Lead Partner del progetto è la Regione Marche che promuove il progetto insieme a tre partner italiani e tre partner croati: la Regione Emilia Romagna, il Comune di Lecce e l'Università di Trieste, la Contea di Spalato-Dalmazia, la Città di Sebenico e l'Aeroporto di Zara.

LA PARTECIPAZIONE alla conferenza è libera ma, visto il numero limitato di accessi alla sala e le esigenze organizzative, sarà possibile assistervi solo previa registrazione al seguente link: <https://step-up-new-scenarios.eventbrite.it> oppure inviando una mail a info@step-up.training entro lunedì 6 maggio.

Si può partecipare alla conferenza anche in streaming, scaricando la app GoToMeeting e collegandosi al link: <https://global.gotomeeting.com/join/275565149>

Università degli Studi di Trieste

Dipartimento di Ingegneria e Architettura

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3.2.4.3 Publication on Smartlogi website – German/Italian

HOME PROJEKT PROJEKTPARTNER NEWS UNTERLAGEN KONTAKT ITALIANO

NEWS

Immer auf dem SMARTLOGI Project aktualisiert werden



[View all news items](#)



DAS PROJEKT SMARTLOGI WURDE BEI DER ERSTEN "TRAINING SESSION" DES PROJEKTS "STEP-UP" VORGESTELLT

5. Mai 2019

Der Hafen von Triest hat das Projekt SMARTLOGI im Rahmen der Konferenz "STEP-UP" vorgestellt: Neue Szenarien zur multimodalen Mobilität, Info-Mobilität für nachhaltige Passagierströme zwischen Italien und Kroatien. Diese Konferenz fand in Triest am 5. Mai 2019 statt und wurde von der Fakultät für Ingenieurwesen und Architektur der Universität Triest organisiert. Die Konferenz war die erste der "training sessions", die im Rahmen des Projekts "STEP-UP" organisiert und vom Programm INTERREG Italien-Kroatien kofinanziert wurde. Das Projekt STEP-UP, "Sustainable Transport E-Planner to Upgrade the IT-HR mobility", hat zum Ziel, die multimodale Mobilität von Passagieren im Programmbereich über IKT-Dienste und Dienste der Info-Mobilität zu unterstützen. Das Ziel der Konferenz war, als "training session" für die Partner des Projektes zu fungieren und ein an den Themen in Zusammenhang mit der multimodalen Mobilität von Passagieren interessiertes Publikum zu bieten. Der Hafen von Triest wurde eingeladen, seine Erfahrungen bezüglich der Probleme der Interoperabilität zwischen heterogenen IKT-Systemen zu präsentieren, ein Problem, das im Rahmen des Projektes SMARTLOGI angegangen wurde und das sich mit anderen Aspekten auch in den Bereichen des Projektes STEP-UP wiederholt. Fast 40 Personen aus Triest und verschiedenen italienischen und kroatischen Ortschaften haben an der Konferenz teilgenommen.

HOME PROGETTO PARTNER NEWS DOCUMENTI CONTATTI DEUTSCH

[View all news items](#)



IL PROGETTO SMARTLOGI PRESENTATO ALLA PRIMA "TRAINING SESSION" DEL PROGETTO "STEP-UP"

5 maggio 2019

Il Porto di Trieste ha presentato il progetto SMARTLOGI nell'ambito della conferenza "STEP-UP: Nuovi Scenari sulla Mobilità Multimodale, Info mobilità per un flusso passeggeri sostenibile tra Italia e Croazia", tenutasi a Trieste il 5 maggio 2019 ed organizzata dal Dipartimento di Ingegneria e Architettura dell'Università degli Studi di Trieste. La conferenza era la prima delle "training sessions" organizzate nell'ambito del progetto "STEP-UP", co-finanziato dal programma INTERREG Italia-Croazia. Il progetto STEP-UP, "Sustainable Transport E-Planner to Upgrade the IT-HR mobility" ha l'obiettivo di agevolare la mobilità multimodale dei passeggeri nell'area del Programma, attraverso servizi ICT e di info mobilità. L'obiettivo della conferenza era di fungere da "training session" per i partner di progetto ed una platea interessata, su argomenti legati alla mobilità multimodale dei passeggeri. Il Porto di Trieste è stato invitato a presentare le sue esperienze correlate alla problematiche della interoperabilità tra sistemi ICT eterogenei, problema affrontato nell'ambito del progetto SMARTLOGI e che si ripropone, con aspetti diversi, anche negli ambiti del progetto STEP-UP. Quasi 40 persone provenienti, oltre che da Trieste, da varie località italiane e Croate hanno partecipato alla conferenza.

3.2.4.4 Article from Il Piccolo (05/05/2019)

14 ATTUALITÀ

Friuli Venezia Giulia

Una piattaforma online per viaggiare “sostenibile”

Lo strumento consentirà di organizzare al meglio gli spostamenti fra Italia e Croazia, dai ticket alle bici a noleggio. L'Università di Trieste nel progetto europeo

Lilli Goriup

TRIESTE. L'Università di Trieste è tra i protagonisti della cooperazione transfrontaliera tra Italia e Croazia per l'implementazione della mobilità sostenibile nel rispetto dell'ambiente. Nell'ambito del progetto europeo Step-up l'ateneo sta infatti lavorando alla realizzazione di una piattaforma online - a disposizione di cittadini e turisti da fine estate - finalizzata all'integrazione dei servizi di trasporto tra i due Stati affacciati sull'Adriatico. Di questi e altri temi si parlerà martedì, durante la conferenza "Nuovi scenari sulla mobilità multimodale. Info-mobilità per un flusso passeggeri sostenibile tra Italia e Croazia", organizzata dal Dipartimento di Ingegneria e Architettura dell'Univ.

Il seminario intende pro-



Mobilità sostenibile, Unifs fra i partner del progetto

muovere la conoscenza di campo del turismo, della multimodalità e dei sistemi Ict applicati ai flussi passeggeri, ponendo l'attenzione sui progetti di sviluppo che coinvolgono appunto l'area adriatica compresa tra gli Stati di Roma e di Zagabria. L'iniziativa si inserisce nel più ampio contesto del pro-

Martedì conferenza con esperti e studiosi di vari Paesi

getto "Sustainable transport e-planner to upgrade the I-Hr mobility", abbreviato appunto in Step-up. Si tratta di un progetto europeo dell'ambito interreg Italia-Croazia, che mira ad agevolare la mobilità multimodale dei passeggeri nell'area pressa in considerazione.

Ciò avverrà attraverso servizi Ict e di info-mobilità.

L'obiettivo finale è la realizzazione di un Travel planner, ossia una piattaforma web messa a disposizione di cittadini e turisti, che permetta di integrare servizi e modalità di trasporto tra i territori dei due Paesi, nel rispetto della sostenibilità. Spiega il professor Walter Ukovich, del Dipartimento di Ingegneria e Architettura: «In altre parole, sivogliono mettere a disposizione del pubblico elementi utili al fine di organizzare i propri spostamenti. Si pensi all'esempio del turista che, uscito dalla porta di casa, prende un taxi per la stazione. Una volta giunto a destinazione salirà a bordo di un traghetto; quando si troverà sull'altra sponda dell'Adriatico, viaggerà su un pullman oppure di una bicicletta a noleggio, per esplorare i dintorni. La piattaforma, che sarà operativa da settembre, servirà a coordinare gli orari, verificare la possibilità di acquistare biglietti online o in forma di pacchetti turistici multiple e coltiva».

All'appuntamento di martedì (dalle 9 all'hotel Savoia) interverranno studiosi ed esperti di vari Paesi. La partecipazione alla conferenza, che si terrà in inglese come lingua ufficiale del progetto, è gratuita registrandosi entro domani (step-up-new-scenarios, eventbrite.it) oppure scrivendo a in-

fo@step-up.training). Si potrà anche partecipare in streaming. La giornata è la prima di tre occasioni formative, tutte aperte al pubblico. L'Università di Trieste è uno dei tre partner italiani con la Regione Emilia Romagna e il Comune di Lecce; quelli croati sono Contea di Spalato-Dalmazia, Città di Sebenico e Aeroporto di Zadra. Capofila la Regione Marche. —

SULLA RETE

Rifiuti in A1 un conto salato per Autovie

Sono circa 300 le tonnellate di rifiuti urbani non differenziati ogni anno conferiti (o abbandonati) dagli utenti sull'autostrada gestita da Autovie Venete: sull'intera rete il dato è pari a una tonnellata di scarti raccolti l'anno per ogni km di autostrada. Rifiuti lasciati in cestini o gettati da veicoli in transito abbandonati. La raccolta rifiuti abbandonati peserà su Autovie 800 mila euro nel triennio 2019-2021, più 200 mila per la raccolta lungo le scarpate. Autovie incrementerà in estate i giri di raccolta. —

3.3 I Training Session: Questionnaire

During the preparation of the first training session a questionnaire previously designed has been distributed to the audience. The questionnaire was printed on paper and was distributed at the registration desk to those present to the conference room and collected at the end of the conference or at their departure. In this way the participants could quickly view the questions and formulate a response idea following the conference.

The results obtained from the first training session questionnaire gave a useful feedback in regards of the organization of the next sessions.

Follows the list of questions proposed to the audience of the First Training Session. For each question the audience was asked to express a preference according to the given assessment grid.

After the list of the proposed questions follows the answers given by the conference participants. Note that each question is marked with a bulleted number. while consulting the answers, refer to it.

		Assessment grid				
		Not at all	Not quite	Neutral	Much	Very much
1	TOPICS					
1.1	The topics were relevant to me					
1.2	I was familiar with the proposed topics					
1.3	The topics offered a good overview on issues related to Passengers' flow					
2	SPEECHES					
2.1	The material used for the presentations was coherent and clear					
2.2	I would find it useful to have the presentations material available for future consultation					
2.3	The presentations were coherent with the title and the topic					
2.4	The presentations met my expectations					
3	CONFERENCE					
3.1	The conference contributed to deepen my knowledge on the topics:					
3.1.1	Multimodality					
3.1.2	European projects on mobility					
3.1.3	New scenaries on mobility (Maas, Electro-mobility...)					
3.1.4	Info-mobility					
3.1.5	Sustainable Tourism					
3.1.6	ICT Tools for Tourism					
3.1.7	E-Planning Platforms					
3.1.8	Other					
3.2	I think these topics should be more disseminated					
3.3	After the conference my knowledge on the covered topics has improved					
3.4	I am involved in these topics (e.g. in daily life/at work)					
3.5	The conference has been well organised					
General assessments:						
4.1	Which topic was of major interest?					
4.2	Which elements of the presentations could be enhanced? (e.g. the quality of presentations, technical aspects, ...)					
4.3	Which topics would you like to be deepened further in the next Training Sessions?					

		1					2					3					4				
		University of Trieste					University of Trieste					Stakeholder					STEP-UP PP				
1	TOPIC	Not at all	Not quite	Neutral	Much	Very much	Not at all	Not quite	Neutral	Much	Very much	Not at all	Not quite	Neutral	Much	Very much	Not at all	Not quite	Neutral	Much	Very much
	1.1					x				x					x						x
	1.2					x				x				x							x
	1.3					x				x				x							x
2	SPEECHES																				
	2.1					x									x						x
	2.2					x									x				x		
	2.3					x									x						x
	2.4					x									x						x
3	CONFERENCE																				
	3.1																				
	3.1.1				x															x	
	3.1.2					x														x	
	3.1.3				x																x
	3.1.4				x										x					x	
	3.1.5					x									x						x
	3.1.6				x										x						x
	3.1.7		x																	x	
	3.1.8																			x	
	3.2					x														x	
	3.3					x														x	
	3.4				x										x						x
	3.5					x									x						x

		5					6					7					8				
		STEP-UP PP					Local Authority					Region Consultant									
1	TOPIC	Not at all	Not quite	Neutral	Much	Very much	Not at all	Not quite	Neutral	Much	Very much	Not at all	Not quite	Neutral	Much	Very much	Not at all	Not quite	Neutral	Much	Very much
	1.1					x				x					x						x
	1.2					x				x				x						x	
	1.3				x					x				x							
2	SPEECHES																				
	2.1					x				x					x						x
	2.2				x					x					x			x			
	2.3				x					x					x						x
	2.4					x				x					x						x
3	CONFERENCE																				
	3.1																				
	3.1.1					x				x					x						x
	3.1.2				x					x					x						x
	3.1.3					x				x					x						x
	3.1.4					x				x					x					x	
	3.1.5				x					x					x					x	
	3.1.6				x					x					x					x	
	3.1.7				x					x					x						x
	3.1.8				x					x					x						x
	3.2									x					x						x
	3.3					x				x					x				x		
	3.4				x					x					x						x
	3.5					x				x					x						x

		17					18					19					20				
		Technical Support					citizen					STEP UP PP Technical Assistance					STEP-UP PP				
1	TOPIC	Not at all	Not quite	Neutral	Much	Very much	Not at all	Not quite	Neutral	Much	Very much	Not at all	Not quite	Neutral	Much	Very much	Not at all	Not quite	Neutral	Much	Very much
	1.1				x				x						x			x			
	1.2			x	x				x					x					x		
	1.3			x						x					x					x	
2 SPEECHES																					
	2.1					x					x				x						x
	2.2					x				x					x						x
	2.3					x					x				x						x
	2.4				x						x				x				x		
3 CONFERENCE																					
	3.1																				
	3.1.1			x						x					x						x
	3.1.2		x							x					x						x
	3.1.3				x					x					x				x		
	3.1.4			x						x					x				x		
	3.1.5				x					x					x				x		
	3.1.6			x						x					x						x
	3.1.7				x					x					x				x		
	3.1.8									x					x						x
	3.2					x					x				x						x
	3.3				x						x				x					x	
	3.4					x			x							x				x	
	3.5					x				x						x					x

		21					22					23					24				
		STEP-UP PP										Local Authority					Sviluppatore software				
1	TOPIC	Not at all	Not quite	Neutral	Much	Very much	Not at all	Not quite	Neutral	Much	Very much	Not at all	Not quite	Neutral	Much	Very much	Not at all	Not quite	Neutral	Much	Very much
	1.1		x								x										x
	1.2			x					x						x						x
	1.3				x										x						x
2 SPEECHES																					
	2.1				x					x					x						x
	2.2			x						x					x						x
	2.3				x				x						x						x
	2.4			x						x					x						x
3 CONFERENCE																					
	3.1																				
	3.1.1				x					x					x						x
	3.1.2				x					x					x				x		
	3.1.3			x						x					x				x		
	3.1.4			x					x						x						x
	3.1.5		x						x					x					x		
	3.1.6		x						x					x					x		
	3.1.7			x					x					x					x		
	3.1.8								x					x							x
	3.2				x					x					x						x
	3.3			x						x					x						x
	3.4		x							x					x						x
	3.5					x				x					x						x

The feedback received for section 4. **General assessment** follows:

4.1 Which topic was of major interest?

All Topics
E-mobility and new idea of passenger mobility
E-Planning Platform, MaaS, E-Mobility
E-Planning platforms/multimodality
MaaS
Maritime Transport --> Massimiliano Angelotti e Sara Carciotti presentation
MOSESS
multimodality (2 items)
multimodality info-mobility
sustainable tourism (4 items)
Tourism and Maas

4.2 Which elements of the presentations could be enhanced? (e.g. the quality of presentations, technical aspects, ...)

maybe a small section on questions and answers could have been useful to involve the audience
more examples from real life, less legislatives and overviews
none
quality of presentations, speakers, duration of presentation should be shorter
technical aspects (2 items)
The possibility to have a notebook with presentation close to the speaker (thus the speaker can well read the slide and the next one
The presentations were very high quality
well interconnected and with common topics

4.3 Which topics would you like to be deepened further in the next Training Sessions?

alternative in transport to decrease CO2
complementary and synergic aspects should be stressed more
E-mobility, car sharing
e-mobility, EU projects, Maas, New activities in the field of mobility from Pas perspective
European Project on mobility and sustainable tourism
info-mobility
multimodality and info-mobility
multimodality E-planning platforms
services for passengers at transport nodes
Sustainable /green/eco tourism
trends in info mobility, acceptance of by the public

4. Realization of the II Training Session (Report)

4.1 Preparation activities for the realization of the II Training Session

4.1.1 II Training Session: Identification of the Audience

To **identify audience** and **organize** the training session the most adequately, a preliminary analysis was performed. For the second training session **project partners, local authorities** and **all the interested parties** could attend the remote conference. Dissemination has been made via invitation through electronic channels, e-mail, social channels and online bulletin boards. The I Training Session was designed to set the grounding knowledge on STEP-UP topics, so the vision offered was broad and general. Whereas, the II Training Session was designed to get deeper in some topics and to touch more technical and specific aspects in addition to the general and introductory ones. The target audience was consequently mainly composed by Project Partners, their external experts and other professionals in the fields related to STEP-UP topics. All the attendees to the webinar should own at least basic knowledge on some offered topics.

Description of the different actors involved in the II Training Session:

v. **Project Partners**

Each partner has expertise on specific topics, thanks to their institutional field of action, the support of their Technical Assistance and the know-how gained through previous projects.

The partnership was asked to communicate some areas of expertise they own and they were asked to contribute with a representative as speaker in at least one of the Training Sessions.

The partners were asked to stress the areas where they wanted to improve their knowledge. They mostly were interested in all the topics we suggested.

vi. **Stakeholders**

We invited some stakeholders to the training sessions and involved some of them as speakers (e.g. Port Authority of Trieste). Obviously, the stakeholders are active in the transportation or mobility field, so they already own some know-how. Although their knowledge might be positively task driven, they may lack some ground basis or some more technically specific knowledge. Addressing to stakeholders is therefore particularly tricky, since there must be a balance between concrete facts and accuracy. Topics must be captivating and useful for their daily work.

In particular, we involved as Target Groups:

- Target Group 8: Education and training organizations as well as universities and research institutes

A university is partner in the project and will provide training sessions, also broadcasted as live streaming, that will be attended by both project partners and all stakeholders interested on multimodal topics. Following those sessions, any other education or training organizations as well as other universities or research institutes, could replace similar initiatives, obviously with a previous agreement with the first university concerning the use of training materials.

- Target Group 2: Local, regional and national public authorities

Local, regional and national authorities, within IT-HR Programme Area, have to be considered fundamental because they represent the most important figures able both to increase the awareness about ecofriendly transportation and sustainable tourism among different subjects (potential suppliers and potential service providers) and to promote their effective realization, through the definition of useful policy initiatives and operational activities. They are amply represented in the partnership.

- Target Group 3: Regional development agencies.

Regional development agencies, as operative branches of Regional authorities, are in charge of implementing theoretical regional policies, into actual actions. For example, Regions and local authorities draws up specific Regional/Urban Mobility Plans and foresees detailed guidelines which include the increase of multimodal transport, but the risk that those indications could remain not applied is tangible if regional agencies do not take care of those guidelines.

- Target Group 5: Transport associations

Target group Transport Associations Description: Transport associations can have a primary role promoting and incentivizing the diffusion of multimodal transport systems among their participants, but often, that associations do not know enough about multimodal themes and their benefits. So, they will be addressed in particular during WP5 implementation. They will be encouraged to participate in training activities in order to improve knowledge and data analysis on multimodal transport sector.

4.1.2 II Training Session: Modality of the session

The II Training Session was designed to offer a more specific contribution and the selected target was therefore selected among partners and stakeholders already sharing interest and a basic knowledge on the offered topics.

This specific topics and the restricted audience selection made us propend for the Webinar format for practicality and also sustainability reasons.

All the speakers have been previously contacted and the topics, materials and modalities discussed with the organizers. Some presentations have been recorded by UNITS at a time agreed with the speaker using an appropriate software (the GoToMeeting software was previously selected and had already been used for the I Training Session) or have been recorded by each speaker following the instructions given by UNITS.



All the presentations have been edited to give an overall format coherence.

The recording of the presentations has been then transmitted via GoToMeeting at a selected date, after sending invitations.

The live streaming, coordinated by UNITS, lasted about 2 hours. All interested parties could connect for up to 150 people, which is the capacity of GoToMeeting.

The proposed dates for the direct streaming have been decided by investigating in lecturer possibilities, to have the desirable participation of all the speakers involved, in order to respond to questions and requests for clarification from viewers in real time. Anyone interested was given the opportunity to ask questions directly to the speaker during the conference through the chat available in the software.

4.1.3 II Training Session: Identification of the Topics

For the second training session the macro-topics already identified for the first were proposed again (follow in small at the end of the paragraph) and other topics of interest were outlined as emerged from the feedback received from the audience through the compilation of the questionnaires.

As done for the selection and definition of topics in the first session, to better tailor the training sessions on the overall needs the list was shared with all PP, to give them the possibility to provide comments on the topics, or suggest new ones,

Submission of the list to the Project Partners was also useful to **analyse their internal expertise**, possibly to be shared with the other partners during the Training Sessions, to **analyse their needs**, the areas where their knowledge or level of expertise needed to be improved through Training Sessions.

Follows the message sent to the partners to invite them to participate actively with suggestions and requests to enrich the panorama of knowledge on the issues pertaining to the STEP-UP project.

“

Dear partners,

This e-mail to inform you about the next steps of the Training Sessions activity.

The second Training Session is planned approximatively for the end of june, the third for the end of july. We will make public the dates as soon as we have defined them.

For the next two Training Sessions, we are going to record speakers separately (materials and presentations in English, about 20-30 minutes). Then we will assemble the presentations in two sessions, which will be broadcasted to you and other stakeholders (we will ask your support for the widest dissemination of the links). Speakers will be asked to join the session broadcasting in order to answer to eventual questions from the audience.

Speakers will be able to record their presentation with our technical support from their offices or any other place of preference, there will be no need to book travels. Presentations should include some materials (e.g. slides, pdf, suggested bibliography...) to be kept together with the presentation recording in the repository. If any partner should be willing to make a presentation, you find in attachment the first topics guideline and the topic suggestions that we collected through questionnaires after the first training session.

We are at your disposal to discuss about the topics you would like to deepen, the date suitable for the recording and any other technical request. Please mind that also the partners who already contributed are very welcome to give another presentation, since some topics could very easily have a "sequel", as we already discussed with some partners during the preparation phase of the first TS.

If you wish to discuss about an intervention, or should there be any other clarification needed, do not hesitate to write us.

”

The list of topics of interest that emerged from the questionnaires is the following:

Topics for the Second and Third Training Session – Suggestions through Questionnaires.

- Sustainable/green/eco-tourism
- Trends in info mobility, acceptance of by the public
- Multimodality E-planning platforms
- Info-mobility
- European Project on mobility and sustainable tourism
- Services for passengers at transport nodes
- Complementariets and synergies should be stressed more
- e-Mobility, EU projects, Maas, New activities in the field of mobility from Pas perspective
- Alternative in transport to decrease CO2
- E-mobility, car sharing

The preliminary list of topics already proposed for the First Training Session:

STEP-UP List Of Topics	2 European Projects concerning Mobility and Tourism
<p>1. Multimodality, Intermodality, Co-modality. Intermodal, multimodal public transport</p> <p>To look up to Multimodality is a necessary step to improve the quality, safety and environmental sustainability of marine and coastal transport services and nodes. This topic includes an introduction and an overview on mobility new perspectives e.g. Maas Mobility as a Service.</p> <p>1.1 Quality, safety and environmental sustainability</p> <ul style="list-style-type: none"> - Impact of the transport sector on the energy consumption and on climate change. Improve air quality and to promote good practices to significantly reduce pollution and to promote intermodality, in order to foster the use of different means of transport. - Public transport with low carbon dioxide emission. <p>1.2 Marine and coastal transport services and nodes</p> <ul style="list-style-type: none"> - Innovative and alternative ways to optimize the carriage of persons and goods specially in our touristic coastal area. - Presence of islands and rural areas, make also integrate connections necessary with focus on inland connections to the coast <p>1.3 New perspectives e.g. Maas Mobility as a Service</p> <p>1.4 Connecting urban/suburban rail/road</p> <ul style="list-style-type: none"> - Seamless solution: using all transport modes (train, ferry, public transport, flexible transportation – Demand Responsive Transport, etc.) <p>1.5 Intermodal mobility</p> <ul style="list-style-type: none"> - A resource for tourism development and encourage joint actions of the cross sector international partnerships aimed at developing new solutions for sustainable environmental development and intermodal transport <p>1.6 Tourism development prediction</p> <p>Analysis of the last years' trends and near future trends forecast.</p>	<p>An overview on European funded projects on Mobility and Tourism. European new perspective, trends and goals on multimodality, sustainability, e-mobility, enhancing waterways and making road flows lighter.</p> <p>2.1 Intermodal in European strategies 2030 and 2050</p> <p>2.2 Mentioned EU Project:</p> <ul style="list-style-type: none"> ▪ 4PILLARS ▪ TISAR ▪ EASEWAY ▪ ECOMOBILITY ▪ MOSES ▪ ... <p>3 Touristic routes and connections between Italy and Croatia. Passengers transport and innovative systems. History, data, overview.</p> <p>This topic aims to deepen the knowledge on the Programme Area, to understand the already existing connections and traffic flow between the two Countries involved in the project. An in-depth analysis on geographical, economical and historical features of tourism and passengers' flow in the Adriatic area. This overview will underline the importance of tourism for social and economic development.</p> <p>The overview can include in a multidisciplinary approach a variety of aspects such as:</p> <ul style="list-style-type: none"> - Urbanization, economic and entrepreneurial development, utilities, social welfare, education, traffic. <p>4 Data standardisation and harmonisation in the transportation field.</p> <p>In a multimodal travel planning platform, many travel aggregators receive property descriptions and availability data from different transport service providers. Each data provider may have its own data schema and structure that must be standardized before it can be used. This topic wants to propose an overview on the main requirements and characteristics of data storing and standardisation. Furthermore, an excursus on specific standards will be given: Standard GTFS (General Transit Feed Specification), SIRI (European Standard for real-time information), DATEX II, and other standards connected to Maas.</p> <p>The lesson aims to:</p>

- Better understand the data standardization as a data processing workflow that converts the structure of disparate datasets into a Common Data Format. Data Standardization can also be thought of as the transformation rules engine in Data Exchange operations.
- Better understand how data standardization enables the data consumer to analyse and use data in a consistent manner. Standardizing data helps you make the source data internally consistent; that is, each data type has the same kind of content and format.
- Give the fundamental knowledge towards the creation of a common communication protocol between different systems (ICT platforms) and services.
- Collect data in INTERMODAL projects.
- Work on a system based on standard protocols for different objective and scenarios managed: tourists' and travellers' needs including those for existing citizens.

5 Big-data for transportation and tourism.

Data fusion

Big data refers to data sets that are too large or complex for traditional data-processing application software to adequately deal with. The topic proposes an overview:

- on Big Data concept;
- on the potential of Big Data applied to transportation and tourism;
- on Big Data characteristics (Volume, Variety, Velocity, Veracity);
- on Big Data Architecture. "5C architecture" (connection, conversion, cyber, cognition, and configuration);
- on the concept of Big Data applied to transportation and tourism. An overview on Big Data.

5.1 Collecting, sharing and managing transport data

5.2 Algorithms for the optimization of multimodal transport

The lesson aims to:

- Better understand the algorithms for the optimization of multimodal transport, and on collecting, sharing and managing transport data

6 ICT Platforms for touristic purpose.

This topic presents an overview on ICT Platforms for touristic purpose. Focusing on:

6.1 ICT Platforms for touristic purpose. State of the art on existing platforms.

- Example of existing platform (e.g. Transport for London).
- Local ICT platform.

6.2 High level platform design.

6.3 APPs and info-mobility data for tourism

6.4 Weather data integrated to ICT Platforms

The lesson aims to:

- Evidence the main requirements and possibilities, such as database creation with useful and relevant mobility data including the real-time information thanks the integration with AVM system.
- Design and developing of added modules such as booking & ticketing to offer a complete solution according to a global vision.
- Develop high quality level of services, improve the ITS level at Regional level, make the current services more reliable and attractive.
- transfer the ICT/ITS applications also during low season in other scenarios (e.g. info-mobility system)
- Permits both citizens and tourists, will be able to have benefits in terms of a better travel planning (more sustainable and with less time spent finding best solutions or purchasing tickets thanks to the ICT channel)

7 ETA

Estimated Time of Arrival, requirements and how to integrate this added module to the platform.

8 Unified ticket, dynamics and governance. E-Ticketing.

This topic presents an overview on:

8.1 Unified ticket as added module fundamental to increase platform efficiency and impact.

8.2 Main requirements and strategies. Examples of virtuous existing

8.3 e-roaming?

Tourist information useful for an extended mobility services such as e-roaming that enables additional visibility and promotion of multimodal transportation across inland (network of electric vehicles and electric bicycles)

9 E-mobility, E-cars.

This topic presents an overview on E-mobility, E-cars, Multimodality integrated with E-Mobility.

9.1 Eco -Mobility

This aspect, the involvement of the Project Partners, was particularly important to enhance the effectiveness of the Training Sessions.

4.1.4 II Training Session: Identification of the Teachers and Experts

For the second training session, were searched and selected speakers who could offer a more technical overview of the topics of the STEP-UP project.

For each seminarian invited to intervene as an expert, the curriculum information of each speaker and the contents of the proposed topic are indicated below. A brief description of his actual professional role is indicated (if they are Project Partner also is specified) and brief biography fulfills the desire to understand in a few lines the professional position and the training path of each speaker and how king of competence can conduce a person to be defined as expert in determined arguments.

A brief introduction follows to each selected speaker with a short biography highlighted on them in gray:

The lectured **Daniela Vasari** is invited to deepening the topic related to MaaS, she is really expert in this topic that collected clear interest from the audience present at the first training session.

Daniela Vasari

Project manager, solution designer in ITS projects and International cooperation, Pluservice, Technical Assistance of Marche Region (STEP-UP project Lead Partner)

Daniela Vasari graduated in Computer Engineering, in March 2009. She works in PluService since 2009 as Solution Designer for ITS in Passenger Transportation and since 2014 as Senior Project Manager. She is involved in EU-International-National projects on topics such as Demand Responsive Transport, Multi-modal Traveller Information Systems, Automatic Vehicle Monitoring systems. She is the Project Manager of several European funded projects.

Giorgia Fanesi is invited to participate at the second training session making available, especially to all Project Partners, but at the same time to all the interested technical notions related to the applications developed for the STEP-UP project.

Giorgia Fanesi

Software analyst and project manager, Pluservice, Technical Assistance of Marche Region (STEP-UP project Lead Partner)

After her Master Degree in industrial engineering at the University of Bologna and an internship at IRU, Giorgia Fanesi has worked on ICT projects for PluService s.r.l. and is currently Software Analyst and Project Manager at myCicero.

To extend the potentiality of an ICT platform and share the experience of Trieste we chose **Valentina Boschian** to introduce the STEP-UP partnership to the internal ICT and data structure used by the Port Network Authority of the Eastern Adriatic Sea.

Valentina Boschian

Dott. Ing, Ph.D.

Port Network Authority of the Eastern Adriatic Sea – Port of Trieste, Digital Port Area

Dott. Ing. Valentina Boschian, Ph.D., works at the Port Network Authority of the Eastern Adriatic Sea – Port of Trieste, in the Digital Port Area. Since 2008, her expertise is focused on consultancy activities related to the analysis of ICT impact on new business cases, mainly in the field of transport and logistics. After obtaining a degree in Management Engineering and a PhD in Computer Science Engineering, she worked as a project manager in several international research projects. She is also expert in business model innovation.

Main skills: Analysis and modelling of processes; Assessment analysis (based on KPIs definition); Management of complex systems with analytical models; Analysis of business scenarios, Use Case identification and User Requirement definition; Project management, ICT applications in logistics and transportation management.

Education

- *Dottorato (Ph.D.) in Information Technology Engineering, University of Trieste (2012)*
- *Degree in Management Engineering and Integrated Logistics (graduation with first class honours, "110/110 e lode"), University of Trieste (2008)*
- *Degree in Management Engineering (graduation with first class honours, "110/110 e lode"), University of Trieste (2003).*

To enlarge the knowledge related to electric vehicles, a topic of interest, as emerged from the first Project Partners meetings and Steering committee meetings, we invited the expert professor **Romeo Danielis** to provide a technical and economical overview of the variety, potential and limits of the electric lanes

Romeo Danielis

professor of Economics at the University of Trieste.

Romeo Danielis is full professor of Economics at the University of Trieste. He teaches Industrial Economics, Transport Economics and Logistics, and Market and Business Economics.

The last speaker involved in this second training session, aimed primarily at satisfying the needs of the project partners, is **Andrea Molinaro**. He is the expert representative involved in the proposal of the business model that is best suited to the STEP-UP project. During this session he is invited to present the basics of his work and the fundamentals necessary for the well definition of an adequate business model.

Andrea Molinaro

Consultant at Studio Peloso & Associati - expert in design thinking, business organization and subsidized finance

4.1.5 II Training Session: Presented Topics

The final topics were chosen in collaboration with the lecturers invited to participate in the first training session. Below is the summary list of the selected titles and again to follow the presentations offered during the conference.

1. **The role of Mobility as a Service**
2. **The economics of electric vehicles**
3. **ICT tool in use at the Port of Trieste: The Port Community System Sinfomar**
4. **How to use GTFS**
5. **MaaS Business Models**

4.1.5.1 The role of Mobility as a Service [Daniela Vasari]

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The role of Mobility as a Service

Pluservice srl
II Training Session | 28th June 2019

European Regional Development Fund

Slide 1/13

Outline

I° Training Session	II° Training Session
What is MaaS?	What is MaaS?
Why MaaS?	Netflix's business model?
Benefits	Mobility through the ages
Added value of MaaS	MaaS from the users' perspective
Typology of MaaS	MaaS - Over the Top Layer
	MaaS API

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Slide 2/13

What is MaaS?



Mobility as a Service (MaaS) is the integration of various forms of transport services into a single mobility service accessible on demand. To meet a customer's request, a MaaS operator facilitates a diverse menu of transport options, be they public transport, ride-, car- or bike-sharing, taxi or car rental/lease, or a combination thereof. For the user, MaaS can offer added value through use of a **single application to provide access to mobility**, with a single payment channel instead of multiple ticketing and payment operations. For its users, MaaS should be the **best value proposition**, by helping them meet their mobility needs and solve the inconvenient parts of individual journeys as well as the entire system of mobility services.

The aim of MaaS is to provide an **alternative to the use of the private car** that may be as convenient, more sustainable, help to reduce congestion and constraints in transport capacity, and can be even cheaper.



Netflix's business model

If Netflix's business model were applied to urban transportation, how might that change the way city dwellers get around?



Mobility through the ages

Streaming services like Netflix have fundamentally changed the way people search for, consume, and pay for media. Transportation now stands on a similar frontier.

At its core, MaaS relies on a **digital platform that integrates end-to-end trip planning, booking, electronic ticketing, and payment services** across all modes of transportation, public or private. It's a marked departure from where most cities are today, and from how mobility has been delivered until now.

Rather than having to locate, book, and pay for each mode of transportation separately, MaaS platforms let users plan and **book door-to-door trips using a single app**. By answering the question of how best to get individual users where they're going based on real-time conditions throughout the network, taking account of all the possible options and each user's own preferences (for example, time and convenience vs. cost), and facilitating seamless mobile payment, **MaaS starts to move us toward a more user-centered mobility paradigm**.

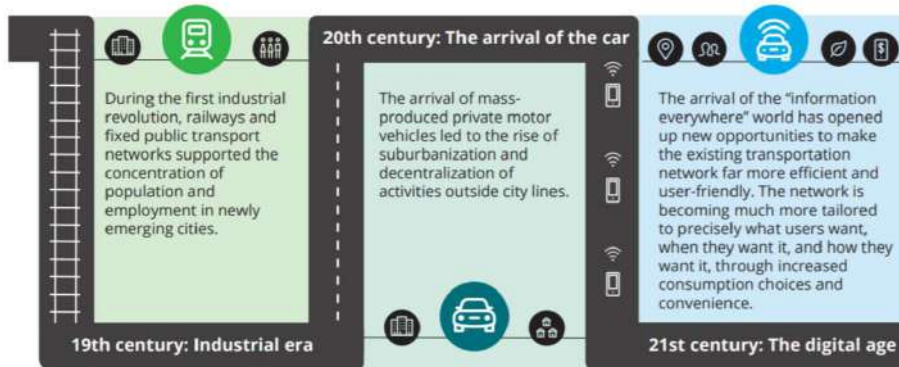
SOURCE: Deloitte analysis – Deloitte University Press



5

Slide 5/13

Mobility through the ages



SOURCE: Deloitte analysis – Deloitte University Press



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Slide 6/13

MaaS: a new concept

MaaS is a new concept in the transport sector; it provides a new way of thinking in terms of how the delivery and consumption of transport is managed:

Integrated and seamless mobility services offered to a client by a public or private mobility aggregators

MaaS is based on disruptive digital business services and models

MaaS is generally based on subscription business model, but could accept micro-transaction



MaaS could be seen as an Over The Top service

Copyright © William El Kam 2016

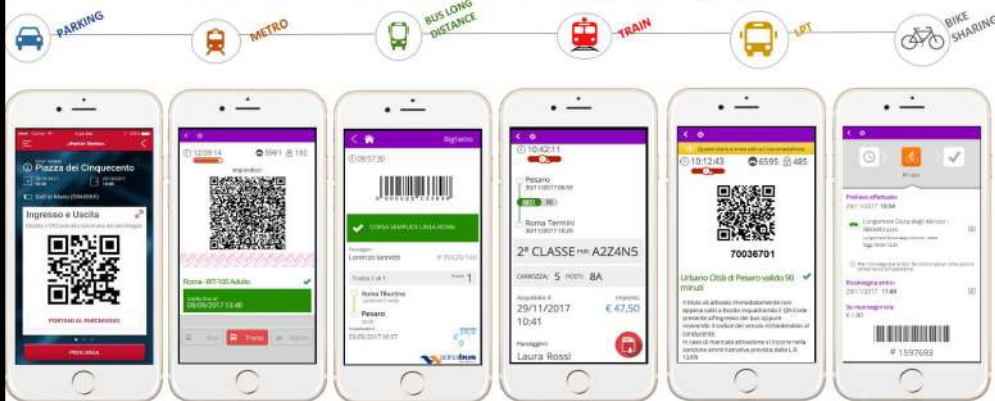


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Slide 7/13

MaaS - Over the Top Layer



Jumping in (8:00) and out of a metro, bus (8:15), and bike-sharing (booked at 9:00)
and pay the right amount or the best fare calculated.



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Slide 8/13

MaaS from the users' perspective

MaaS offers an attractive value proposition by providing a better customer experience in terms of:

Journey Planning: real-time journey planning allows a user to plan his journey, choosing from multiple modes that are «intelligently» suggested based on his personal preferences (like for example, cost, comfort, time)

Ease of Transaction: the user can access mobility using a range of payment channels for example a phone, watch, smartcard or bank card regardless of which modes of transport he use

Flexible Payment terms: the users can pay for their mobility choice via pre-pay, post-pay or pay-as-you-go

User Experience: data analytics will enhance the overall user experience. This feature may be seen as a virtual «concierge service» that provides the user with the best possible whole journey experience by managing the choices they make

Personalized Service: a fully personalized service that builds a relationship between the user and the MaaS provider by allowing two-way communication. The MaaS 'service' will be highly customer relevant and focused and will react to user feedback

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Slide 9/13

MaaS API

An important factor in making MaaS a success will be getting all of the players to work together, especially the Transport Service Provider point of view .



How MaaS interacts with Transport Service Provider?

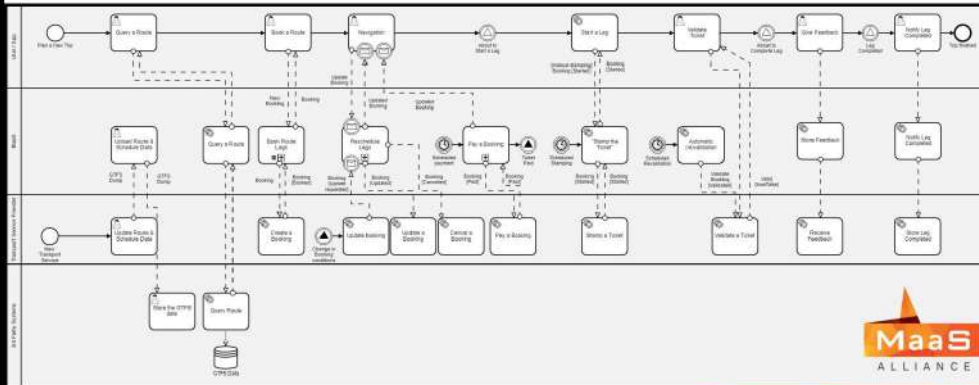


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Slide 10/13

Life-cycle of an individual trip from a TSP point of view



Documentations and Links

- <https://maas-alliance.eu/>
- <https://maas.guide/>
- https://en.wikipedia.org/wiki/Mobility_as_a_service
- <https://www2.deloitte.com/content/dam/Deloitte/nl/Documents/consumer-business/deloitte-nl-cb-the-rise-of-mobility-as-a-service.pdf>
- <https://github.com/maasglobal/maas-tsp-api/blob/master/specs/Booking.md>
- <https://www.slideshare.net/welkaim/mobility-as-a-service-maas>

Thank you for your attention!

Daniela Vasari

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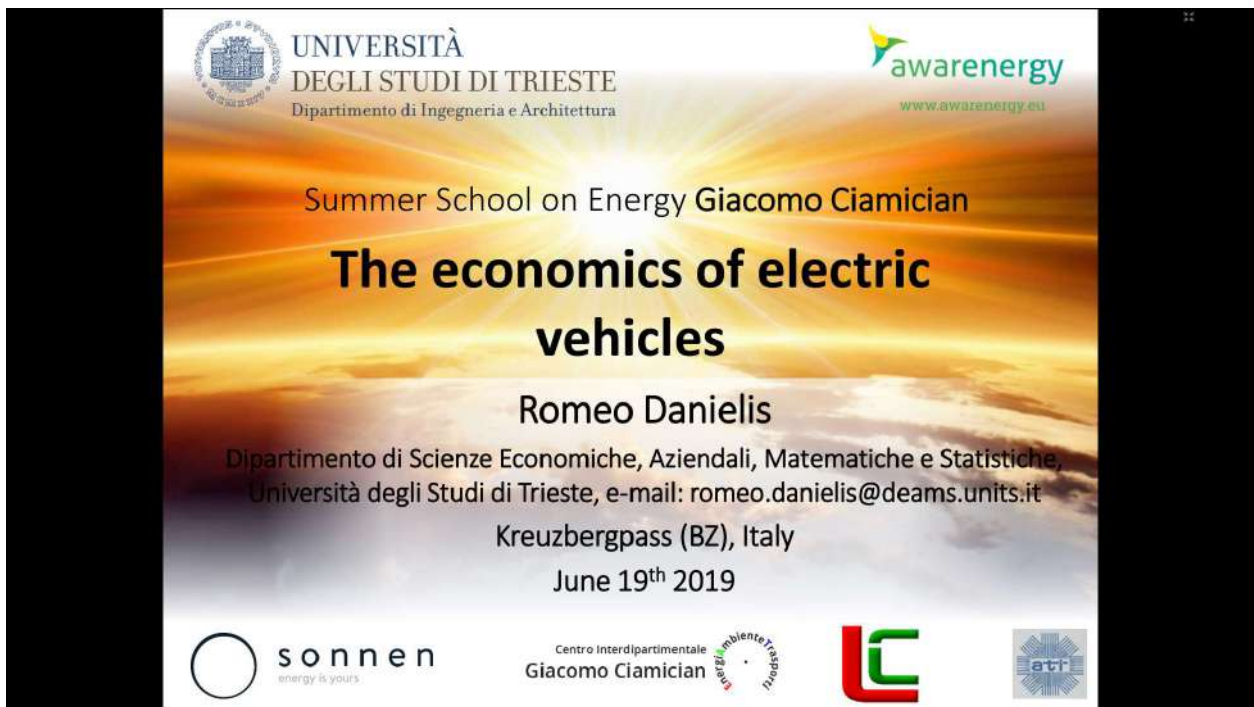
Slide 13/13

4.1.5.2 The economics of electric vehicles [Romeo Danielis]



The slide features a blue and white design. At the top left, it displays the 'Interreg Italy - Croatia STEP-UP' logo alongside the European Union flag. The main title 'STEP-UP' is centered in a large blue shape, with the subtitle 'Sustainable Transport E-Planner to Upgrade the IT-HR mobility' below it. A graphic of a battery is positioned to the left of the subtitle. The text 'STEP-UP II TRAINING SESSION' is located in the lower-left quadrant. At the bottom, there is a row of logos for various partners, including the European Regional Development Fund, Regione Marche, and others. The website 'www.italy-croatia.eu/stepup' is listed in the bottom right. A small number '1' is in the bottom right corner.

Slide 1/58



The slide has a background of a sunset over a body of water. At the top left is the logo of 'UNIVERSITÀ DEGLI STUDI DI TRIESTE Dipartimento di Ingegneria e Architettura'. At the top right is the 'awareenergy' logo with the website 'www.awareenergy.eu'. The main title 'The economics of electric vehicles' is centered in large, bold black font. Below it, the name 'Romeo Danielis' is centered. Further down, the text 'Dipartimento di Scienze Economiche, Aziendali, Matematiche e Statistiche, Università degli Studi di Trieste, e-mail: romeo.danielis@deams.units.it' is centered. Below that, 'Kreuzbergpass (BZ), Italy' and 'June 19th 2019' are centered. At the bottom, there are logos for 'sonnen energy is yours', 'Centro Interdipartimentale Giacomo Ciamician', a stylized 'LC' logo, and the 'atp' logo.

Slide 2/58

Outline

- Why do we need for Evs?
- Are EVs technologically feasible?
- Is there an economic case for EVs?
- Which EVs are available? For which transport modes?
- Is it possible to decarbonise transport?

3

Slide 3/58

Do we need electric vehicles?

Two potential environmental motivations:

- Local urban air emission
- Global CO₂eq emissions

4

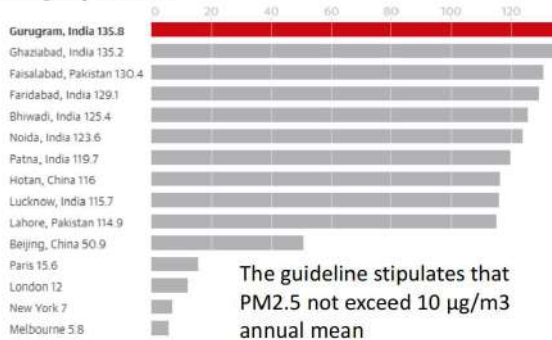
Slide 4/58

Local air emissions

64% of cities globally exceed WHO guidelines. Every single measured city in the Middle East and Africa exceeds the WHO guidelines, as well as 99% of cities in south Asia and 89% in east Asia.

Gurugram in India was the most polluted city in the world in 2018

Annual mean concentration of particulate matter with diameter of 2.5 microns or less. Micrograms per cubic metre



The WHO estimates that 7 million people a year die prematurely from exposure to air pollution globally, with the World Bank calculating the cost to the world economy in lost labour as \$225bn.

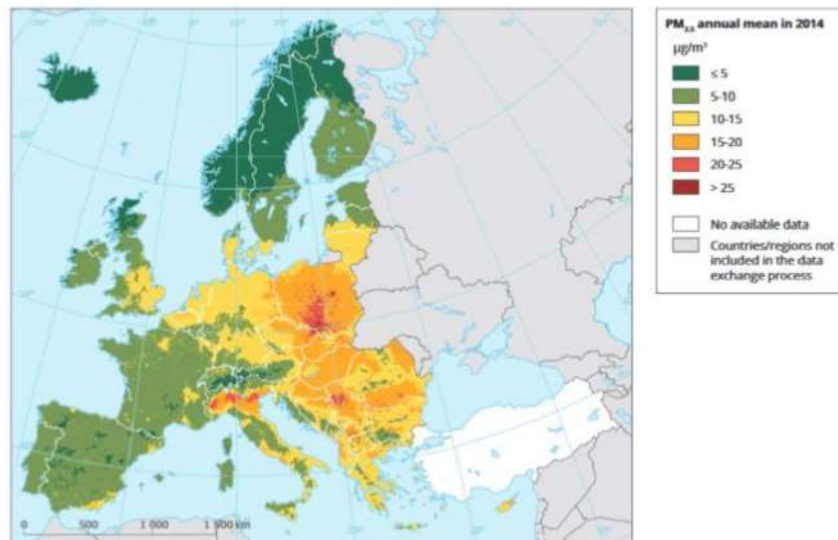


Guardian Graphic | Source: Greenpeace/AirVisual

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Slide 5/58

Local air emissions in Europe



<https://www.eea.europa.eu/publications/air-quality-in-europe-2017>

6

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Global CO2eq emissions

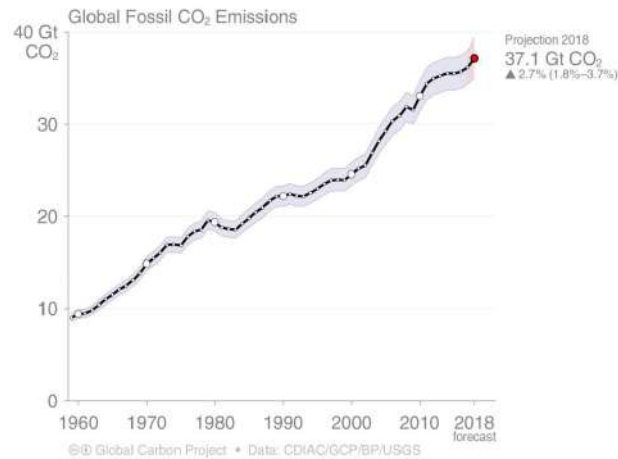


Figura 1 - Estimates for 2015, 2016 and 2017 are preliminary ; 2018 is a projection based on partial data.

Source: [CDIAC](#); [Le Quéré et al 2018](#); [Global Carbon Budget 2018](#)

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Slide 7/58

Transport's CO2 emissions on the rise..

In EU è il 27% nel 2014:

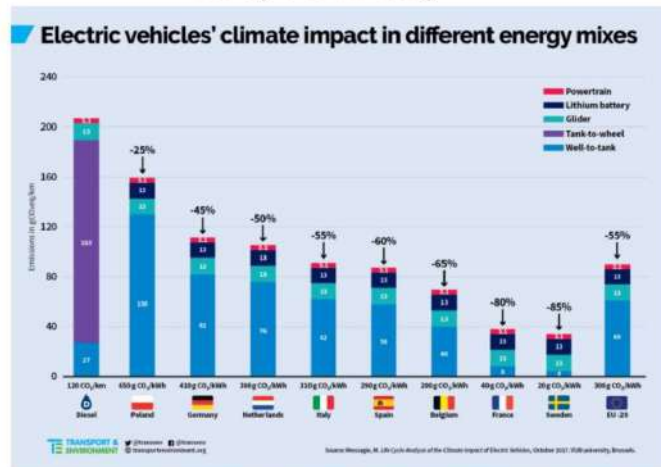
(20,8 Transport; 3,2% international navigation, 3,2% international shipping)

	1990		2014		Difference
Transport	785.5	13.9%	889.9	20.8%	104.4
International navigation	109.4	1.9%	135.2	3.2%	25.8
International aviation	69.7	1.2%	137.1	3.2%	67.4
Energy supply	1861.4	32.8%	1334.3	31.1%	-527.1
Industry	1376.4	24.3%	866.1	20.2%	-510.3
Agriculture	643.6	11.4%	514.1	12.0%	-129.5
Residential and commercial	726.5	12.8%	524.4	12.2%	-202.1
Other	31.7	0.6%	10.7	0.2%	-21
Land use, land use change and Fores	-255.2	-4.5%	-302.6	-7.1%	-47.4
Waste management	243.5	4.3%	146	3.4%	-97.5
CO2 emissions from biomass	198.2	3.5%	506.1	11.8%	307.9
Total excl. LULUCF	5668.7	100.0%	4285.6	100.0%	-1383.1
All transport		17.0%		27.1%	
	5790.7		4761.3		

Figura 5 – Emissione di gas serra per settore economico in EU (fonte: <https://www.eea.europa.eu/data-and-maps/daviz/change-of-co2-eq-emissions-2#tab-dashboard-01>)

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Europe and Italy

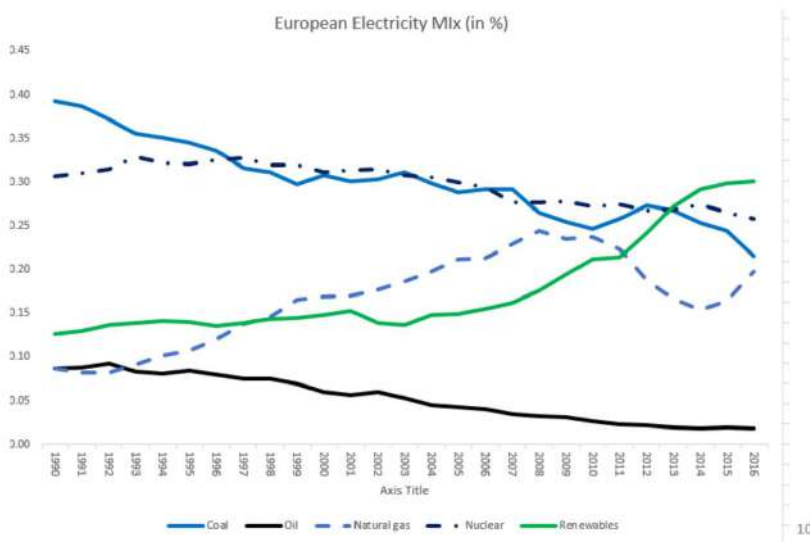


Transport & Environment (T&E)- Electric cars emit less CO₂ over their lifetime than diesels even when powered with dirtiest electricity (Italy, Europe -55%)

Romeo Danielis - Le emissioni di CO₂ delle auto elettriche e delle auto con motore a combustione interna. Un confronto per l'Italia tramite l'analisi del ciclo di vita, WP SIET (<http://sietitalia.org/pubblicazioni.htm>). «le auto elettriche emettono complessivamente meno CO₂ delle automobili con motori a combustione interna più vendute in Italia: il 19% in meno delle auto a benzina, il 18% in meno delle auto diesel ed il 9% in meno delle ibride.»

Slide 9/58

Europe..and the grid is getting cleaner

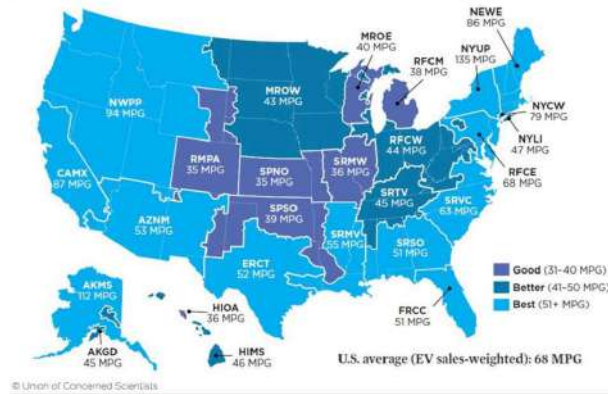


Slide 10/58

USA: Life Cycle Electric Vehicle Emissions (2015) Union of Concerned Scientist

global warming emissions of electric cars on a *life cycle* basis—from the manufacturing of the vehicle's body and battery to its ultimate disposal and reuse

Electric Vehicle Global Warming Pollution Ratings and Gasoline Vehicle Emissions Equivalents by Region



How many miles per gallon would a gas car have to achieve to produce global warming emissions equivalent to an EV? The answer depends on where you live. Numbers based on the EPA's eGRID 2015 database. [Click to enlarge.](#)

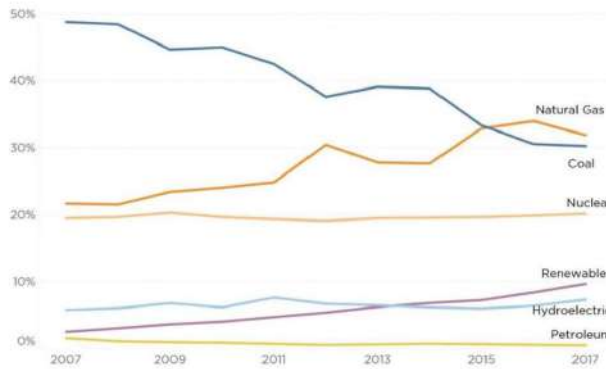
The fuel economy of new U.S. cars and trucks hit a record 24.7 miles per gallon in the 2016 model year, a government report said

<https://www.ucsusa.org/clean-vehicles/electric-vehicles/life-cycle-ev-emissions>

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USA ...and the grid is getting cleaner



17% in 2018

Utility-scale electric power generation. Power from coal has dropped over the last decade and clean renewable power has increased. Data Source: US Department of Energy, Energy Information Agency.

In 2018, about 4,178 billion kilowatthours (kWh) (or 4.18 trillion kWh) of electricity were generated at utility-scale electricity generation facilities in the United States.¹ About 63% of this electricity generation was from fossil fuels (coal, natural gas, petroleum, and other gases). About 20% was from nuclear energy, and about 17% was from renewable energy sources. The U.S. Energy Information Administration estimates that an additional 30 billion kWh of electricity generation was from small-scale solar photovoltaic systems in 2018

<https://www.eia.gov/tools/faqs/faq.php?id=427&t=3>

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EVs: are they technically feasible?

Batteries: main component

- More than 5 million electric cars in the streets in December 2018, million miles driven
- Battery lifespan: many charging cycles (most manufacturers are offering 8-year/100,000-mile warranties), degradation curve (3-5% initially then slowing down). “Tesla Batteries Have 90% Capacity After 160,000 Miles, May Last For 500,000 miles”
(<https://cleantechica.com/2018/04/16/tesla-batteries-have-90-capacity-after-160000-miles-may-last-for-500000-miles/>)
- Rare components: cobalt free (Tesla), new materials
- Battery recycling
- Safety: catching fire
- New batteries, solid state batteries (Toyota)

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EVs: are they technically feasible?

EV charging infrastructure

- Home charging: main advantage (if you own a garage)
- Availability: Chicken-egg problem? No, charging stations follow, regulation (and incentives) needed
- Charging time: up to 350 kW existing, 400 kW CHADEMO announced, 900 kW in China tentative

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The Tesla network

1.533 stazioni Supercharger con 13.344 paline Supercharger



Slide 15/58

The IONITY network: the power of 350 KW

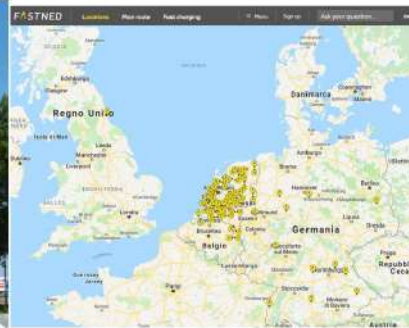


IONITY is a joint venture of BMW Group, Daimler AG, Ford Motor Company, and Volkswagen Group with Audi and Porsche. Our goal is simple: Building a high power charging network for electric vehicles along major highways in Europe.

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Slide 16/58

Fastned: 350 kW



Fastned opens its 100th fast charging station
13 June 2019

For all types of electric vehicle

Fastned offers all fast charging standards at all its stations and is compatible with all electric cars, such as:

- ✓ Tesla Model S / X
- ✓ Nissan Leaf
- ✓ BMW i3
- ✓ Hyundai Ioniq

[Can my car fast charge?](#)

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EVs: Are they economically feasible?

- The consumers' point of view (demand side of the market)
 - Monetary attributes: total cost of ownership
 - Non monetary attributes: time to charge, driving range, other social motives
- The automotive industry's point of view (supply side of the market)

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Total cost of ownership

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The TCO model

2. Total Cost of Ownership model and break-even BEV MSRP

The private TCO of a vehicle covers all costs occurring over its lifetime. It includes one-time costs, i.e. the lump-sum initial costs (IC), the annual operating costs (AOC) during the period of use minus the residual value (RV) of the vehicle at time T, when it is sold or scrapped.

Initial costs are equal to:

$$IC = MSRP - RD - SUB + RC + HC$$

where MSRP is the manufacturer's suggested retail price, RD is the retailer's discount, SUB is the government subsidy, RC is the registration cost and, in the case of electric vehicles, HC is the cost for acquiring and installing the home charging equipment (e.g., wall-box).

AOC includes all the costs incurred during the period of ownership T of the vehicle. For every year $t \in [1, T]$, AOC is equal to:

$$AOC_t = CT_t + INS_t + MAINT_t + FE_t$$

where CT is the circulation tax, INS is the insurance premium, MAINT are the repair and maintenance costs, and FE stands for the fuel/electricity cost to run the car. These costs vary with the propulsion system and the annual distance travelled.

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FE is the product of the fuel/energy efficiency (FE_E) and fuel/electricity price (FE_P). We specify FE_E as follows:

$$FE_E = \gamma \cdot (\alpha \cdot FE_{urb} + (1 - \alpha) \cdot FE_{exturb})$$

where γ is the weather-adjustment factor, FE_{urb} and FE_{exturb} the fuel/energy efficiency in urban and in extra-urban roads, respectively, and α is the percentage of trips driven in an urban area. We specify FE_P as:

$$FE_P = \begin{cases} \beta \cdot EP_{home} + (1 - \beta) \cdot EP_{public} & \text{for BEVs} \\ \text{average price of diesel/petrol} & \text{for HEVs, D_ICEVs and P_ICEVs} \end{cases}$$

For BEVs, the electricity cost depends on whether charging takes place at home or at public chargers. Therefore, we compute the weighted average of the electricity price paid at home, EP_{home} , and that at the public charger, EP_{public} , where β is the percentage of electricity charged at home. For diesel and petrol cars, we consider the average price paid.

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The total amount to be paid to the retailer when purchasing the vehicle is equal to MSRP-RD-SUB. If financed with borrowed money at a given APR, its annual amount is equal to:

$$\frac{(MSRP - RD - SUB) \cdot APR}{1 - (1 + APR)^{-T}}$$

Further components of the initial costs are RC and HC. Their annualized value is obtained multiplying them by the CRF⁹, i.e. the capital recovery factor equal to $(i(1+i)^T)/((1+i)^T - 1)$:

$$(RC + HC) \cdot CRF$$

The sum of these two components represents the Annualized Initial Cost (AIC):

$$AIC = \frac{(MSRP - RD - SUB) \cdot APR}{1 - (1 + APR)^{-T}} + (RC + HC) \cdot CRF$$

⁹ APR is expressed as a percentage that represents the actual yearly cost of funds over the term of a loan. This includes any fees or additional costs associated with the transaction but does not take compounding into account.

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AOC takes place during the lifetime of the vehicle. We discount it and compute its average value, obtaining the average annual operating cost (AAOC):

$$AAOC = \frac{1}{T} \sum_{t=1}^T \frac{AOC_t}{(1+i)^t}$$

Finally, we add the discounted and annualized residual value (DARV):

$$DARV = \frac{RV}{(1+i)^T} \cdot CRF$$

where RV can be expressed as a percentage η of the MSRP.

Therefore, the annualized TCO metric is the following:

$$ATCO = AIC + AAOC - DARV$$

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Therefore, the annualized TCO metric (ATCO) is the following:

$$ATCO = AIC + AAOC - DARV$$

Dividing this sum by the annual distance travelled (ADT) in kilometers, we finally obtain the metric ATCO/km, which represents the average cost per kilometer of owning a given vehicle:

$$\frac{ATCO}{\text{km}} = \frac{ATCO}{ADT} = \frac{1}{ADT} \left(\frac{(MSRP - RD - SUB) \cdot APR}{1 - (1 + APR)^{-T}} + (RC + HC) \cdot CRF + \frac{1}{T} \sum_{t=1}^T \frac{AOC_t}{(1+i)^t} - \frac{\eta \cdot MSRP}{(1+i)^T} \cdot CRF \right)$$

An interesting indicator is to compute which BEVs' MSRP would make BEV's ATCO/km equal to that of an alternative propulsion system. Solving the above equation with respect to BEVs' MSRP, one gets the following result:

$$\text{Break - Even BEV MSRP} = \frac{ATCO_{\text{comp}} - AAOC + \frac{(RD + SUB) \cdot APR}{1 - (1 + APR)^{-T}} - (RC + HC) \cdot CRF}{\frac{APR}{1 - (1 + APR)^{-T}} - \frac{\eta \cdot CRF}{(1+i)^T}}$$

where $ATCO_{\text{comp}}$ is the average ATCO of the propulsion system we want to compare BEVs with. We define it as the ATCO/km break-even BEV MSRP.

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Summary of TCO determinants

- **Market variables:** MSRP, (partly) petrol\diesel and electricity price
- **Financial variables:** Interest rate, own funds or nominal annual percentage rate of charge (APR)\effective APR (or EAPR). In Italy, TAN (tasso annuale nominale)\TAEG (tasso annuo effettivo globale)
- **Policy variables:** subsidies, reduced registration taxes, (partly) petrol\diesel and electricity price, reduced parking, fees to access restricted areas (LTZ),
- **Mobility variables:** Annual distance travelled, % of urban trips
- **Charging habits and location variables:** at home (garage availability) or at public charges

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Model implementation in Excel

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Further analysis and conclusions

- The TCO model can be further refined including uncertainty and dynamics
- Main conclusions: EVs are not yet cost competitive unless
 - High annual travelled distances
 - Incentivising policies (subsidies, discounts, free parking, etc.)
 - Urban driving
 - Charging at home
- ...but people make decisions not only based on monetary variables, but also attitudes, beliefs, time constraints and so on..

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Discrete choice modelling

All variables are considered;

- Monetary: MRSP, AOC (fuel, maintenance, annual excise fees)
- Technical: acceleration, driving range, emissions, noise
- Time: charging time and charging stations availability
- Mobility needs: cars in the household, % of longer trips, traffic restrictions

Preference data are collected

The discrete choice model is estimated

The discrete choice model is used to forecast EVs uptake

The role of driving range in consumers' purchasing decision for electric cars in Italy
M Giansoldati, R Daniels, L Rotaris, M Scorrano
Energy 165, 267-274

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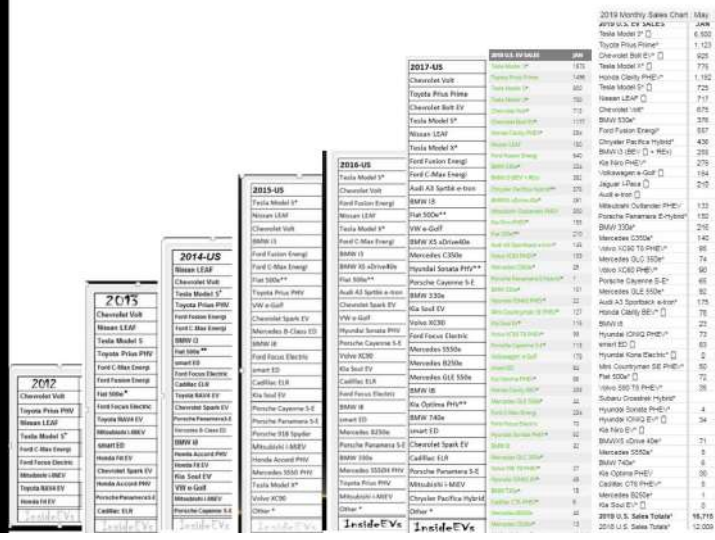
The automotive industry's point of view (supply side of the market)

- Increased variety
- Increasing number of charging stations
- Large investments

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Variety is increasing: BEV, PHEV, EREV (no HEV) in the USA



Source:
 InsideEvs.com
 Jan. 2012: 9
 Jan. 2013: 16
 Jan. 2014: 22
 Jan. 2015: 24
 Jan. 2016: 26
 Jan. 2017: 32
 Jan. 2018: 42
 May, 2019: 45

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Coming models 2019-20

- VW: Volkswagen ID.3, Volkswagen ID Crozz, Volkswagen ID Buzz and Cargo Concept
 - Audi e-tron SUV, Audi e-Tron GT, Porsche Taycan
 - Skoda Citigo, Seat El-Born, Seat Mii electric
 - BMW: Mini Cooper SE, BMW i4
 - Peugeot e-208
 - Tesla Model Y, Tesla semi, Tesla pick up
 - Rivian electric SUVs and pick-ups
 - Chinese related: Byton EV SUV, Faraday Future FF-91, Polestar 2, Vauxhall Corsa-e
 - Honda e
 - And Toyota???
- } VW group

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Large investments

Table 1. Electric vehicle and battery manufacturing plant investments

Automaker group	Announced investment*	Electric models*	Annual global electric sales (shares)*
Nissan-Renault-Mitsubishi	• \$9 billion over 2018-2022 (in China only)	• 12 electric models by 2022	3 million (30%) by 2022
Volkswagen Group	• \$40 billion manufacturing plant by 2022 • \$60 billion battery procurement	• 80 electric models by 2025 • 300 electric models by 2030	2-3 million (20%- 25%) by 2025
Toyota	• (not available)	• All vehicles hybrid, battery, or fuel cell electric by 2025	2 million (25%) by 2025
Chongqing Changan	• \$15 billion by 2025	• 21 electric models by 2025 • 12 plug-in hybrid models by 2025	1.7 million (100%) by 2025
BAIC	• \$1.5 billion by 2022 • \$1.9 billion (with Daimler)	• (not available)	1.3 million (100%) by 2025
Geely	• (not available)	• All models hybrid or electric by 2019 (Volvo)	1.1 million (90%) by 2020
General Motors	• (not available)	• 20 electric models by 2023	1 million (12%) by 2026
Tesla	• \$4-5 billion battery manufacturing	• 3-4 electric models (S, X, 3, Y)	0.5 million (100%) by 2020
Mercedes	• \$12 billion manufacturing plant • \$1.2 billion battery manufacturing	• 10 electric models by 2025 • 50 electrified models by 2025	0.4-0.6 million (15%-25%) by 2025
BMW	• \$2.4-3.6 billion procurement by 2025	• 12 electric models by 2025 • 13 plug-in hybrid models by 2025	0.4-0.6 million (15%-25%) by 2025
Ford	• \$11 billion manufacturing plant by 2022	• 16 electric models by 2022 • 24 plug-in hybrid models by 2022	(not available)
Great Wall	• \$2-8 billion over 10 years	• (not available)	(not available)
Jaguar	• (not available)	• All models hybrid or electric by 2020	(not available)
Infiniti	• (not available)	• All new models plug-hybrid or electric by 2021	(not available)

Note. Details are from press statements from the companies and media reports at time of announcements.
*Assume 1 euro to \$1.2 conversion, based on mid-2017 exchange. *Models in this column refer to plug-in electric and non-plug-in hybrids. *Final column has approximated sales and shares of new vehicles based on announced commitments and 2016 sales volume (excluding non-plug-in hybrids).

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The crucial factor: the battery

chemistries, , power-to-weight ratio (per unit weight), energy to weight ratio (specific energy is energy per unit mass) and energy density (per unit volume), cycles (before degradation), recharging time, disposal



Fig. 1. Basic outline of Japanese Government progression supporting R&D in EVs and FCVs.
 Source: Mori (2008), Government policy and the development of electric vehicles in Japan. Energy Policy, 34 (4): 433-443.

Under the New Strategy Program, R&D in polymer electrolyte fuel cells (PEFCs) has been undertaken since 1992. Research is also conducted under the same program on lithium batteries through the organization LIBES since 1992. The aim was to develop both stationary and vehicle applications of the next generation of batteries based on lithium.
 In 1997, the MITI initiated the Advanced Clean Energy (ACE) study program. This is an R&D program extending from 1997 to 2003 with the objective of developing efficient high-energy efficient hybrid vehicles.

Lithium batteries technology

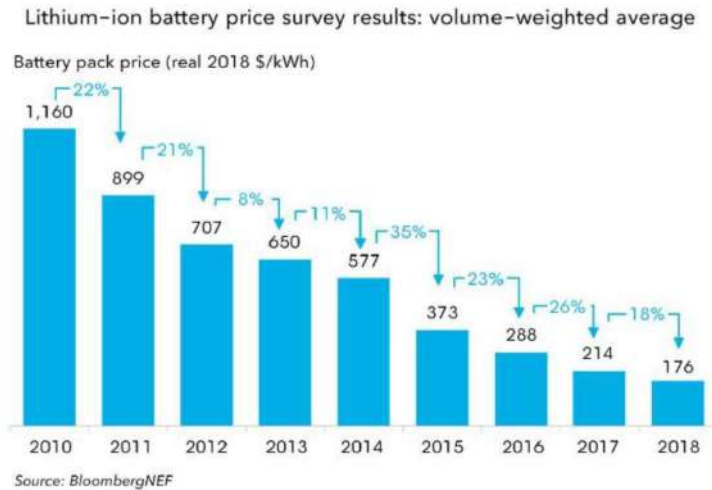
- Lithium batteries were proposed by J. S. Whinnier, now at [Battelle Columbus](#), while working for [General Motors](#).
- In 1971, [Sony](#) and [Asahi Kasei](#) released the first commercial lithium ion battery. It combined the [lithium cobalt oxide cathode](#) of a [General Electric](#) [nickel-cadmium](#) battery with a carbon [anode](#) to create the world's first commercial lithium ion battery.
- In 1984, [Chang](#) again achieved performance by adding [graphite](#) (instead of [carbon](#)) to the [anode](#) of his [lithium ion](#) battery. This discovery allowed density, power and performance to improve. Commercialization led to a rapid growth in the market for higher capacity cells, as well as a period of vigorous battle between [Chang](#) and [Sony](#).
- In 2002, [Panasonic](#), [Sanyo](#) and [AESC](#) received the 2002 [MIT](#) Medal for Environmental and Safety Technologies for developing the lithium ion battery.



Parameters	Now	Target
Energy density (Wh/kg, Wh/L)	220Wh/kg	500Wh/kg
Cell cost (\$/kWh)	\$130/kWh	\$60/kWh
Cycle life and calendar life	1,000 cycles 7 years	3,000-10,000 cycles 15-25 years
Charge rate	1-2 hours	<10min
Safety	Not Safe	Safe

<https://www.youtube.com/watch?v=vp--eMUxPs>

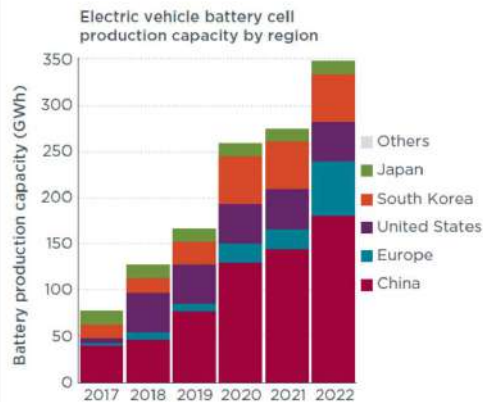
Declining battery prices (Bloomberg annual survey)



<https://about.bnef.com/blog/behind-scenes-take-lithium-ion-battery-prices/> 35

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Increasing battery production, economies of scale (Cina, Corea, Giappone, USA)



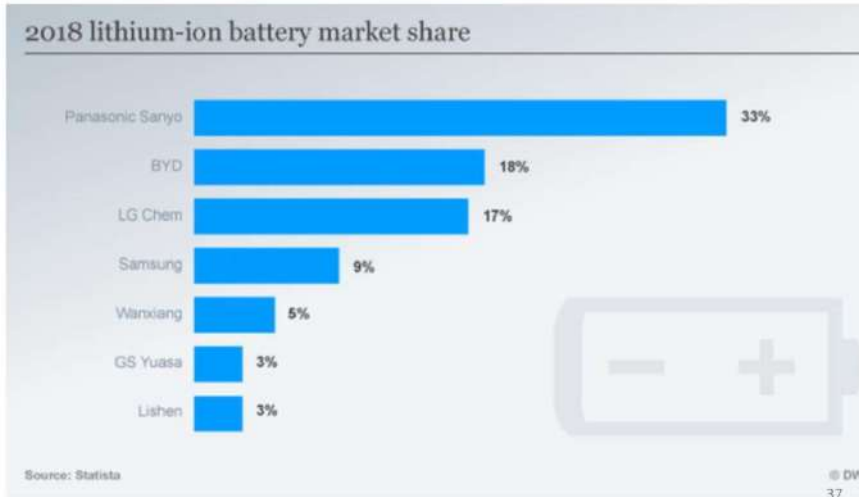
Announced electric vehicle battery pack production capacity for 2017–2022, by company and region.

icct
THE INTERNATIONAL COUNCIL
ON CLEAN TRANSPORTATION

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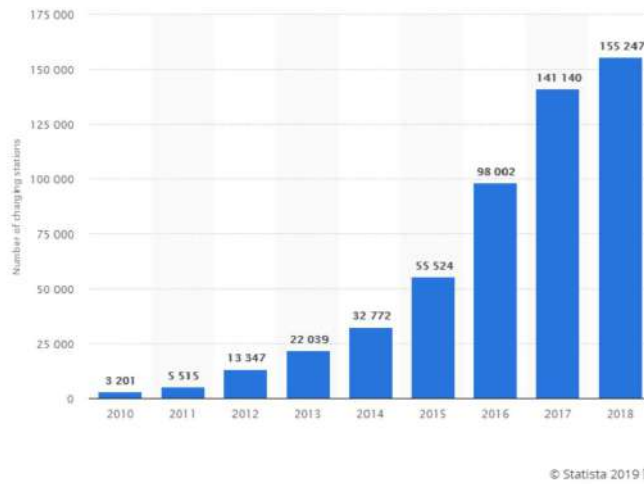
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<https://www.forbes.com/sites/jackperkowsky/2017/08/03/ev-batteries-a-240-billion-industry-in-the-making/#1c496603f084>



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Increasing number of charging stations

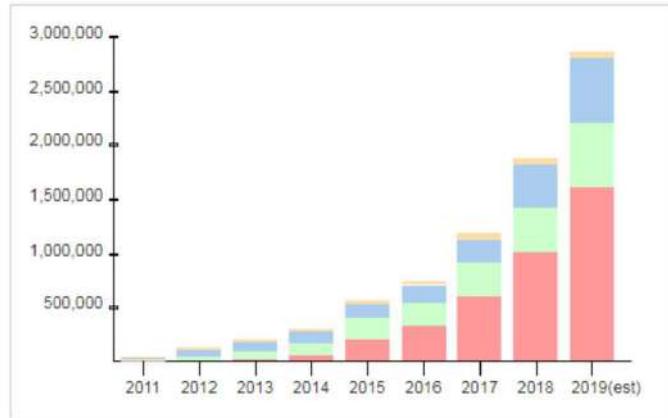


<https://cleantechnica.com/2018/03/07/stop-comparing-number-gas-stations-ev-charging-stations/>

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Annual sales of light-duty plug-in EVs



Annual sales of light-duty plug-in electric vehicles in the world's top markets between 2011 and 2017.^{[2][8][15][21]}

■ China ■ North America
■ Europe ■ Japan

https://en.wikipedia.org/wiki/Electric_car_use_by_country

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Passenger plug-in market share of total new car sales between 2013 and 2018 for selected countries and selected regional markets

Country	2018	2017	2016 ^{[15][74]}	2015 ^{[75][76]}	2014 ^[77]	2013 ^[78]
 Norway ^{[50][16]}	49.1%	39.2%	29.1%	22.39%	13.84%	6.10%
 Iceland ^{[79][80][81][82]}	19%	14.05%	4.6%	2.93%	2.71%	0.94%
 Sweden ^{[83][84][83]}	8.2%	5.2%	3.5%	2.62%	1.53%	0.71%
 Netherlands ^{[61][85]}	6.5%	2.6%	6.7%	9.9%	3.87%	5.55%
 Finland ^{[79][86]}	4.7%	2.57%	1.2%	N/A	N/A	N/A
 China ^{[77][87][88][23][89]}	4.2%	2.1%	1.31%	0.84%	0.23%	0.08%
 Andorra ^[90]		5.6%	0.81%	N/A	N/A	N/A
 Portugal ^[91]	3.6%	1.9%	N/A	N/A	N/A	N/A
 Austria ^{[79][92][93]}	2.6%	2.06%	1.6%	0.90%	N/A	N/A
 Switzerland ^{[79][94]}		2.55%	1.8%	1.98%	0.75%	0.44%
 UK ^{[95][96][54]}	2.53%	1.86%	1.37%	1.07%	0.59%	0.16%
 Belgium ^{[79][97]}	2.5%	2.7%	1.8%	N/A	N/A	N/A
 Canada ^[62]	2.16% ⁽³⁾	0.92%	0.58%	0.35%	0.28%	0.18%
 France ^{(1)[57][58]}	2.11%	1.98%	1.4%	1.19%	0.70%	0.83%
 USA ^{[98][49][99][100]}	2.1%	1.13%	0.90%	0.66%	0.72%	0.60%
 Denmark ^{[101][102]}	2%	0.4%	0.6%	2.29%	0.88%	0.29%
 Germany ^{[77][87][103][60][59][104]}	1.9%	1.58%	1.1%	0.73%	0.43%	0.25%
 Japan ^{[2][52][105]}	1.0%	1.1%	0.59%	0.68%	1.06%	0.91%
 New Zealand ^[106]	0.96%	0.72%	0.50%	0.23%	0.21%	N/A
Global Total						
 California ^{[67][107]}	7.8%	4.8%	3.6%	3.1%	3.2%	2.5%
 Europe ^{[66][79][108][109][110][111][2]}	2.5%	1.74%	1.3%	1.41%	0.66%	0.49%

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The future of EVs

International Energy Agency «Global EV Outlook 2019»

- **Electric mobility is expanding at a rapid pace.** In 2018, the global electric car fleet exceeded **5.1 million**.
- **Policies play a critical role** (fuel economy standards, incentives for zero- and low-emissions vehicles), policy support to address the strategic importance of the battery technology value chain.
- **Technology advances are delivering substantial cost cuts.** Key enablers are developments in battery chemistry and expansion of production capacity in manufacturing plants. Other solutions include the redesign of vehicle manufacturing platforms.
- **Private sector response to public policy signals confirms the escalating momentum** for electrification of transport.
- **Positive outlook.** In 2030, in the New Policies Scenario, global electric car sales reach **23 million** and the stock exceeds **130 million vehicles**. In the EV30@30 Scenario, EV sales reach **43 million** and the stock is more than 250 million.

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The future of EVs

- **Volkswagen is betting its future on electric cars.** VW is increasing the number of **new electric models** it plans to build over the next decade from 50 to 70. The Volkswagen Group said that it now plans to build **22 million electric cars across its brands by 2028**. It said it may also get into the battery manufacturing business in Europe. The Volkswagen Group, which includes Audi, Porsche and Skoda, sold a record 10.8 million cars in 2018. But just 40,000 of those were electric vehicles, and only 60,000 or so were plug-in hybrids.
- **Evergrande**, a Chinese firm believed to be the biggest real estate company in the world, **announced a massive \$23 billion investment in the production 1 million electric cars and 50 GWh of batteries per year**. The company is known for having its hands in many different businesses in China and overseas.

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EVs....not only cars

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Electric Scooters



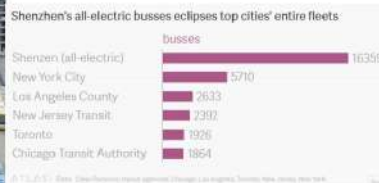
- **Producers:** Cezeta, Victory Motorcycles, Monday Motorbikes, Mahindra, Zero Motorcycles, Lightning Motorcycle, Energica Motor Company, Johammer, Evoke Motorcycles, Quanta, Electric Motorsport, Hollywood Electrics, Yo, Lito, Romai, Gogoro, Inokim, Rondine Motor, Current Motor Company, KTM and Alta Motors. Yamaha plans to enter the market shortly with at least two models.
- **Scooter sharing in molte città europee**
 - Battery swapping
- **Vendite:** China leads the world in electric scooter sales, comprising 9.4 million of the total 12 million sold worldwide in 2013. There were only 31,338 electric scooter sales outside the Asia-Pacific region including Europe.
 - Piaggio? Coming in September

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Electric Buses

Shenzhen's transport commission said on Dec. 27 2017 that it had transitioned its 16,359 buses to all-electric models. The city's 17,000 taxis are next (63% of them are already electric).



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Apr 11, 2018 FlixBus launches first long-distance electric bus route in France



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Electric Taxis

**Florence: 70
new licenses,
mandatory
BEV.**

**Next:
Bologna,
Milan**



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Urban freight distribution with electric vans

This was a privately organized research initiative at the RWTH Aachen University which later became an independent company in Aachen
In April 2016, Deutsche Post DHL Group announced that StreetScooter GmbH would be scaling up to manufacture approximately 10,000 of the Work vehicles annually, starting in 2017.



Die London Electric Vehicle Company (LEVC) zeigt ein erstes Foto ihres elektrifizierten Transporters, der Ende 2019 in den Handel kommen soll.

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Medium to long distance trucks



The Tesla Semi is an all-electric battery-powered Class 8 semi-trailer truck prototype which was unveiled on November 16, 2017 and planned for production in 2019. The company initially announced that the truck would have a 500 miles (805 km) range on a full charge and with its new batteries it would be able to run for 400 miles (640 km) after an 80% charge in 30 minutes using a solar-powered "Tesla Megacharger" charging station.

Bundesverkehrsministerium fördert umweltfreundliche Lkw
Die Höhe der Zuschüsse beträgt
12.000 Euro für E-Lkw bis 12
Tonnen und 40.000 für E-Lkw über
12 Tonnen.



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Special transport vehicles in Bern



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By the airport..



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Air transport? First Passenger Electric Aircraft to Take Off Soon

magniX and Harbour Air team up to make the first all-electric commercial airplane fleet

By Prachi Patel

Harbour Air operates 30,000 flights over 12 routes in the Pacific Northwest each year, carrying 500,000 passengers on its small seaplanes. MagniX will begin by swapping the fuel tanks and Pratt & Whitney engines on the airline's six-passenger Havilland Beaver aircraft in exchange for its 560-kilowatt (750-horsepower) electric motor and lithium-ion batteries that provide enough energy to fly about 160 kilometers (100 miles) on a single charge. That, says Harbour, is enough range for the airline's short-hop flights. Flight tests will happen later this year.



Photo: MagniX

In an important move towards all-electric aviation, startup magniX in Redmond, Washington plans to retrofit Canadian airline Harbour Air Seaplane's six-passenger Havilland Beaver aircraft with a battery-powered electric motor. The plan is to convert all the airline's airplanes in the coming years.

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International aviation?



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River, lake and maritime transport?

Corvus Energy has been selected by Norwegian ferry operator Fjord 1 to supply lithium-ion energy storage systems for 5 new all electric ferries. The new ships are being built by Havyard shipbuilders and are expected to enter service in January of 2020. Fjord 1 already has 8 electric ferries operating on four routes. In all, Corvus Energy has supplied energy storage systems for 40 short range hybrid and electric vessels worldwide.



Corvus Energy battery systems provide power to hybrid and all electric heavy industrial equipment as well as ferries and other vessels. To date, it has supplied over 200 MWh of battery storage to industry. Its battery storage systems have successfully accumulated over 2 million operating hours.

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International shipping?



55

Slide 55/58

Decarbonising transport: is it possible?

Avoid, Shift, Improve strategy

– Avoid

- Reduce unnecessary trips (land-use, urban planning, teleconferences)

– Shift to less carbon intensive modes of transport

– Improve: technology mandate

- Electric vehicles (car, scooters, buses, trains, vans) using electricity from renewable sources
- Hydrogen fueled vehicles (coaches, trucks, boats) using electricity from renewable sources
- International aviation and shipping?

Effective and efficient policies to decarbonise transport

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Thanks for your attention!

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Slide 57/58



STEP-UP

Sustainable Transport

E-Planner to Upgrade

the IT-HR mobility

STEP-UP II TRAINING SESSION

www.italy-croatia.eu/stepup

European Regional Development Fund



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4.1.5.3 ICT tool in use at the Port of Trieste: the Port Community System Sinfomar
[Valentina Boschian]



The slide features a large blue graphic on the right side that resembles a stylized 'U' or a drop. Inside this graphic, the text reads: "STEP-UP", "Sustainable Transport", "E-Planner to Upgrade the IT-HR mobility". To the left of this graphic is a small icon of a ladder inside a dark circle. In the top left corner, there are logos for "Interreg Italy - Croatia STEP-UP" and the "EUROPEAN UNION". Below the main graphic, the text "STEP-UP TRAINING SESSIONS" is displayed. At the bottom, there is a row of logos for various partners: "European Regional Development Fund", "REGIONE MARCHE", "Regione Emilia Romagna", "City of Trieste", "UNIVERSITÀ DEL TRIESTE", "Sistema Portuale", "Porto Libero Trieste", and "Infrastrutture". The website "www.italy-croatia.eu/stepup" is also listed. A small number "1" is in the bottom right corner.

Slide 1/27



The slide is a title page with a large blue wave graphic at the bottom. In the top left corner, there are logos for "Interreg Italy - Croatia STEP-UP" and the "EUROPEAN UNION". The main title is centered in blue text: "ICT tool in use at the Port of Trieste: the Port Community System Sinfomar". Below the title, the name "Valentina Boschian" is written. In the bottom left corner, there is a logo for "European Regional Development Fund". In the bottom right corner, there is a logo for "Autorità di Sistema Portuale del Mare Adriatico Orientale Porti di Trieste e Monfalcone".

Slide 2/27

Dott. Ing. Valentina Boschian, Ph.D.



- I am working at the Port Network Authority of the Eastern Adriatic Sea – Port of Trieste, in the Digital Port Area.
- Since 2008, my expertise is focused on consultancy activities related to the analysis of ICT impact on new business cases, mainly in the field of transport and logistics. After obtaining a degree in Management Engineering and a PhD in Computer Science Engineering, I worked as a project manager in several international research projects. I am also expert in business model innovation.

Main skills: Analysis and modelling of processes; Assessment analysis (based on KPIs definition); Management of complex systems with analytical models; Analysis of business scenarios, Use Case identification and User Requirement definition; Project management, ICT applications in logistics and transportation management.

EDUCATION

- Dottorato (Ph.D.) in Information Technology Engineering, University of Trieste (2012)
- Degree in Management Engineering and Integrated Logistics (graduation with first class honours, "110/110 e lode"), University of Trieste (2008)
- Degree in Management Engineering (graduation with first class honours, "110/110 e lode"), University of Trieste (2003)

3

Slide 3/27

Agenda

- Importance of ICT tools in Ports
- Definition of Port Community System - PCS
- Sinfomar: the PCS of the Port of Trieste
- Main modules and components of Sinfomar
- Next steps and further developments

4

Slide 4/27

Agenda

- **Importance of ICT tools in Ports**
- Definition of Port Community System - PCS
- Sinfomar: the PCS of the Port of Trieste
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- Next steps and further developments

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The Importance of ICT tools in Ports

- The European Commission defines the **Port Authority** as the entity which has as its objective under national law or regulation, the **administration and management of the port infrastructures and the coordination and control of the activities of the different operators present in the port.**
- However we can find **different types of port authorities** depending on their size, the kind of traffic they manage, their political, social and geographical environment, what is their main objective, the way they approach their functions and the role and strategies they adopt, their governance model, ...
- In Italy: law n.84/94 (D.lgs.169/2016) – art.4 Port Classification

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The Importance of ICT tools in Ports

- **Information and communications technology (ICT)** tools have an **important role** in the governance and efficiency in the flow of goods at ports. A key element in the application of ICTs in ports is the interconnection of different actors of the supply chain that makes possible a better information flow.
- Recent developments in international trade and transport have led to an **increased use of ICT in ports**.
- **ICT solutions are playing an increasing role** in the design and implementation of trade and transport facilitation measures. These applications can reduce waiting times at border crossings and at ports, secure processing of data, simplify formalities, and provide timely information to transport operators.

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Slide 7/27

Agenda

- Importance of ICT tools in Ports
- **Definition of Port Community System - PCS**
- Sinfomar: the PCS of the Port of Trieste
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- Next steps and further developments

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What is a PCS?

- Its development starts in the '70s and' 80s in Germany, France and Great Britain.
 - It is an electronic open platform connecting multiple ICT based networks/systems operated by different seaport organisations.
 - Its main objective is the optimization and harmonization of all port logistic processes through a 'single window system' concept.
- ➔ The system components are designed to enable a single data submission.

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PCS definition



The **Port Community System (PCS)** is a **neutral and open electronic platform** enabling intelligent and secure exchange of information between public and private stakeholders in order to improve the competitive position of the sea and air ports.

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Slide 10/27

Agenda

- Importance of ICT tools in Ports
- Definition of Port Community System - PCS
- **Sinfomar: the PCS of the Port of Trieste**
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- Next steps and further developments

1
1

Slide 11/27

Reasons for implementing the PCS Sinfomar

- As key nodes in international transport chains providing access to global markets, ports are more and more under constant competitive pressure to face the challenge of changes in the economic, institutional, regulatory and operational domains.
- EU and international port freight transport main protagonists recognize the deployment of web-based ICT solutions as key drivers to optimize the overall logistics processes providing operators, both from public and private sectors, with a reliable, effective and efficient real time information management system.



In 2014, within a co-financed EU TEN-T Programme project named ITS Adriatic Multiport Gateway, the Authority launched the implementation of a dedicated ICT platform reaching the definition of the PCS Sinfomar.

1
2

Slide 12/27

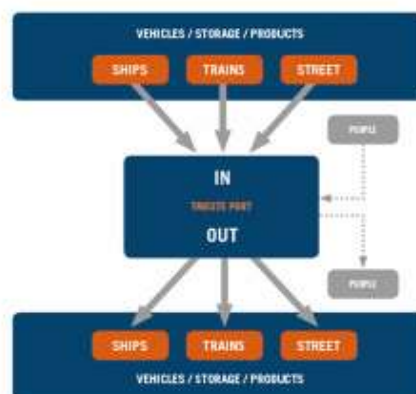
Main stakeholders involved



Slide 13/27

The Overall System Architecture Framework

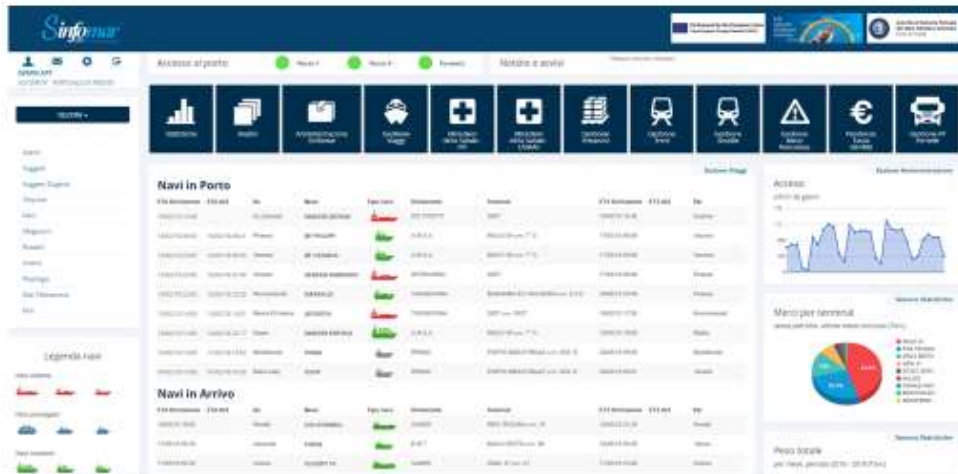
- Focus on intelligent and secure exchange of information between both private and public organizations with the primary goal to create the most favourable conditions to constantly improve the competitiveness of the Port Authority



1
4

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Home Page



Slide 15/27

Agenda

- Importance of ICT tools in Ports
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- Sinfomar: the PCS of the Port of Trieste
- **Main modules and components of Sinfomar**
- Next steps and further developments

1
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Main Modules

1. Pre-Arrival/Departure Notifications
2. Ships
3. Cargo
4. Vehicle
5. Trains
6. Statistics/Analysis
7. People
8. Maritime Health Authority
9. Dangerous Goods
10. Taxes on Loading/Unloading
11. External Free Zone Terminal-Area

17

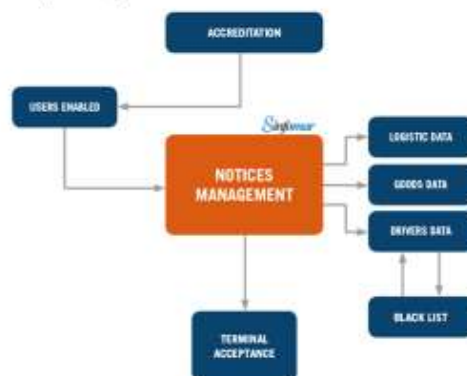
Slide 17/27

Pre-Arrival/Departure Notification

Key Features

It elaborates up to 63 different basic data concerning logistics, Customs and security requirements. Specific types of processed data are related to:

- The arrival and departure of vehicles/containers
- The detailed specification of transported cargo
- The relevant data on ship crew / haulers

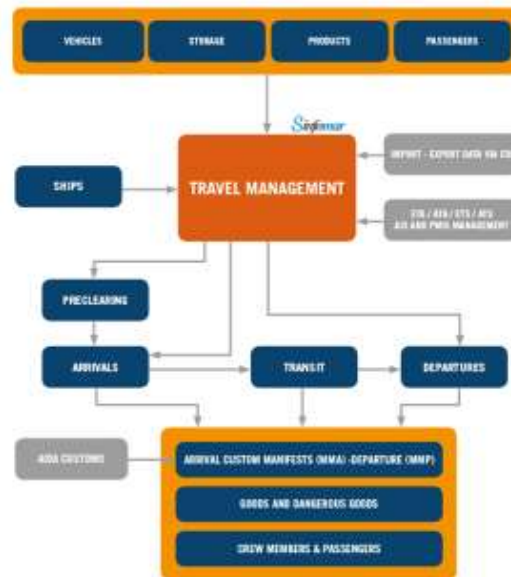


Slide 18/27

The Ship Module

Key Features

- It collects all ship data and relevant information on cargo / logistic units to be loaded or unloaded.
- It elaborates all data needed for the “ship formalities” and related to Customs procedure requirements.



Slide 19/27

Cargo Module

Key Features

It allows:

- the management of the entry and exit of cargo from/to the port areas by ship, train or road with the digitalization of the Rail Cargo Manifest and the Pre-Arrival/Departure Declaration Module procedures;
- the digitalization of the loading and unloading operations related to the Entry Summary Declaration (ENS) and export declarations (MRN);
- automatic calculation of the precise amount of duties/taxes related to maritime accounting.



Slide 20/27

Vehicles

Key Features

- It allows the identification and tracking of the vehicle landed or embarked by ship or the train / vehicle that enters or leaves the port area.
- It also allows the tracking of any type of cargo/containers carried by a vehicle, including the identification of the type of goods.



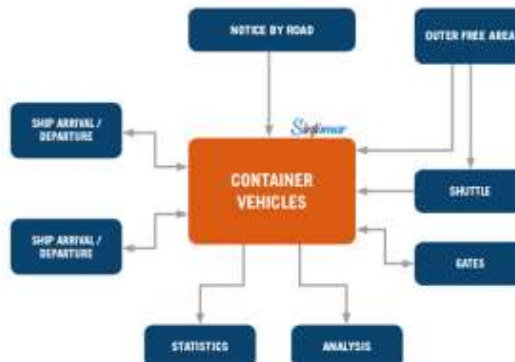
➤ Integrated with the Pre-Arrival/Departure Module

Slide 21/27

Trains 1/2

Key features

- It allows the management of trains arriving or departing from the Port.
- It uses standards as: ILU codes for rolling stock, BIC for containers, UIC for wagons.



➤ Integrated with the other modules involved in railway traffic for the train entry and exit control operations

Slide 22/27

Trains 2/2

Key features

It allows to generate a CH30 document (the Customs Agency required list for the formal declaration for train entering / leaving the port) in a single format, agreed with the private operators and the Customs Agency.

REPORT CH30 SP - TRIESTE DI PARTENZA

Versione: 06/2010

Operatore: SINFOMAR & CO. S.p.A. (SINFOMAR)

Versione: 1.0

IN DATA: 24/10/2010 ore: 10:00

IN SEDE DI: SINFOMAR TRIESTE

Pos.	Descrizione	Descrizione	Descrizione	Descrizione	Descrizione	Descrizione	Descrizione	Descrizione	Descrizione	Descrizione
01
02
03
04
05
06
07
08
09
10

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Agenda

- Importance of ICT tools in Ports
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- **Next steps and further developments**

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Perspectives on further developments

Several further developments and pilot activities are planned for the next future, e.g.:

- Interoperability with the Port of Monfalcone, as well as other logistic centres and inland terminals of the Friuli Venezia Giulia Region – i.e. Cervignano, Gorizia and Pordenone;
- Interoperability with core regional industrial zones of Friuli Venezia Giulia Region;
- Interoperability with other core transportation nodes in Italy and abroad;
- Evaluation and testing processes related to the 'blockchain' in collaboration with strategic international PCS platforms.

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Thank you for your kind attention!

Valentina Boschian

valentina.boschian@gmail.com



Slide 26/27



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Sustainable Transport

E-Planner to Upgrade

the IT-HR mobility

STEP-UP TRAINING SESSIONS

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European Regional Development Fund



4.1.5.4 How to use GTFS [Giorgia Fanesi]



How to use GTFS

STEP-UP | Marche Region
Second training session

European Regional Development Fund

Slide 1/16

Outline

- The importance of Mobility Data
- What is a GTFS file
- GTFS structure
- How to create a GTFS
- Google validator
- How to find a GTFS file

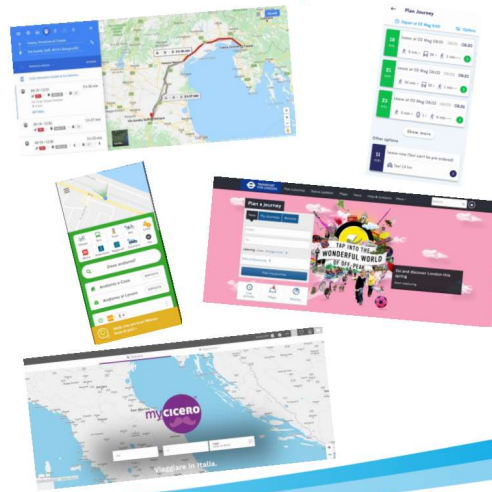


2

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The importance of Mobility Data

Mobility Data to feed
travel planner
systems



The importance of Mobility Data

[Directive 2003/98/EC of the European Parliament and of the Council of 17 November 2003](#)

The re-use of public sector information

[Directive 2013/37/EU of the European Parliament and of the Council of 26 June 2013](#)

amending Directive 2003/98/EC on the re-use of public sector information Text with EEA relevance. The new European directive amends the previous one (directive PSI – Public Sector Information) in order to facilitate the re-use of European public administrations data.

In particular, the directive obliges administrations to make their data available, for both commercial and non-commercial purposes, in compliance with the legislation on personal data protection.

[Directive \(EU\) 2019/1024 of the European Parliament and of the Council of 20 June 2019](#)

on open data and the re-use of public sector information

After its adoption in 2003 and the significant revision in 2013, the Directive has now been relaunched taking into account the profound technological and social changes that have taken place over the past five years, contemplating, at the same time the reference legislation on data management.

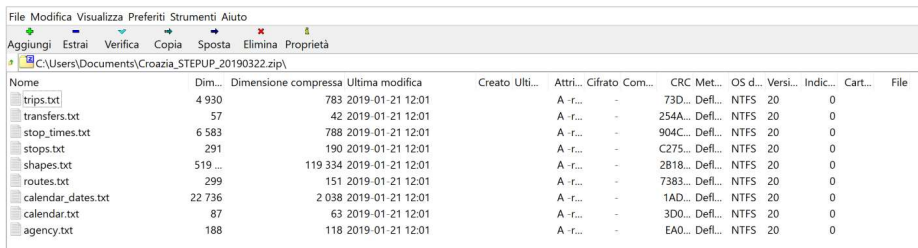
What is GTFS file

The General Transit Feed Specification (GTFS) defines a common format for public transportation schedules and associated geographic information. GTFS "feeds" allow public transit agencies to publish their transit data in a format that can be consumed by a wide variety of software applications.

<https://developers.google.com/transit/gtfs/reference/>
<https://developers.google.com/transit/gtfs/>

GTFS Structure

A GTFS feed is composed of a series of text files collected in a ZIP file. Each file models a particular aspect of transit information: stops, routes, trips, and other schedule data.



Nome	Dim...	Dimensione compressa	Ultima modifica	Creato	Ulti...	Attri...	Cifrato	Com...	CRC Met...	OS d...	Versi...	Indic...	Cart...	File
trips.txt	4 930	783	2019-01-21 12:01	A -r...	-	-	-	-	73D...	Defl...	NTFS	20	0	
transfers.txt	57	42	2019-01-21 12:01	A -r...	-	-	-	-	254A...	Defl...	NTFS	20	0	
stop_times.txt	6 583	788	2019-01-21 12:01	A -r...	-	-	-	-	904C...	Defl...	NTFS	20	0	
stops.txt	291	190	2019-01-21 12:01	A -r...	-	-	-	-	C275...	Defl...	NTFS	20	0	
shapes.txt	519 ...	119 334	2019-01-21 12:01	A -r...	-	-	-	-	2818...	Defl...	NTFS	20	0	
routes.txt	299	151	2019-01-21 12:01	A -r...	-	-	-	-	7383...	Defl...	NTFS	20	0	
calendar_dates.txt	22 736	2 038	2019-01-21 12:01	A -r...	-	-	-	-	1AD...	Defl...	NTFS	20	0	
calendar.txt	87	63	2019-01-21 12:01	A -r...	-	-	-	-	3D0...	Defl...	NTFS	20	0	
agency.txt	188	118	2019-01-21 12:01	A -r...	-	-	-	-	EA0...	Defl...	NTFS	20	0	

GTFS Structure

- Agency:** One or more transit agencies that provide the data in this feed.
- Stops:** Individual locations where vehicles pick up or drop off passengers.
- Routes:** Transit routes. A route is a group of trips that are displayed to riders as a single service.
- Trips:** Trips for each route. A trip is a sequence of two or more stops that occurs at specific time.
- Stop_times:** Times of vehicle arrivals at and departures from individual stops for each trip.
- Calendar:** Defines service dates when service is available for particular routes. Uses a weekly schedule.
- Calendar dates:** Defines exceptions for the services defined in the calendar.txt. If calendar_dates.txt includes ALL dates of service, this file may be specified instead of calendar.txt.
- Shapes:** Rules for drawing lines on a map to represent a transit organization's routes.

GTFS Structure – Agency_id

File Agency.txt

agency_id	agency_name	agency_url	agency_timezone	agency_lang	agency_phone	agency_fare_url
xxx	vettore xxx	https://www.mycicero.it/	Europe/Rome	it	NULL	NULL
yyy	vettore yyy	https://www.mycicero.it/	Europe/Rome	it	NULL	NULL

File Routes.txt

route_id	agency_id	route_short_name	route_long_name	route_type	route_color	route_text_color	route_desc	route_url
51xxx			51Zadar-Ancona	4	F2160B	14DFEC	NULL	NULL
53xxx			53Split-Ancona	4	F2160B	14DFEC	NULL	NULL
53_1	xxx		53Stari Grad-Split-Ancona	4	F2160B	14DFEC	NULL	NULL
D001	yyy	SNAV	Ancona-Split	4	F2160B	14DFEC	NULL	NULL

GTFS Structure – Route_id

File Routes.txt

route_id	agency_id	route_short_name	route_long_name	route_type	route_color	route_text_color	route_desc	route_url
51xxx		51	Zadar-Ancona	4	F21608	14DFEC	NULL	NULL
53xxx		53	Split-Ancona	4	F21608	14DFEC	NULL	NULL
53_1	xxx		Stari Grad-Split-Ancona	4	F21608	14DFEC	NULL	NULL
5001	yyy	SNAV	Ancona-Split	4	F21608	14DFEC	NULL	NULL

File Trips.txt

route_id	service_id	trip_id	trip_headsign	direction_id	block_id	shape_id	trip_short_name	trip_type	wheelchair_accessible	bikes_allowed
51	ZAJ400G	2019010120191231STEPUP	64Zadar - Luka	1	NULL	ZZZZ5100012	z008	NULL	NULL	NULL
51	ZAJ400VE	2019010120191231STEPUP	65Zadar - Luka	1	NULL	ZZZZ5100012	z008	NULL	NULL	NULL
51	ZAJ400SA	2019010120191231STEPUP	66Zadar - Luka	1	NULL	ZZZZ5100012	z008	NULL	NULL	NULL
51	ZAJ400DO	2019010120191231STEPUP	67Zadar - Luka	1	NULL	ZZZZ5100012	z008	NULL	NULL	NULL
53	000SV00S	2019122620191226STEPUP	7Split - Luka	1	NULL	ZZZZ5300012	7	NULL	NULL	NULL
53	000B00D	2019010120191231STEPUP	8Ancona - Porto	0	NULL	ZZZZ5300011	8	NULL	NULL	NULL
53_1	000C00L	2019010120191231STEPUP	19Split - Luka	1	NULL	ZZ53_100022	19	NULL	NULL	NULL
53_1	000C00M	2019010120191231STEPUP	20Split - Luka	1	NULL	ZZ53_100022	20	NULL	NULL	NULL
53_1	000C00SA	2019010120191231STEPUP	21Split - Luka	1	NULL	ZZ53_100022	21	NULL	NULL	NULL
53_1	000C00VE	2019010120191231STEPUP	22Stari Grad - Luka	1	NULL	ZZ53_100012	22	NULL	NULL	NULL
5001	SNAVLMV	2019010120191231STEPUP	31Split - Luka	0	NULL	ZZ000100011	1001	NULL	NULL	NULL
5001	SNARMAGD	2019010120191231STEPUP	32Ancona - Porto	1	NULL	ZZ000100012	1002	NULL	NULL	NULL
5001	SNA1MAGS	2019010120191231STEPUP	33Ancona - Porto	1	NULL	ZZ000100012	1003	NULL	NULL	NULL

GTFS Structure – Service_id

File Trips.txt

route_id	service_id	trip_id	trip_headsign	direction_id	block_id	shape_id	trip_short_name	trip_type	wheelchair_accessible	bikes_allowed
51	ZAJ400VE	2019010120191231STEPUP	64Zadar - Luka	1	NULL	ZZZZ5100012	z008	NULL	NULL	NULL
51	ZAJ400SA	2019010120191231STEPUP	66Zadar - Luka	1	NULL	ZZZZ5100012	z008	NULL	NULL	NULL

File Calendar Dates.txt

service_id	date	exception_type
ZAJ400VE	20190726	0
ZAJ400VE	20190802	0
ZAJ400VE	20190809	0
ZAJ400VE	20190816	0
ZAJ400VE	20190823	0
ZAJ400SA	20190727	1
ZAJ400SA	20190803	1
ZAJ400SA	20190810	1
ZAJ400SA	20190817	1
ZAJ400SA	20190824	1

File Calendar.txt

service_id	Monday	Tuesday	Thursday	Wednesday	Friday	Saturday	Sunday	start_date	end_date
ZAJ400VE	1	1	1	1	1	1	0	20190130	20190830

GTFS Structure – Trip_id

File Trips.txt

route_id	service_id	trip_id	trip_headsign	direction_id	block_id	shape_id	trip_short_name	trip_type	wheelchair_accessible	bikes_allowed
51ZAJ400VE2019010120191231STEPUP		64	Zadar - Luka	1	NULL	ZZZ5100012	z008	NULL	NULL	NULL
51ZAJ400SA2019010120191231STEPUP		66	Zadar - Luka	1	NULL	ZZZ5100012	z008	NULL	NULL	NULL

File Stop_times.txt

trip_id	arrival_time	departure_time	stop_id	stop_sequence	stop_headsign	pickup_type	drop_off_type	shape_dist_traveled	timepoint	arrival_time_seconds	departure_time_seconds	stop_headsigns
64	22.00.00	22.00.00	P_AN	1	Zadar - Luka	0	0	0	NULL	NULL	NULL	NULL
64	31.00.00	31.00.00	L_ZA	2	Ancona - Porto	0	0	0	NULL	NULL	NULL	NULL
66	16.00.00	16.00.00	P_AN	1	Zadar - Luka	0	0	0	NULL	NULL	NULL	NULL
66	22.00.00	22.00.00	L_ZA	2	Ancona - Porto	0	0	0	NULL	NULL	NULL	NULL

GTFS Structure – Shape_id

File Trips.txt

route_id	service_id	trip_id	trip_headsign	direction_id	block_id	shape_id	trip_short_name	trip_type	wheelchair_accessible	bikes_allowed
51ZAJ400VE2019010120191231STEPUP		64	Zadar - Luka	1	NULL	ZZZ5100012	z008	NULL	NULL	NULL

File Shapes.txt

shape_id	shape_pt_lat	shape_pt_lon	shape_pt_sequence	shape_dist_traveled
ZZZ5100012	43.622258	13.508942	1	
ZZZ5100012	43.622380	13.509070	2	
ZZZ5100012	43.622260	13.509290	3	

How to create a GTFS file

To create a GTFS file there are several proprietary and open tools.

Steps to generate a GTFS:

- 1 Creation of **Agency** file
- 2 Definition of lines and creation of **routes** file (the lines is associated to the agency)
- 3 Creation of **stops** file based on the bus stops
- 4 Creation of **trips** file → trips are linked to the routes
- 5 As the routes are created, it is necessary to create the **calendar** (calendar.txt or calendar dates)
- 6 Creation of **Stop_times** file → association routes, timetables and stops
- 7 Creation of **shapes** file (optional) → to sketch the trip, it is important to enter latitude and longitude to each shape

Google validator

Before loading the zip file, GTFS feeds should be validated in order to catch errors.
On internet it is possible to find several validation tools.

GTFS validation results for feed:
C:\GTFS\STEPUP_20190322.zip
FeedValidator extension used: None

Agencies: [jadrolinija](#), [SNAV](#)
Routes: 4
Stops: 4
Trips: 67
Shapes: 8
Effective: January 02, 2019 to December 30, 2019

During the upcoming service dates Thu Jul 04 to Sun Sep 01:

Average trips per date: 3
Most trips on a date: 6, on 2 service dates (Sat Aug 03, Sat Aug 10)
Least trips on a date: 2, on 11 service dates (Fri Jul 05, Sun Jul 07, Mon Jul 08, ...)

feed validated successfully

Generated by [FeedValidator](#) version 1.2.15 on July 04, 2019 at 10:21 AM ora legale Europa occidentale.

Found these problems:

36 errors **872 warnings**
12 [Invalid Values](#) 1 [Expiration Date](#)
24 [Missing Values](#) 182 [Stop Time Classes](#)
167 [Too Fast Trips](#)
12 [Too Many Consecutive Stop Times With Same Times](#)

Errors:

Invalid Value

- Invalid value 430001 in field agency_id
Route uses an unknown agency_id
in line 36 of routes.txt

route_id	agency_id	route_short_name	route_long_name	route_type	route_color	route_text_color
109935	430001	109935	SABONO-IMPERIA-TORINO 3	FFFFFF	000000	
- Invalid value 430001 in field agency_id
Route uses an unknown agency_id
in line 37 of routes.txt

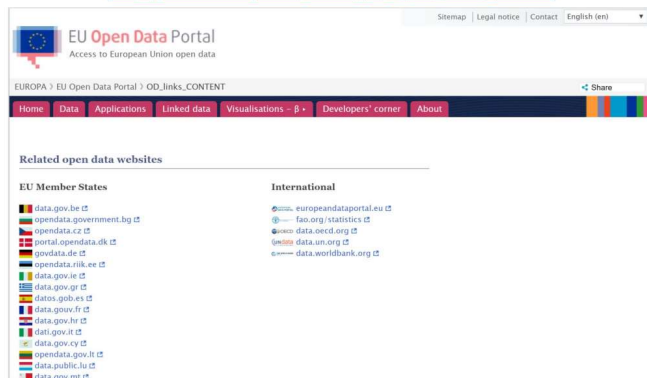
route_id	agency_id	route_short_name	route_long_name	route_type	route_color	route_text_color
109986	430001	109986	BIKE SAN ROMOLO 3	FFFFFF	000000	
- Invalid value 109935 in field route_id
in line 279 of trips.txt

route_id	service_id	trip_id	trip_headsign	trip_short_name	direction_id	block_id	shape_id
109935	300008	300008	Sarveo (Autorizzione)		1	300008	1098350011

How to find a GTFS file


EU Open Data Portal offers a list of Related open data website (including GTFS file)

http://data.europa.eu/euodp/it/open_data_portals



Thank you for your attention!

Giorgia Fanesi

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MaaS Business Models

- The Business Model
- The role of Design Thinking
- Business Model Canvas application
- Mobility as a Service Business Models

BUSINESS MODEL DEFINITION

A **business model** describes the rationale of how an **organization** creates, delivers, and captures **value**, in economic, social, cultural or other contexts

Organization is an entity comprising multiple people, such as a company, an institution or an association, that has a particular purpose.

Value proposition is the set of products and services that create value for a specific customer segment, and more and more.....

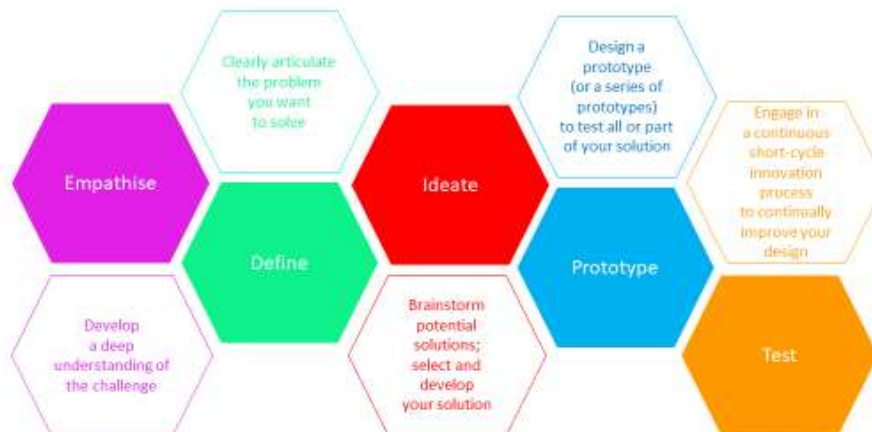
DESIGN THINKING

The Design Thinking is an approach centered on people, based on integration of **analytical capacity** with **creative attitudes**, to define and solve complex problems:

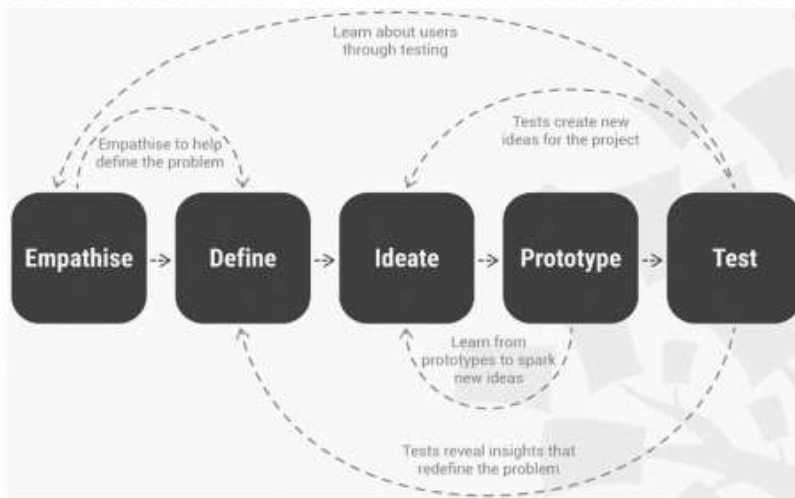
It can be used to identify customer needs, create new products/services and develop innovative business models, imagining future scenarios and analyzing market experiences.

Design Thinking has the goal to involve consumers, designers and business managers in a **integrated innovation process**.

DESIGN THINKING STAGES



DESIGN THINKING: A NON LINEAR PROCESS



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DESIGN THINKING: VISUAL TOOLS AND STORYTELLING



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BUSINESS MODEL CANVAS

Business Model Canvas is a strategic management and lean startup template for *developing new or documenting existing business models*.

It is a visual board with elements describing a firm's or product's value proposition, infrastructure, customers, and strategic resources.

It is a very useful tool to guide brainstorming processes and develop new ideas.

The business model canvas was created by **Alexander Osterwalder** in 2008 and it is used in all over the world.

WHAT DO WE NEED ?



<p>KEY PARTNERS</p> <p>Who are our key partners? Who are our key suppliers? What key resources do we get from partners? What key activities do partners do?</p>	<p>KEY ACTIVITIES</p> <p>What key activities are required for:</p> <ul style="list-style-type: none"> • produce the value offered to customers? • reach our markets (distribution)? • establish and manage customer relations? • generate revenue streams? 	<p>VALUE PROPOSITION</p> <p>What customer problem do I contribute to solving and / or what needs are met? What set of products and services do I offer to each customer segment? How I stand out in the market, how I am perceived and what is real value/benefit transferred to the customer?</p>	<p>CUSTOMER RELATIONSHIPS</p> <p>What kind of relationship do you expect to establish with us each segment of customers? Which is more functional? How much does this type of relationship cost and how does integrate with the other elements of our BM?</p>	<p>CUSTOMER SEGMENTS</p> <p>For whom we are creating value? Who are our most important customers?</p>
	<p>KEY RESOURCES</p> <p>What key resources are needed for:</p> <ul style="list-style-type: none"> • produce the value offered to customers? • reach our markets (distribution)? • establish and manage customer relations? • generate revenue streams? 		<p>CHANNELS</p> <p>Through which channels do customers want to be reached? How are channels integrated with customer habits? Which channels are more efficient? (performing / cheaper)? How is the service product distributed?</p>	
<p>COST STRUCTURE</p> <p>What are the most important costs of our business model? What are the most expensive key resources? What are the most expensive key activities?</p>		<p>REVENUE STREAMS</p> <p>What value are customers really willing to pay for? How do they pay or how would they prefer to pay? How much they have to pay and how the revenue stream contributes to revenues general (how much do they impact)?</p>		

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BUSINESS MODEL CANVAS: CUSTOMER SEGMENTS

For whom we are creating value?
Who are our most important customer?

Divide and classify customers into distinct groups by:

- needs / interests that require a separate offer
- how they are achieved (distribution channels)
- type of relationship established
- associated profitability
- willingness to pay for different aspects of the offer



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BUSINESS MODEL CANVAS: VALUE PROPOSITION

What customer problem do I contribute solving and / or what needs are met?

What set of products and services do I offer to each customer segment?

How I stand out in the market, how I am perceived and what is real value / benefit transferred to the customer?

Describe what the company sells and what is the value for customers in terms of value offered by the company:

- the needs met
- problems solved
- the benefits offered divided into classes and connected to customers

VALUE PROPOSITION

The elements to consider into the value proposition are not only the **products** and **services**. It is essential also to consider other valuable elements:

- **Making innovation.** To create a new value giving to customers something that was not there before
- **Make a product/service accessible.** It allows Customer Segments that previously could not use a product/service to access it (think, for example, of Ryanair's low-cost flights)
- **Improve a product or service,** by adding relevant features or modifying the current ones to make them more functional to a specific need.
- **Decrease the price** for a product/service. Solving a specific problem, starting from the study of the real and urgent needs of customers
- Use **the brand/status** to convey an identity and create a **community**
- Improve **the design** and **the performance** of a product
- Make the products **more convenient** and **easier to use**
- **Reduce the risks** related to a product/service

These methods allow the company to transfer not only the intrinsic value of the product/service but, above all, **the intangible values** that can be associated with it.

BUSINESS MODEL CANVAS: CHANNELS

Through which channels do customers want to be reached?

How are channels integrated with customer habits?

How are the different channels integrated together?

Which channels are more efficient (performing / cheaper)?

How is the service product distributed?

Describe how the value offered reaches the customer in the phases of communication, distribution and sales in terms of:

- types of channels used
- functions performed by the channels
- overall shopping experience

BUSINESS MODEL CANVAS: COSTUMER RELATIONSHIP

What kind of relationship do you expect to establish with us each segment of customers? Which is more functional?

How much does this type of relationship cost and how does it integrate with the other elements of our BM?

Describe how the company acquires and manages customers in terms of:

- customer experience
- construction and delivery of the corporate image
- effectiveness

BUSINESS MODEL CANVAS: REVENUE STREAMS

What value are they really willing to pay customers for?

How do they pay or how would they prefer to pay?

How much they have to pay and how the revenue stream contributes to revenues general (how much do they impact)?

Describe the mechanism adopted for the price definition and the revenues generated by the different types of customers, also divided by value category offered and based on:

- how they pay
- what they pay for

BUSINESS MODEL CANVAS: KEY RESOURCES

What key resources are needed for:

- *produce the value offered to customers?*
- *reach our markets (distribution)?*
- *establish and manage customer relations?*
- *generate revenue streams?*

Describe and list the key resources necessary for the operation of the model business in relation to the value offered to customers

BUSINESS MODEL CANVAS: KEY ACTIVITIES

What key activities are required for:

- *produce the value offered to customers?*
- *reach our markets (distribution)?*
- *establish and manage customer relations?*
- *generate revenue streams?*

Describe and list the key activities necessary for the operation of the model business in relation to the value offered to customers

BUSINESS MODEL CANVAS: KEY PARTNERS

Who are our key partners?

Who are our key suppliers?

What key resources do we get from partners?

What key activities do partners do?

Describe with which external parties the company wants to work by defining in particular:

- reasons
- modality
- the key assets or resources acquired

BUSINESS MODEL CANVAS: COST STRUCTURE

What are the most important costs of our business model?

What are the most expensive key resources?

What are the most expensive key activities?

Describe if the model is based on costs or value and define the list of fixed and variable costs incurred for key resources, key activities and partners

MOBILITY AS A SERVICE

Definition

MaaS is the integration of various forms of transport modes
into a single mobility service accessible on demand.

It provides a **new way of thinking in terms of how the delivery**
and consumption of transport or mobility:

the key concept behind Mobility as a Service (MaaS)

is to **put the users at the core of transport services,**

offering them **tailor made mobility solutions based on their individual needs.**

MaaS IS A MULTI-SIDE PLATFORM PATTERN

- Multi-sided platforms bring together **two or more distinct but interdependent customer groups**.
- These platforms are a value for a group of customers only if the other group of customers is also present.
- The platform creates value by **facilitating interactions between different groups**.
- The value of a multi-sided platform grows when it attracts more users, a phenomenon known as the **network effect**



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KEY PARTNERS	KEY ACTIVITIES	VALUE PROPOSITIONS	COSTUMER RELATIONSHIPS	COSTUMER SEGMENTS
<p>National and transnational public Authorities and Policy Makers</p> <p>Mobility and accommodation providers</p> <p>Event and entertainment service agency</p> <p>Tourist operators</p>	<p>Platform Efficiency</p> <p>ADV and web marketing</p> <p>Contract negotiations</p> <p>Continuous implementation of new services providers</p> <p>Resource and develop of ITS</p>	<p>Web platform that integrate End users and Service Providers</p> <p>New way of thinking for traveling</p> <p>Tailor made mobility solutions based on their individual needs</p> <p>Way to promote:</p> <ul style="list-style-type: none"> - multi-modal mobility - sustainable transport - security <p>BIG DATA and SMALL DATA as strategic assets</p> <p>What is the most relevant information? What's specific users need? What advantages can be created? Are there any ancillary services we can offer?</p>	<p>Automatic platform system</p> <p>Help Desk</p> <p>Customer care office</p> <p>CRM system and strategy</p>	<p>Multi-sided market</p> <p>End users:</p> <ul style="list-style-type: none"> - Private user - Commuter - Companies - Tourist - ... <p>Service provider:</p> <ul style="list-style-type: none"> - Mobility - Event organizers - Accommodation - Rental companies - Tourist agency - ... <p>B2B, B2C, B2B2C</p> <p>Who are the end users? And the intermediate users? Who can take advantage of the platform? What are their needs? What are their problems? For those who can represent an opportunity?</p>
<p>COST STRUCTURE</p> <p>Platform management and development</p> <p>Territory and commercial referents</p> <p>ADV and Web Marketing</p>		<p>REVENUE STREAMS</p> <p>Self on commissions</p> <p>Service advertisement</p> <p>Fixed contracts with end users and service providers</p> <p>BIG DATA and SMALL DATA market</p>		

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Contacts

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Address: Via Nazionale 124/e 33100 Tavagnacco (UD)

4.2 II Training Session: 24 July 2019

The second Training Session was broadcast on-line via the Go To Meeting software, the main computer was the one of the organizer of the session (namely the University of Trieste) and was placed in Trieste. The guests had been invited by UNITS and by the project partners.

4.3 Agenda

Below the final agenda proposed:



STEP-UP Second Training Sessions **NEW SCENARIOS ON MULTIMODAL MOBILITY** INFOMOBILITY FOR SUSTAINABLE PASSENGERS' FLOW BETWEEN ITALY AND CROATIA

Webinar

- 10:30 – 11:00** **The role of Mobility as a Service**
Daniela Vasari, *Project manager, solution designer in ITS projects and International cooperation, Pluservice, Technical Assistance of Marche Region (STEP-UP project Lead Partner)*
- 11:00 – 11:30** **The economics of electric vehicles**
Romeo Danielis, *Department of Economics, Business, Mathematics and Statistics, University of Trieste*
- 11:30 – 12:00** **ICT tool in use at the Port of Trieste: the Port Community System Sinfomar**
Valentina Boschian, *Port Network Authority of the Eastern Adriatic Sea*
- 12:30 – 13:00** **How to use GTFS**
Giorgia Fanesi, *Software analyst and project manager, Pluservice, Technical Assistance of Marche Region (STEP-UP project Lead Partner)*
- 13:00 – 13:30** **MaaS Business Models**
Andrea Molinaro, *Consultant at Studio Peloso & Associati - expert in design thinking, business organization and subsidized finance*

YouTube channel: **Project Step-Up**

link to Web Page: www.step-up.training

e-mail: info@step-up.training

link to questionnaire: <https://step-up.training/questionnaire/>

4.4 Attendance I Training Session

Persone

ORGANIZZATORI DELLA RIUNIONE

 UNITS 

PARTECIPANTI ALLA RIUNIONE

 **alberto**

 Agenzia per lo Sviluppo S...

 Bartolomeo Silvestri (POL...

 Carlo Giansante (POLIBA)

 DANIELA VASARI

 Finproject

 Giambattista Fiume

 Giorgia Fanesi

 Matteo Castellucci

 Sergio Ruggieri[POLIBA]

 Vanja

4.5 Dissemination

4.5.1 Publication on University of Trieste official website



UNIVERSITÀ
DEGLI STUDI DI TRIESTE

[Futuri Studenti](#)[Studenti](#)[Laureati](#)[Ricerca](#)[Impresa](#)[Ateneo](#)[NOTIZIE](#)[EVENTI](#)[AVVISI](#)[VIDEO](#)

Interreg EU "STEP-UP" Project

Data evento: Da 24/07/2019 A 24/07/2019

CONDIVIDI



Stampa



STEP-UP II TRAINING SESSION

Interreg EU "STEP-UP" Project

www.italy-croatia.eu/stepup

Mercoledì 24 luglio 2019 alle 10:30 (durata approssimativa: tre ore).

Cattura rettangolare

Programma:

- **Valentina Boschian**, Port Network Authority of the Eastern Adriatic Sea: *"ICT tool in use at the Port of Trieste: the Port Community System Sinfomar"*;
- **Daniela Vasari**, Pluservice, Technical Assistance of Marche Region (STEP-UP project Lead Partner): *"The role of Mobility as a Service"*;
- **Romeo Danielis**, Department of Economics, Business, Mathematics and Statistics, University of Trieste (STEP-UP Project Partner): *"The economics of electric vehicles"*;
- **Giorgia Fanesi**, Pluservice, Technical Assistance of Marche Region (STEP-UP project Lead Partner): *"How to use GTF5"*;
- **Andrea Molinaro**, Studio Peloso & Associati: *"MaaS Business Models"*.

Per tutti coloro che desiderano seguire la conferenza ed intervenire con domande è possibile partecipare attraverso il seguente link:

<https://global.gotomeeting.com/join/159804069>

STEP-UP II Training Session, Wed, Jul 24, 2019 10:30 AM - 1:30 PM CEST

Access Code: 159-804-069

You can also dial in using your phone.

United States: +1 (669) 224-3412

New to GoToMeeting? Get the app now and be ready when your first meeting starts:

<https://global.gotomeeting.com/install/159804069>

4.6 II Training Session: Questionnaire

For the second training session a questionnaire previously designed has been shared through a link. The questionnaire was published on STEP-UP Web Page. The results obtained from the first training session questionnaire gave a useful feedback in regards of the organization of the next sessions.

Follows the list of questions proposed to the audience of the second Training Session. For each question the audience was asked to express a preference according to the given assessment grid.

We take the opportunity to illustrate how the answers given with the online questionnaire are displayed. We illustrate this on the occasion of the second training session as it is the only one of the three for which the distribution of the paper questionnaires has not been foreseen.

Before proceeding with the images related to the graphics of the answers, we report the complete list of questions and the relative evaluation grid proposed.

		Questionnaire II Training Session																																							
		1					2					3					4					5					6					7									
		expert					STEP-UP PP					expert					STEP-UP PP					expert					expert					STEP-UP PP									
		Not at all	Not quite	Neutral	Much	Very much	Not at all	Not quite	Neutral	Much	Very much	Not at all	Not quite	Neutral	Much	Very much	Not at all	Not quite	Neutral	Much	Very much	Not at all	Not quite	Neutral	Much	Very much	Not at all	Not quite	Neutral	Much	Very much	Not at all	Not quite	Neutral	Much	Very much					
1	TOPIC																																								
	1.1			X						X					X						X						X						X						X		
	1.2				X						X			X								X						X							X						X
	1.3			X						X					X						X						X						X						X		
2	SPEECHES																																								
	2.1				X					X					X						X						X						X						X		
	2.2					X				X					X						X						X						X						X		
	2.3				X					X					X						X						X						X						X		
	2.4				X					X					X						X						X						X						X		
3	CONFERENCE																																								
	3.1																																								
	3.1.1				X					X					X						X						X						X						X		
	3.1.2				X					X					X						X						X						X						X		
	3.1.3				X					X					X						X						X						X						X		
	3.1.4				X					X					X						X						X						X						X		
	3.1.5				X					X					X						X						X						X						X		
	3.1.6				X					X					X						X						X						X						X		
	3.1.7	X								X					X						X						X						X						X		
	3.1.8																																								
	3.2				X					X					X						X						X						X						X		
	3.3			X						X					X						X						X						X						X		
	3.4				X					X					X						X						X						X						X		
	3.5			X						X					X						X						X						X						X		

		Assessment grid				
		Not at all	Not quite	Neutral	Much	Very much
1	TOPICS					
1.1	The topics were relevant to me					
1.2	I was familiar with the proposed topics					
1.3	The topics offered a good overview on issues related to Passengers' flow					
2	SPEECHES					
2.1	The material used for the presentations was coherent and clear					
2.2	I would find it useful to have the presentations material available for future consultation					
2.3	The presentations were coherent with the title and the topic					
2.4	The presentations met my expectations					
3	CONFERENCE					
3.1	The conference contributed to deepen my knowledge on the topics:					
3.1.1	Multimodality					
3.1.2	European projects on mobility					
3.1.3	New scenarios on mobility (Maas, Electro-mobility...)					
3.1.4	Info-mobility					
3.1.5	Sustainable Tourism					
3.1.6	ICT Tools for Tourism					
3.1.7	E-Planning Platforms					
3.1.8	Other					
3.2	I think these topics should be more disseminated					
3.3	After the conference my knowledge on the covered topics has improved					
3.4	I am involved in these topics (e.g. in daily life/at work)					
3.5	The conference has been well organised					

5. Realization of the III Training Session (Report)

5.1 Preparation activities for the realization of the III Training Session

5.1.1 III Training Session: Identification of the Audience

To **identify audience** and **organize** the training session the most adequately, a preliminary analysis was performed. The Second Training Session, as reported, was dedicated mainly to people who already owned some knowledge on the given topics (partners, external experts, professionals and other stakeholders). To counterbalance the specific character of the Second Training Session and to maximize the spreading, the utility and most of all the engagement of the citizenship, UNITS deemed it useful to design the Third session as a Public Event.



Despite the dissemination character of the session and the attention to an audience which was not necessarily already familiar with the proposed topics, stakeholders were invited to participate in order to fulfil the goal to create and/or consolidate a network among the **project partners**, between the **local authorities**, **all the interested parties** and **the citizenship**. Description of the specific targets for the Third Training Session:

vii. Project Partners

Each partner has expertise on specific topics, thanks to their institutional field of action, the support of their Technical Assistance and the know-how gained through previous projects.

We asked the partnership to communicate some areas of expertise they own and we involved a representative as speaker at the Training Session.

We also requested the areas where they wanted to improve their knowledge. They mostly were interested in all the topics we suggested.

viii. Stakeholders

We invited some stakeholders to the training sessions and involved some of them as speakers (e.g. Port Authority of Trieste). Obviously, the stakeholders are active in the transportation or mobility field, so they already own some know-how. Although their knowledge might be positively task driven, they may lack some ground basis or some more technically specific knowledge. Addressing to stakeholders is therefore particularly tricky, since there must be a balance between concrete facts and accuracy. Topics must be captivating and useful for their daily work.

ix. Students

Students best represent the future professionals in the field of transport. The job offer environment is changing seamlessly and especially the field of transport and mobility. It is of crucial importance that students who are about to choose their career are aware of trends that are happening and will lead to future changes, so that they will be more informed and prepared professionals in the future.

x. Citizenship

Citizenship is called to respond to various responsibilities including participating in political processes and undertaking economic, social and cultural roles according to accepted norms, laws and regulations. Inform citizenship is important also in the themes of the project in fact the development of the main objective of STEP-UP will have repercussion in the way of thinking mobility both in the exceptional cases in which the citizen becomes a tourist but also in the everyday life in which the citizen moves within his city or the neighboring places for the care of himself or for work. Multimodality request an evolved way of thinking and citizenship are the first kind of audience directly involved in the concrete change that the development of multimodality will bring.

In particular, we involved:

- Target Group 8: Education and training organizations as well as universities and research institutes

A university is partner in the project and will provide training sessions, also broadcasted as live streaming, that will be attended by both project partners and all stakeholders interested on multimodal topics. Following those sessions, any other education or training organizations as well as other universities or research institutes, could replace similar initiatives, obviously with a previous agreement with the first university concerning the use of training materials.

- Target Group 1: General public

The end users are necessary to guarantee the reliability of the project after the end and they are the main target group who will give important feedback in terms of User Interface, User experience, reliability and ease to use the pilot tools. Main categories of general public identified as the most interested to the project outputs will consist of working people and tourists, but also all others citizens could obtain benefit from STEP-UP implementation.

- Target Group 2: Local, regional and national public authorities

Local, regional and national authorities, within IT-HR Programme Area, have to be considered fundamental because they represent the most important figures able both to increase the awareness about ecofriendly transportation and sustainable tourism among different subjects (potential suppliers and potential service providers) and to promote their effective realization, through the definition of useful policy initiatives and operational activities. They are amply represented in the partnership.

- Target Group 3: Regional development agencies.

Regional development agencies, as operative branches of Regional authorities, are in charge of implementing theoretical regional policies, into actual actions. For example, Regions and local authorities draws up specific Regional/Urban Mobility Plans and foresees detailed guidelines which include the increase of multimodal transport, but the risk that those indications could remain not applied is tangible if regional agencies do not take care of those guidelines.

- Target Group 5: Transport associations

Target group Transport Associations Description: Transport associations can have a primary role promoting and incentivizing the diffusion of multimodal transport systems among their participants, but often, that associations do not know enough about multimodal themes and their benefits. So, they will be addressed in particular during WP5 implementation. They will be encouraged to participate in training activities in order to improve knowledge and data analysis on multimodal transport sector.

5.1.2 III Training Session: Modality of the session

As already exposed in Chapter 2.1, about the identification of the target Audience, the III Training Session was designed as a public event.

When choosing this modality, one decisive factor was the consideration that it would be better to reach different audience targets through the three sessions because this would better convey the knowledge to very different targets with a different level of awareness. Moreover, it would have been better for dissemination purposes.

In particular, we turned to the citizens of Trieste. The implementation method can be defined as mixed.

An important role is played by the choice of location. The event was structured inside Antico Caffé San Marco, a historic cafe in the very centre of Trieste, which has recently become a literary café. Passage utilities in this location are of different nature. The usual guests of the chosen venue are families, students, workers, passersby, tourists, people with different levels of education of different professions and ages, making it the perfect venue for encountering a significant variety of citizens.

A room was set up to accommodate different types of communication and knowledge sharing channels.

The room was set up with a large desk specially designed for the speakers, with pc, microphones and a large projection screen. A series of seats have been disposed to allow the view of the screen.

Two PC stations were also set up with 2 computers each and headphones. At these stations the audience could look out to hear the recordings of the presentations of all three training sessions.

Another location was reserved for a further questionnaire “Sustainable Tourism? You can have your say”, to gather the opinions of the audience on the perception of the citizenship of mass tourism. This part was particularly important given the stress of the whole session on **Participatory Planning**. This way the Training Session would be educational not only in one way – from the lecturer to the audience -, but we would also listen to the opinions, perception and suggestions of the citizenship and gather information that will be useful in the future of the project and within future projects.

UNITS group members have remained available throughout the event to answer to all curiosities about STEP-UP and INTERREG projects.

The main language was Italian, since the expected audience was of normal citizens, but the presentations were in English with some of them with Italian subtitles and we disposed a simultaneous translation for the foreigners and the Croatian Partners who came to the event.

III Training Session: Identification of the Teachers and Experts

For the Third Training Session, the research for the speakers concentrated on selecting relators who could complete the educational path started with the First Training Session, continued with the technical deepening of the Second session.

For the third and last Training Session the speakers were chosen with the criteria of giving additional notes on the topics already started in the previous training sessions and add a future perspective on the next possible steps, therefore contributing to the sustainability, transferability and durability of the project. These speakers recorded their presentations which will be, as the previous sessions, uploaded to the Project's official YouTube channel and the link will be uploaded on the Training Sessions' webpage (www.step-up.training). For this session, in addition to the post production editing, the videos have been subtitled and made available to the public at the Third Training Session public event.

In addition to the speakers for the recorded of the presentations, we have been selecting the association FIAB, Federazione Italiana Ambiente e Bicicletta as partner in the public event of the Third Training Session. FIAB association, whose members are experts in mobility and strong territorial awareness, has been invited to participate and collaborate in the realization of the event since the citizenship has shown interest on the theme of bicycles within the city, as a green and sustainable vehicle to be considered in the frame of multimodality.

For each seminarian invited to intervene as an expert, the curriculum information of each speaker and the contents of the proposed topic are indicated below. A brief description of his actual professional role is indicated (if they are Project Partner also is specified) and brief biography summarizes the professional position and the training path of each speaker.

A brief introduction follows to each selected speaker with a short biography highlighted in gray:

To share an expert point view on tourism and mobility in general, on the role of mobility management in rural tourism and to introduce existing approaches and solutions was invited the lecture Petra Grgasović.

Petra Grgasović

Director of Erkon Ltd, an independent expert in fields of urban mobility and integrated urban development, also active as an ad-hoc URBACT expert

Petra Grgasovic is a director of Erkon Ltd and an independent expert in fields of urban mobility and integrated urban development, also active as an ad-hoc URBACT expert. During the last decade she has been working both in public and private sector, mostly on project evaluation, development and implementation, strategic planning and policy analysis. Petra is currently a PhD student in field of Geography, already holding a Master's degree in Architecture and Urban Planning and a specialisation in Eco – engineering.

It was decided to invite the expert **Vanja Lipovac** to present an introduction to participatory governance model and to introduce how to approaches and develop participatory governance in practice.

Vanja Lipovac

Consultant for EU Projects, Zadar Airport (STEP-UP project Partner)

Vanja Lipovac has master degree in cultural sociology (2015). Shortly after, he started an internship in Zadar County department for EU projects and development, where he participated on preparation and implementation of several national and international EU projects. After finishing a year of internship he started working as a project manager for „Foster children rights“ project, financed from European social funds. After the project ended, he started working as a consultant for EU project for Driope. He is mostly focused on projects regarding urban mobility, intermodality, info-mobility and sustainable development.

To introduce the theme of Sustainable Urban Mobility Planning we invited **Luca Lucietti** as renowned expert in mobility, transport and Participatory Planning.

Luca Lucietti

Civil engineer expert in mobility and transport currently in service at Roma Capitale

Luca Lucietti - Graduated in Civil Engineering (Transport) in 2001 at the University of Rome La Sapienza. He worked from March 2002 up to June 2019 in FIT Consulting srl, an Italian independent SME, where he held the role of Project Manager several projects. FIT built up remarkable national and international experience in research & innovation, demonstration and supporting action projects in mobility of people and goods. He carried out feasibility studies in the urban logistics sector for the cities of Padua, Ferrara, Parma, Frosinone and Prato. He provided technical support for the SUMP elaboration for the cities of Piacenza, Parma, Trieste and Verona, with specific focus on the reorganization of the urban goods distribution. He has lectured and trained on logistics issues in the Link University of Rome's master of sustainable mobility and logistics. He works in the Municipality of Rome (Roma Capitale) since July 1st 2019.

To enhance how ICT tools can enable and assist the transition to smart and sustainable mobility the lecturer **Alessandro Rinaldi** was invited to present the ICT tools and services developed within the European project H2020 ELVITEN.

Alessandro Rinaldi

*Research fellow and research doctor
at the Department of Electrical and Information Engineering (DEI) of the Polytechnic of Bari.*

Experience and expertise in the specific disciplinary area of IICAR 10 with particular regard to the issues of energy efficiency and sustainability of buildings, also demonstrated through active participation in national and international conferences, as well as constant scientific production with contributions to international journals. Ph.D. in Information Technology Engineering, University of Trieste (2012)

Bartolomeo Silvestri, was invited to show how new mobility technologies and concepts can improve the citizen life in the urban area.

Bartolomeo Silvestri

PhD student and research fellow in the Polytechnic University of Bari, Italy

Bartolomeo Silvestri is a third-year PhD student and research fellow in the Polytechnic University of Bari, Italy. His doctoral research investigates sustainable transport in smart cities, both for the mobility of people and for the last mile logistics. He is focusing on EVs, ELVs and new mobility concepts such as Mobility as a Service, sharing system and innovative approach to engage users. He analyzes also the transport externalities, especially in urban area and energy consumption with the use of EVs as storage in a smart city. He co-authored of several scientific papers in international conference and journal. He holds a master's degree in Management Engineering with specialization in environmental management of companies, from Polytechnic University of Bari, Italy, with a thesis on the optimization of the plants configuration for recovery and treatment of solid urban waste in metropolitan Bari area. He holds a degree in Management Engineering from Polytechnic University of Bari, Italy, with a thesis on the optimization of the train seller point in Apulia region.

To stimulate the active participation of the the citizenship in a public and transparent process, which starts from a careful analysis of reality, urban fabrics, the use of space, densities and services, two representatives of the FIAB association were invited to intervene at the public event, the president **Luca Mastropasqua** and the former public authority and today active member of the association **Jacopo Rothenaisler**. They gave an interesting insight on new perspectives, advantages and governance policy obstacles concerning cycling in a urban environment.

5.1.3 III Training Session: Presented Topics

The topics for the Third Training Session were chosen thanks to the contribution of the partners and without the need for solicitations. In fact, they have put forward some excellent proposals that are inherent and consistent with what was done previously. Other topics were chosen by UNITS as a response to participation in events related to multimodality and urban planning attended during the last year. The natural collaboration of the Project Partners was particularly important to confirm the **effectiveness of the Training Sessions**.

The Third Training Session concentrated on two main Topics related to Sustainable Tourism: Planning (especially Participatory) and E-Vehicles.

The participatory aspect is becoming more and more fundamental within the strategic mobility planning. It is no longer possible to avoid including citizens, their needs and wishes in the decisional act of designing the future of urban mobility in a sustainable way.

The presentations underlined how mobility planning can bring benefits to e.g. sustainable rural tourism (Petra Grgasović), included the aspect of governance in the Participatory planning model (Vanja Lipovac) and the contribution of SUMP (Sustainable Urban Mobility Plans) to Sustainability (Luca Lucietti).

The presentations on e-mobility included the aspects of the use of ICT tools (Alessandro Rinaldi) and the system of incentives to foster the Sharing System and the Reallocation of electric vehicles (EVs) (Bartolomeo Silvestri).

The final topics were chosen in collaboration with the lecturers invited to participate in the first training session. Below is the summary of the final presentations' titles, followed by the presentations offered during the conference.

1. **Planning mobility to support sustainable rural tourism**
2. **Participatory governance as a model for urban mobility planning**
3. **Sustainable transport and SUMP**
4. **ICT tools for a more efficient and sustainable e-mobility model**
5. **Electric Vehicles (EVs), Sharing System, Reallocation and Balancing of sharing EVs within a city through an incentive system**

5.1.3.1 Planning mobility to support sustainable rural tourism [Petra Grgasović]

The slide features a white background with a large blue wave graphic at the bottom. At the top left are the logos for Interreg Italy - Croatia STEP-UP and the European Union. At the top right is the logo for Spittsko dalmatinska županija. The main title is 'Planning mobility to support sustainable rural tourism' in a large blue font. Below it, the subtitle reads 'STEP-UP | SPLIT DALMATIA COUNTY' and 'TRAINING | SPLIT | JULY 2019'. A small speaker icon is located in the bottom right corner, and the text 'European Regional Development Fund' is in the bottom left corner.

Slide 1/28

The slide is titled 'STEP-UP TRAINING: PLANNING MOBILITY TO SUPPORT SUSTAINABLE RURAL TOURISM' at the top. It is divided into two columns by a vertical dotted line. The left column is headed 'TRAINING OBJECTIVES' with a target icon and lists four bullet points: establishing a link between tourism and transport, identifying impacts of mobility, learning about challenges and approaches, and exploring existing solutions. The right column is headed 'TRAINING TARGET GROUPS' with a group of people icon and lists five bullet points: local/regional administration, key stakeholders of transport system, public and private entities, professionals and researchers, and decision makers. The bottom of the slide contains a row of logos including Interreg Italy - Croatia, Regione Marche, Regione Emilia Romagna, and others, along with a speaker icon.

Slide 2/28

STEP-UP TRAINING: PLANNING MOBILITY TO SUPPORT SUSTAINABLE RURAL TOURISM

TRAINING STRUCTURE

PART 1	Tourism and mobility: two sides of the same coin
1.1	The interconnection of transport and tourism
1.2	Types and impacts of touristic mobility
1.3	Challenges of tourist mobility management
1.4	Integrated planning as a key starting point
PART 2	The role of mobility management in rural tourism
2.1	Urban vs. rural tourism: challenges and opportunities
2.2	Characteristics of rural areas impacting mobility / tourism
2.3	Tourist mobility management as a tool for rural regeneration
PART 3	Existing approaches and solutions
3.1	Intermodality
3.2	E-mobility
3.3	The role of ICT in supporting rural touristic mobility
3.4	Best practice examples and initiatives

Slide 3/28

STEP-UP TRAINING: PLANNING MOBILITY TO SUPPORT SUSTAINABLE RURAL TOURISM

PART 1
Tourism and mobility: two sides of the same coin

- *Definition of tourism*
- *History of tourism and transport interconnectivity*
- *Types of tourist mobility*
- *Impacts of tourist mobility*
- *Challenges of tourist mobility management*
- *Integrated planning*

Slide 4/28

1.1 The interconnection of transport and tourism: *Definition of tourism*

Tourism is defined through:

- ORIGIN
- DURATION
- MOTIVATION



There is NO
tourism
without
mobility!

1.1 The interconnection of transport and tourism: *Definition of tourism*

Tourism is defined through:

- ORIGIN
- DURATION
- MOTIVATION



There is NO
tourism
without
mobility!

1.1 The interconnection of transport and tourism: *Role of transport*

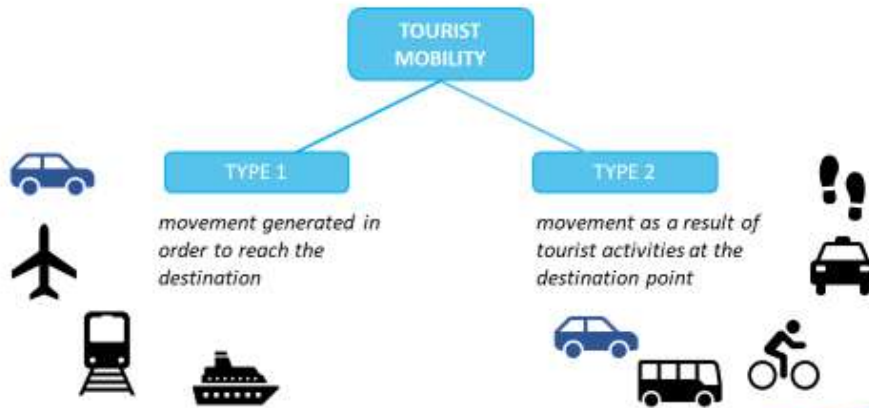
The impact of transport system development on tourism:

- accessibility of tourist destinations
- mobility within tourist destinations
- potential addition to the overall tourist offer of an area
- attractor of new businesses and services boosting local and/or regional economy



Sources of images: Shutterstock

1.2 Types and impacts of tourist mobility: *Two key mobility types*



1.2 Types and impacts of tourist mobility: *Overall impacts*

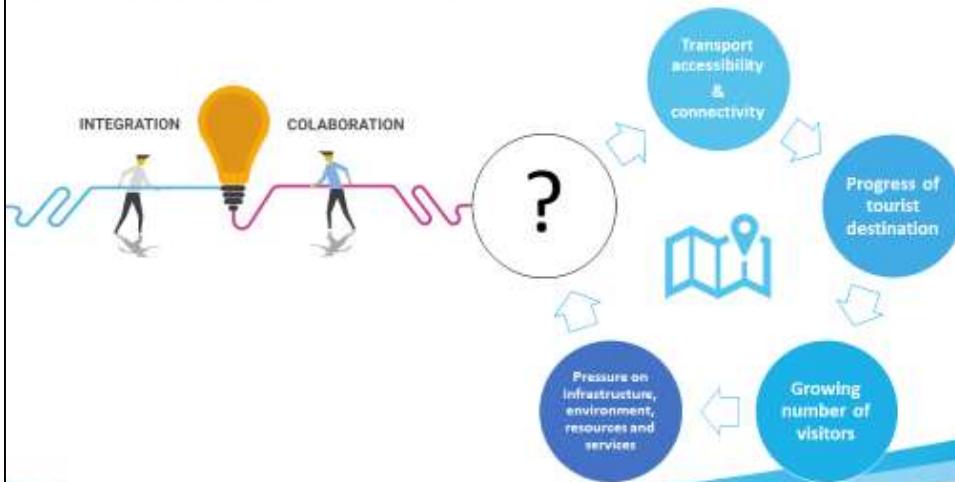


Possible negative impacts:

- air pollution
- unsustainable resource consumption (including energy and land)
- congestion
- unbalanced territorial development
- unequal distribution of tourism generated monetary benefits
- reduced quality of life for the residents (abandonment by the permanent residents)
- non-feasible infrastructural investments (seasonal use)
- inadequacy of public services and infrastructure
- damage to cultural and natural heritage
- noise pollution
- safety issues etc.

Slide 9/28

1.3 Challenges of tourist mobility management: *The missing link*



Slide 10/28

1.4 Integrated planning as a key starting point

- infrastructure and services more compatible with the sustainability demands
- rural areas more accessible and economically active, attractive to tourists and residents

LOCAL LEVEL

SUMPs
Tourism Travel Plans
?

REGIONAL LEVEL

Tourism Travel Plans
Transport Masterplans
?



„Strategies specifically designed to govern tourism demand, in order to reduce localised pressure and distribute it evenly over the destination, are not independent of policies planned for the management of the area as a whole, and particularly of transport policies.“

M. Manente, V. Minghetti and E. Celotto (2000)



Slide 11/28

1.4 Integrated planning as a key starting point: *Data collection and analysis*

- Understanding tourists' movements – a key prerequisite for the management of the economic, social, and environmental impacts of tourism
- Lack of data on multi-destination trips (including both inter- and intra-destination trips) – only origin and “main destination”
- Errors in common measurement and interpretation methodologies
- New technologies as monitoring tools (mobile phones, GPS, GIS...)
- The potential of the collected data remains unexploited.



Slide 12/28

PART 2

The role of mobility management in rural tourism

- Urban and rural tourism characteristics and trends (in terms of socio-economic context and mobility)
- Tourist mobility in urban and rural environment
- Mobility management helping rural areas
- Preconditions to successful mobility management



REGIONE MARCHE

Regione della Romagna

Provincia di...

UNIVERSITÀ POLITECNICA DI BOLOGNA

Ministero delle Infrastrutture e dei Trasporti

Ministero del Turismo

Università del Piemonte Orientale

Università del Salento

Università del Sud

Università del Trentino

Università del Friuli Venezia Giulia

Università del Molise

Slide 13/28

2.1 Urban vs. rural tourism: challenges and opportunities



URBAN



RURAL



Sources of images:
<https://www.foto-Stock.com/urban-tourism>
<https://www.foto-Stock.com/rural-tourism>
<https://www.foto-Stock.com/urban-tourism>
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<https://www.foto-Stock.com/rural-tourism>



REGIONE MARCHE

Regione della Romagna

Provincia di...

UNIVERSITÀ POLITECNICA DI BOLOGNA

Ministero delle Infrastrutture e dei Trasporti

Ministero del Turismo

Università del Piemonte Orientale

Università del Salento

Università del Sud

Università del Trentino

Università del Friuli Venezia Giulia

Università del Molise

Slide 14/28

2.2 Characteristics of rural areas impacting mobility / tourism

- Low population density
- Depopulation
- Aging population
- Low level of economic activity
- Poor accessibility to services



Image source: <http://fotoscena.com.br/?tag=comunicacao-visual-1024x768>



2.3 Tourist mobility management as a tool for rural regeneration



PART 3

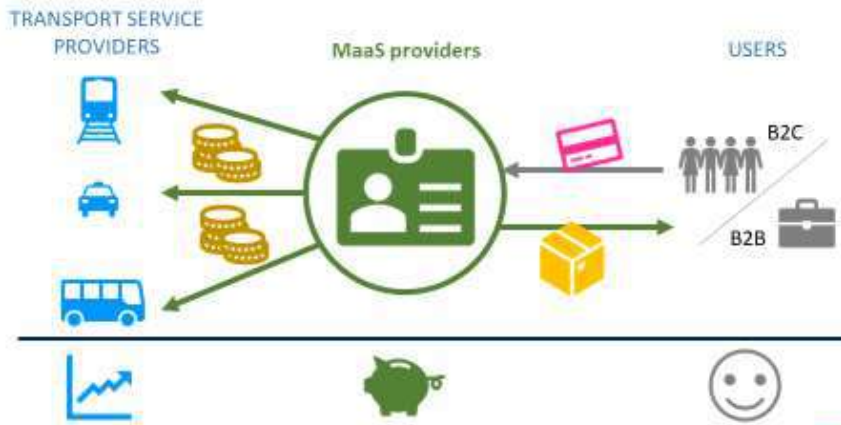
Existing approaches and solutions

- *Intermodality: potentials and prerequisites*
- *E-mobility in achieving tourism sustainability objectives*
- *The application of ICT to make tourist mobility more sustainable*
- *Project examples*
- *STEP-UP outcomes: Split Dalmatia County*



Slide 17/28

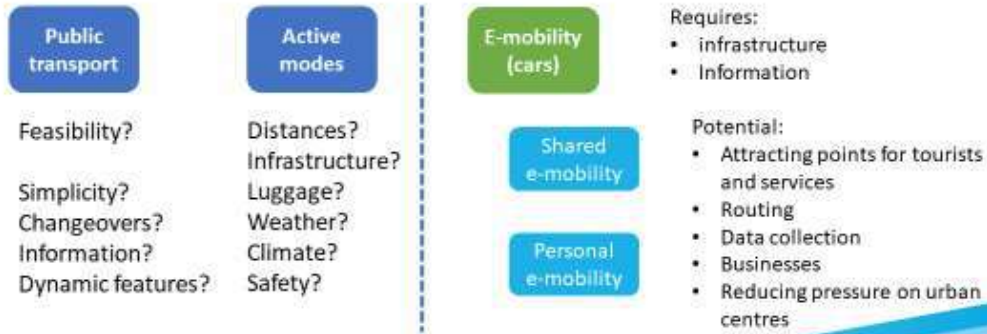
3.1 Intermodality: Potentials and requirements



Slide 18/28

3.2 E-mobility: Potentials and requirements in rural areas

- Tourism is dependent on accessibility
- Sustainable tourism includes sustainable mobility, especially in rural areas



Slide 19/28

3.3 The role of ICT in supporting rural touristic mobility



Slide 20/28

3.4 Best practice examples and initiatives: SEEMORE project (2012 - 2015)



**Sustainable and Energy
Efficient Mobility Options in
Tourist Regions in Europe**

<http://www.seemore-project.eu>

Aims:

- to increase visitors' awareness of sustainable mobility;
- to strengthen the cooperation between the mobility and tourism sectors;
- to shift travel behaviour of tourists to sustainable transport modes
- communicate and transfer experiences to other tourist regions.

Expected results:

- reduction of car use by targeted visitors for leisure trips within the SEEMORE regions;
- increase in non-motorized leisure trips amongst target groups in the SEEMORE regions;
- increase of annual public transport passengers in the SEEMORE regions;
- increase of passenger demand in rural public transport routes;
- Increase in km driven with electric vehicles
- reduction of annual primary energy use
- reduction of GHG emissions.



Slide 21/28

3.4 Best practice examples and initiatives: SEEMORE project (2012 - 2015)



**Sustainable and Energy
Efficient Mobility Options in
Tourist Regions in Europe**

<http://www.seemore-project.eu>

Aims:

- to increase visitors' awareness of sustainable mobility;
- to strengthen the cooperation between the mobility and tourism sectors;
- to shift travel behaviour of tourists to sustainable transport modes
- communicate and transfer experiences to other tourist regions.

Expected results:

- reduction of car use by targeted visitors for leisure trips within the SEEMORE regions;
- increase in non-motorized leisure trips amongst target groups in the SEEMORE regions;
- increase of annual public transport passengers in the SEEMORE regions;
- increase of passenger demand in rural public transport routes;
- Increase in km driven with electric vehicles
- reduction of annual primary energy use
- reduction of GHG emissions.



Slide 22/28

3.4 Best practice examples and initiatives: STEP-UP in Split Dalmatia County

STEP-UP project

- WP 3 Development of feasibility/executive studies on multimodal aspects
- Task 3.2 – Realization of feasibility studies and executive projects
- **D.3.2.1 FEASIBILITY STUDY FOR THE PILOT PROJECT OF INITIAL CHARGING STATIONS NETWORK ON THE TERRITORY OF SPLIT DALMATIA COUNTY HINTERLAND**

Purpose of the document:

- Definition of the locations and the key features of the initial network of e-charging stations in the rural hinterland
- Evaluation of the expected impacts of the network layout in terms of accessibility to rural destinations and an overall impact on the socio-economic development of the hinterland.



Slide 23/28

3.4 Best practice examples and initiatives: STEP-UP in Split Dalmatia County

STAKEHOLDERS

- Split Dalmatia County
- Local administration (multiple municipalities)
- Public and private service providers
- Tourist board of the Split Dalmatia County

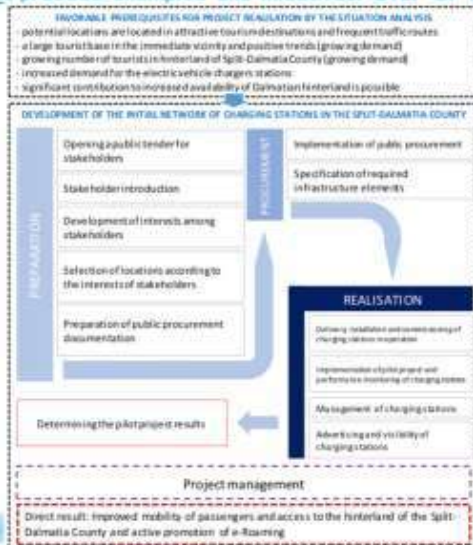
TARGET GROUPS

- permanent residents
- tourists



Slide 24/28

3.4 Best practice examples and initiatives: STEP-UP in Split Dalmatia County



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About the author/presenter



Petra Grgasović, external expert

Petra Grgasovic is a director of Erkon Ltd and an independent expert in fields of urban mobility and integrated urban development, also active as an ad-hoc URBACT expert. During the last decade she has been working both in public and private sector, mostly on project evaluation, development and implementation, strategic planning and policy analysis. Petra is currently a PhD student in field of Geography, already holding a Master's degree in Architecture and Urban Planning and a specialisation in Eco – engineering.



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5.1.3.2 Participatory governance as a model for urban mobility planning [Vanja Lipovac]

Participatory governance as a model for urban mobility planning

Presenter: Vanja Lipovac
Institution: AB-OVO I.t.d.
STEP-UP Training session III

This slide features a blue gradient background with white text. The title is centered in a large font. Below it, the presenter's name, institution, and session information are listed in a smaller font. The bottom of the slide has a decorative wavy blue border.

Slide 1/14

Participatory governance

- * The concept of participatory governance can be defined as sharing governance responsibilities among different stakeholders who have 'a stake in what happens' (Wilcox, 1994: 5).
- * Process which allows for the adoption of management models whereby responsibility is shared and decisions are taken by communities rather than by individuals

This slide has a blue header with the title 'Participatory governance'. Below the header, there are two bullet points defining the concept and describing the process. The background is white with a decorative wavy blue border at the top.

Slide 2/14

Why is participatory governance model relevant?

1. People are more and more interested in active engagement to take care for their communities
2. This model proposes more realistic problem solutions as communication between related stakeholders creates a good synergy of experiences
3. Reduces costs of planning and offers more potential for investments

Slide 3/14

Stakeholders

Administration –
National/regional/local governance

- Have the most power (legally and financially)
- Can in majority of cases directly influence the outcome of investment/proposed solution

Experts – organizations and individuals with the most expertise in a given field, artists, scientists, doctors, universities etc

- Professional insight to problem solving
- See in advance what is the best option available and how will it affect the current situation.

General public representatives – NGOs, citizen associations and citizen initiatives

- They have the most legitimation to ask for a change, as they (should) vocalize the experiences of real people regarding an issue

Slide 4/14

Stakeholder weakness

<div style="background-color: #f4a460; padding: 10px; border: 1px solid #ccc; width: 150px; margin-bottom: 20px;">Administration</div>	<ul style="list-style-type: none"> Often lack initiative Proposed solutions are not correspondent to actual problems Private interest can take over public ones Bureaucratic procedures take time
<div style="background-color: #f4a460; padding: 10px; border: 1px solid #ccc; width: 150px; margin-bottom: 20px;">Experts</div>	<ul style="list-style-type: none"> No legitimation to implement good ideas into practice No support or logistics implement these ideas
<div style="background-color: #f4a460; padding: 10px; border: 1px solid #ccc; width: 150px;">General public</div>	<ul style="list-style-type: none"> Usually no legal and financial power to make a change Lack of capacities to propose a real, sustainable proposal

Slide 5/14

Participatory governance

<div style="background-color: #f4a460; padding: 10px; border: 1px solid #ccc; width: 150px; margin-bottom: 20px;">Administration</div>	<ul style="list-style-type: none"> By working with general public representatives can get an influx of motivation as well as of the field knowledge necessary for a good solution Political engagement from public has more legitimation to steer decisions towards public interest
<div style="background-color: #f4a460; padding: 10px; border: 1px solid #ccc; width: 150px; margin-bottom: 20px;">Experts</div>	<ul style="list-style-type: none"> Legitimation from the public, legal power from the administrative institutions Operative capacities increase by working with others
<div style="background-color: #f4a460; padding: 10px; border: 1px solid #ccc; width: 150px;">General public</div>	<ul style="list-style-type: none"> They have the most legitimation to ask for a change, as they (should) vocalize the experiences of real people regarding an issue

Slide 6/14

Participatory governance

- * Participatory governance can mitigate the weaknesses of each stakeholder category by focusing on what they do the best
- * Top to bottom approach focuses more on how to solve a problem the best, by engaging general public
- * Bottom to top approach focuses more on establishing a ground network that can influence the administration

* http://participatory-governance-in-situations.net/wordpress/wp-content/uploads/2014/06/Participatory-Governance-FN_web.pdf

Slide 7/14

Participatory governance – approaches to engage the general public

1. Noticing a problem and detecting public opinion on it.
2. Stakeholder mapping
3. Discussions among stakeholders and further data collecting
4. Mutual course of action
5. Symbolic agreement for cooperation

A lot more ideas can be found here:

<https://www.civicus.org/index.php/es/centro-de-medios/recursos/manuales/611-participatory-governance-toolkit>

Slide 8/14

Participatory governance – approaches to engage the general public

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Slide 9/14

Urban mobility planning by participatory governance model

- * Main problem – traffic congestion
- * First step: detailing the scope of the problem
 - * Public questionnaires and workshops
 - * Collecting and analyzing data on traffic fluctuations (done by hired experts)



Slide 10/14

Urban mobility planning by participatory governance model

- * Basic data showed that the most congested street was Poljička street, showing signs of overcrowding even before the touristic season
- * Citizen data showed a noticeable level of dissatisfaction with traffic in general, while bicycle usage was estimated pretty low
- * The questionnaires also revealed which locations would be the most suitable for bicycle stations, which population would be most interested in public bicycle system etc

Slide 11/14

Urban mobility planning by participatory governance model

- * Stakeholders assembled commented on collected data, giving valuable new insights to the situation
- * Memorandum of Understanding was signed between City of Split and Split Parking, with the purpose of maintaining a public service a public good

Slide 12/14

Conclusion

- * Limitations of the given example
- * Urban planning responsive to actual needs
- * Participatory governance as a model to improve democracy and quality of life

Slide 13/14

Conclusion

- * Limitations of the given example
- * Urban planning responsive to actual needs
- * Participatory governance as a model to improve democracy and quality of life

Slide 14/14

5.1.3.3 Sustainable transport and SUMP [Luca Lucietti]

The slide features a white background with a large, stylized blue wave graphic at the bottom. In the top left corner, there are logos for 'interreg Italy - Croatia STEP-UP' and the 'EUROPEAN UNION'. The main title 'Sustainable transport and SUMP' is centered in a large, blue, sans-serif font. Below the title, the text 'STEP-UP | Luca Lucietti' and the date '29 July 2019' are centered. At the bottom left, the text 'European Regional Development Fund' is visible.

interreg
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EUROPEAN UNION

Sustainable transport and SUMP

STEP-UP | Luca Lucietti

29 July 2019

European Regional Development Fund

Slide 1/26

The slide has a white background with a blue wave graphic at the bottom. The title 'Table of contents' is in a blue, sans-serif font. Below the title is a bulleted list of seven items. At the bottom, there is a row of logos including 'interreg Italy - Croatia STEP-UP', 'EUROPEAN UNION', 'REGIONE MARCHE', 'Regione Emilia Romagna', and several other regional and institutional logos.

Table of contents

- Transport and mobility planning framework
- Transport and GHG emissions scenario
- How to move forward
- How to move forward: from the traditional transport planning to Sustainable Urban Mobility Planning
- How to move forward: Sustainable Urban Mobility Plan
- SUMP strategic objectives, characteristics, overall steps, measures selection
- Relevant funding opportunities
- Case studies: Sustainable Mobility Action Plan Liguria
- Case studies: MaaS

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EUROPEAN UNION

REGIONE MARCHE

Regione Emilia Romagna

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Slide 2/26

Transport and mobility planning framework

- **Mobility Master Plans (MMPs)** are intended to represent the global transport policy of a large municipality, including urban goods movements. MMPs aim to improve air quality and public health, promote accessibility and social justice, making cities more pleasant and increasing economic performance. In the UK, the equivalent document is the **Local Transport Plan**.
- National Law n. 340/2000 in Italy introduces the **Urban Mobility Plans** which include the planned interventions in the overall mobility system. Urban Mobility Plan is defined as a 10-year systematic and integrated planning instrument for managing mobility in urban areas, including infrastructural measures. It is not mandatory, but it is identified as a fundamental prerequisite for all municipalities or conurbations with populations over 100 000 in order to receive national funds to co-finance mobility projects.
- The European **"Covenant of Majors"** initiative, addressing "20-20-20" target (20% decreasing of greenhouse gas emissions by 2020 and 20% increasing of energy saving as well as using energy produced from renewable sources).
- **Sustainable Energy Action Plan (SEAP)**, according with the Covenant of Majors initiative, is aimed at describing a the set of measures and interventions in the different fields to be implemented in a concrete manner and planned timeframe.



Slide 3/26

Transport and mobility planning framework

Common strategic objectives of the **Urban Mobility Plan** are:

- satisfaction and development of mobility needs
- reduction of air and noise pollution as well as the reduction of energy consumption
- increasing transport and traffic safety
- minimizing individual usage of private car and traffic moderating
- increasing transport capacity and quality of service
- enhancing competitiveness and efficiency of public transport versus private cars
- increasing modal split towards public transport and sustainable mobility modes
- reducing traffic congestion through integrated solutions of the transport system
- encouraging use of alternative transport modes with lower environmental impact

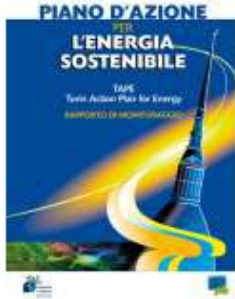
Common strategic objectives of the **Sustainable Energy Action Plan** (transport-related measures only) are:

- strategic cycle network design and cycling promotion for home-work trips
- development of a recharging network for electric vehicles
- progressive increasing of green buses in substitution to diesel buses
- using green vehicles for last-mile delivery in the city center
- promoting electric car sharing for urban and peri-urban areas
- implementation of measures aimed at facilitating traffic flows and reducing congestion
- modulation parking rates aimed at discouraging private car use in favour of public transport and cycling



Slide 4/26

Transport and mobility planning framework



Slide 5/26

Transport and GHG emissions scenario

Shares in EU transport greenhouse gas emissions in 2010 (estimates)

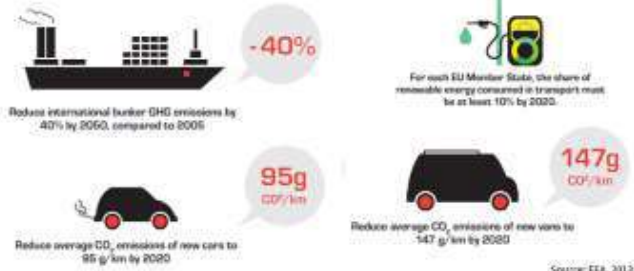
- 60 % GHG emissions from transport (inc. aviation) by 2050 compared to 1990



Slide 6/26

Transport and GHG emissions scenario

- 60 % GHG emissions from transport (inc. aviation) by 2050 compared to 1990

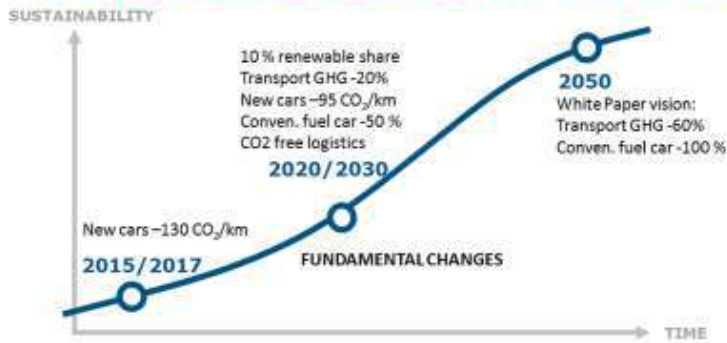


Source: EEA, 2012

European Environment Agency

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Transport and GHG emissions scenario



2015-2017: specific targets.

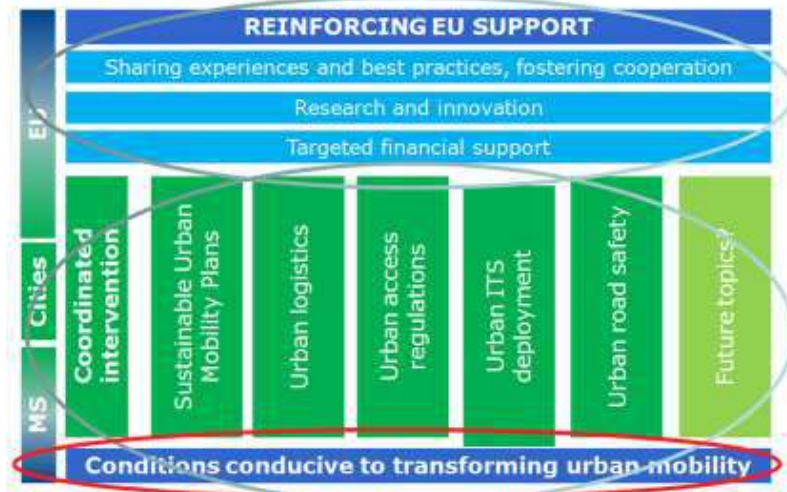
2020/2030: comprehensive policies or specific targets.

2050: long term vision.

European Environment Agency

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How to move forward



How to move forward: from the traditional transport planning to Sustainable Urban Mobility Planning

Traditional Transport Planning	Sustainable Urban Mobility Planning
Focus on traffic	Focus on people
Primary objective: Traffic flow capacity and speed	Primary objectives: Accessibility and quality of life
Model-focused	Balanced development of all relevant transport modes and shift towards sustainable modes
Infrastructure as the main topic	Combination of infrastructure, market, services, mechanisms, information, and promotion
Sectorial planning document	Sectorial planning document consistent and complementary to related policies
Short- and medium-term delivery plan	Short- and medium-term delivery plan embedded in a long-term vision and strategy
Related to an administrative area	Related to a functioning area based on travel-to-work patterns
Domain of transport engineers	Interdisciplinary planning teams
Planning by experts	Planning with the involvement of stakeholders using a transparent and participatory approach
Limited impact assessment	Intensive evaluation of impacts and shaping of a learning process

- Cities are almost always connected with areas around them by daily flows of people and goods.
- The geographic scope of a SUMP needs to be based on the "functional urban area", depending on local context, this might be a city and its surrounding peri-urban area, an entire polycentric region, or other spatial constellations.
- New business models provide "Mobility as a Service"; changing attitudes among travellers result in an increase in shared mobility and cycling.

Figure 1: Differences between traditional transport planning and Sustainable Urban Mobility Planning

How to move forward: Sustainable Urban Mobility Plan

European Platform
of Sustainable Urban
Mobility Plans



Guidelines for Developing and
Implementing a Sustainable Urban
Mobility Plan (Second Edition)

First Draft for SCMP Consensus,
12 June 2019

The 12 Steps of Sustainable Urban Mobility Planning (SUMP 2.0) – A decision maker's overview



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REGIONE
MARCHE

Regione Emilia Romagna

City of Rome

Regione Lombardia

Local Mobility Authorities

Interreg

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Sustainable Urban Mobility Plan: strategic objectives

A Sustainable Urban Mobility Plan is a strategic plan designed to satisfy the mobility needs of people and businesses in cities and their surroundings for a better quality of life.

It builds on existing planning practices and takes due consideration of integration, participation, and evaluation principles

- Sustainable Urban Mobility Planning focuses on a process that can support the required "step change" to cope effectively with the complex problems that cities are facing.
- A sustainable transport system should meet the following basic **criteria** :
 - Is accessible and meets the basic mobility needs of all users
 - Balances and responds to the diverse demands for mobility and transport services by residents, businesses and industry
 - Guides a balanced development and better integration of the different transport modes
 - Meets the requirements of sustainability, balancing the need for economic viability, social equity, health and environmental quality
 - Optimises efficiency and cost effectiveness
 - Makes better use of urban space and of existing transport infrastructure and services
 - Enhances the attractiveness of the urban environment, quality of life, and public health
 - Improves traffic safety and security
 - Reduces air and noise pollution, greenhouse gas emissions, and energy consumption
- Contributes to a better overall performance of the trans-European transport network and the Europe's transport system as a whole.

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REGIONE
MARCHE

Regione Emilia Romagna

City of Rome

Regione Lombardia

Local Mobility Authorities

Interreg

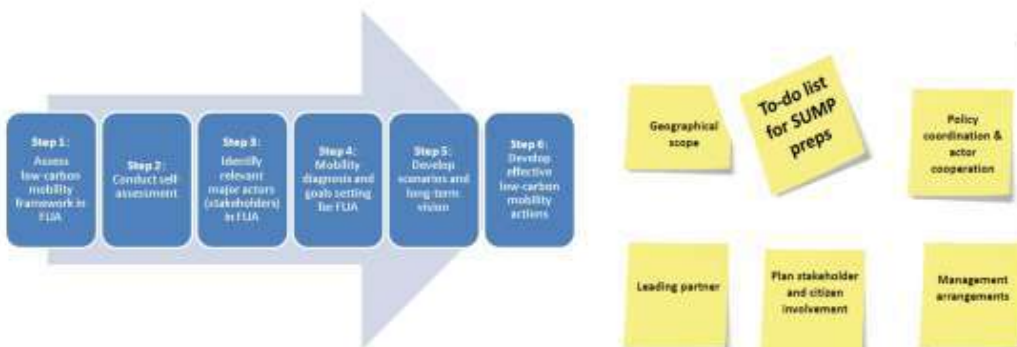
Slide 12/26

Sustainable Urban Mobility Plan: characteristics

- A **clear vision, objectives and a focus on achieving measurable targets** that are embedded in an overall sustainable development strategy
- A **long-term vision and clear implementation plan**. A long-term strategy and a plan for short-term implementation, specifying the timing for implementation, clearly allocating responsibilities and identifying resources and finances
- A **participatory approach** that involves citizens and stakeholders from the outset and throughout the planning process
- A **pledge for sustainability** to balance economic development, social equity and environmental quality
- An **integrated approach** that considers practices and policies of different policy sectors, authority levels, and neighbouring authorities
- A **review of transport costs and benefits**, taking into account wider social costs and benefits



Sustainable Urban Mobility Plan: overall steps



Sustainable Urban Mobility Plan: overall steps



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Sustainable Urban Mobility Plan: measures selection



Slide 16/26

Relevant funding opportunities

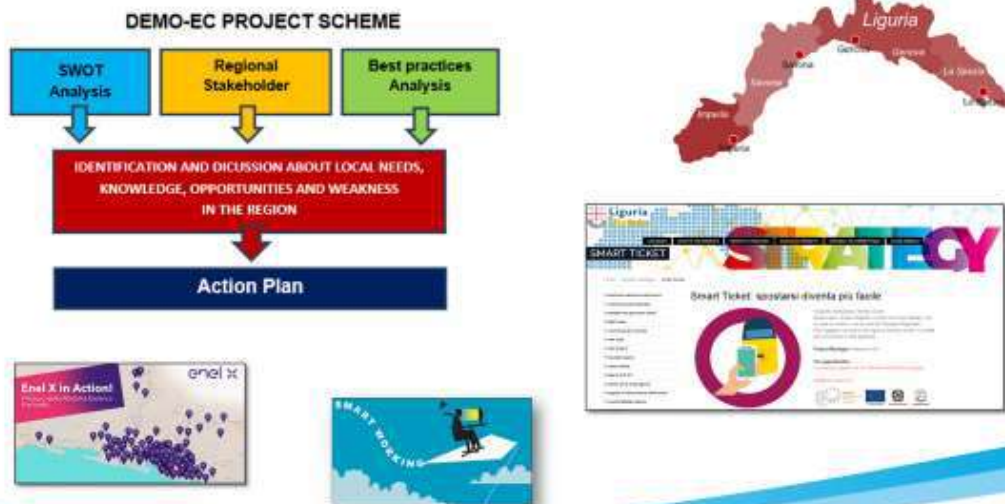
- **HORIZON 2020**
- **European Structural and Investment Funds**
 - Some 8 billion Euros were allocated for urban mobility projects over 2007-2013
- **Connecting Europe Facility (CEF) funds for TEN-T projects (Trans-European Transport Network)**
- **EIB (European Investment Bank) loans and other financial products**
- **INTERREG programme, CENTRAL EUROPE**, for regional sustainable development projects
- **LIFE+ programme**, for sustainable development projects



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Case studies: Sustainable Mobility Action Plan Liguria



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Case studies: Sustainable Mobility Action Plan Liguria

Car reduction

The Regional Government improve policies as guidelines aimed to reduction of car use as issue in different local reality (pedestrian and cycling zones):

- **PEDIBUS:** In many areas of the cities is active the modal shift from car to walking in home-to-school daily trips in different cities in the Region (from 2013)
- **RETE CICLABILE LIGURE (RCL) network** with 5 cycle routes in the region to connect Italian and European cycle networks

In Liguria Region a lot of walking/cycling paths are old railway lines not used for several years



Smart Ticket

Slide 19/26

Case studies: Sustainable Mobility Action Plan Liguria

E-mobility

Project at Regional Level

"Progetto Mobilità Sostenibile Genova e Savona"

OBJECTIVES

Definition of the optimal position of the charging stations and installation.

In 2014: project approved by the Region within PNIRE programme

In 2015: Memorandum of Understanding between the municipalities of Genova, Arenzano, Cogoleto, Cairo Montenotte, Savona

In 2018 (May): end of design phase → Within 2019 installation of new 22 charging stations



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Case studies: Sustainable Mobility Action Plan Liguria

E-mobility Incentives for E-mobility



OBJECTIVE: Create a sustainable development model for improve environmental condition in urban areas with economic incentives for citizens

- **Car tax exemption for electric and hybrid cars for 5 years**, the longest exemption for hybrid cars in the north of Italy
- **Free parking pass for electric vehicles in Blu Area park** in Genova and urban goods vehicles access in LTZ (Limited Traffic Zone)
- **Scrapping incentive in Genova** for electric scooter and bike (December 2017)



- **Free parking pass for electric vehicles** in municipality area of **La Spezia**
- **Electric cars** (8 cars, 16 charging/parking stations) and **electric bikes** (25 bikes) available for employees of Municipality of **La Spezia**



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Case studies: MaaS

Mobility as a Service (MaaS) is a mobility distribution model in which customer's major transportation needs are met thanks to one single integrated service provider combining transportation infrastructures, travel information, payment services and more.

(Source: M. FINGER (2015) 'Mobility as a service: from the regulation of transport to the regulation of transport as a service', European Transport Regulation Observer)

- MaaS is a paradigm change in transportation towards offering personalized and smart mobility services reflecting users' different needs
- MaaS is to be the best value proposition for its users, providing an alternative to the private use of car that may be as convenient and more sustainable
- MaaS is all about multimodal passenger transport, shared mobility, multimodal traveler information, integrated booking/ticketing/payment, etc.
- MaaS is fed by scheduled public transport services, parking, private sharing mobility services, on-demand public transport services, etc.



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Case studies: MaaS



Expected impacts of Mobility as a Service:

- reducing private car use
- decreasing private car ownership
- facilitating behavioural change towards sustainable mobility modes
- increasing collective passenger transport use and ride sharing
- reducing CO2 emissions
- reducing congestion and traffic levels
- increasing public transport system's revenues by reaching new customers
- improving attractiveness of PT system
- increasing of PT commercial speed

Known barriers and obstacles to collaboration in MaaS ecosystems

- The perceived risk of cannibalisation
- The perceived risk to brands
- The perceived risk of losing existing customer relationships
- The lack of a shared vision for MaaS
- A lack of understanding of what MaaS is within key organisations
- The pervasive role of existing roles and identities
- Misaligned values within different organisations
- Uncertainties regarding the MaaS business case and associated business models
- A lack of key competencies within certain organisations
- The lack of an entrepreneurial mindset, or "not invented here" syndrome
- A lack of understanding related to users' wants and preferences
- A lack of understanding related to key customer segments
- A lack of understanding related to willingness-to-pay and overall market demand for MaaS



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Case studies: MaaS in the city of Turin



The City's Department of Mobility supports the implementation of experimentation activities and defines policies and guidelines to regulate the entire process.



URBI supplies MaaS technology and signs commercial agreements with mobility operators integrated into the MaaS platform.



Tonic Wireless supports the coordination among stakeholders, the feasibility and operational implementation of the Living Lab.



ST facilitates the technical integration of the systems and manages the operation of the Living Lab.

URBI business as MaaS platform for companies in the target FUA of Turin

Mobile app (Android and iOS) of the MaaS platform for companies to:

- o search on map the nearest vehicle (ride sharing, taxi, car sharing) and bike sharing
- o compare by time or costs
- o reserve (and open) the chosen vehicle and bike
- o buy integrated public transport tickets



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Case studies: MaaS in the city of Turin

The MaaS Technology Platform [IMOVE]



The City of Turin is testing the technology platform, accessed - for free for the entire duration of the LI through a mobile app:

Route planner, booking and payment (and validation) for the following means of transport: local public transport, bike sharing, car sharing, taxi;

Collection of anonymous and aggregated data on users, regarding use of the app, mobility choices made, kilometres travelled;

Monthly corporate billing for costs for work to work mobility-job of employees, during the trial period.

travelling by

In collaboration with WADH partner:



(...by now!)



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Slide 25/26

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🌐 www.italy-croatia.eu/acronym



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Slide 26/26

5.1.3.4 ICT tools for a more efficient and sustainable e-mobility model [Alessandro Rinaldi]

The slide features a black background with a diagonal grey stripe. In the top right corner, there are logos for 'Interreg Italy - Croatia STEP-UP' and the 'EUROPEAN UNION'. The title 'ICT tools for a more efficient and sustainable e-mobility model' is written in green text. Below the title, the presenter's name 'Eng. Alessandro RINALDI, PhD' and affiliation 'Polytechnic University of Bari' are listed. At the bottom left is the Polytechnic University of Bari logo, and at the bottom right is the 'LCA Laboratory of Control and Automation' logo.

Slide 1/25

The slide has a black header with the word 'Introduction' in white. The 'Interreg Italy - Croatia STEP-UP' and 'EUROPEAN UNION' logos are in the top right. The main content consists of three bullet points. The first bullet point states that the evolution of mobility requires attention to city needs. The second bullet point mentions the United Nations Agenda 2030 and its goal to improve urban quality of life. The third bullet point notes that cars are the most frequent mode of transport in Europe and lists three characteristics: inefficient transport systems, urban traffic congestion, and air/noise pollution.

Introduction

- **The evolution of mobility in a sustainable perspective requires specific attention to issues closely related to the changing needs of cities and public policies.**
- **This change is also imposed by** United Nation Agenda 2030 focusing on the several sustainable development goals linked to **improve the quality of life in urban area.**
- Studies show that, in European Countries, **the most frequent trip is made by car** and it is characterized by:
 - transport systems not efficient;
 - negative effects such as urban traffic congestion, parking shortages;
 - air pollution and noise pollution.

Slide 2/25

Introduction



- The transition to alternative mobility meets the **objectives of decarbonisation, decentralization and digitalisation.**
- In addition to the reduction of CO2 emissions and a clear improvement in air quality, a transport revolution based on more sustainable patterns and mobility habits and low environmental impact technologies has important repercussions not only in the environmental but also in the social sphere..
- In the field of mobility, a new transport mode is emerging, more based on access to services rather than on the use of a vehicle owned by the company.
- In this context, the **Sustainable Mobility** can allow the reduction of the negative effects inside the city area and to create a real smart city.

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Slide 3/25

Mobility in Smart Cities



SMART CITY DEFINITION (EU)



The new vision of mobility is characterized by “**smart**” systems which improve the urban traffic and the inhabitants’ mobility. These systems are focused on **sustainability, innovation and safe transport.**

Slide 4/25

ICT in Electro-mobility



- Modern ICT solutions allow significant improvement in the mobility sector, especially for electro-mobility and sharing systems.
- **The ICT tools allow to incentivize and facilitate the use of Electric Vehicles (EV)** by providing services such as booking and brokering, charging station, parking spots, as well as payments and vehicle monitoring.

Slide 5/25



The ELVITEN project

Slide 6/25

ELVITEN at a glance



Electrified L-category Vehicles Integrated into Transport and Electricity Networks (ELVITEN)



Call identifier: H2020-GV-2017

Topic: GV-10-2017
"Demonstration (pilots) for integration of electrified L-category vehicles in the urban transport system"

EC funding: 7,840,648,75€

Duration: November 2017 – October 2020

Demonstrations in **Six** European Cities

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Slide 7/25

ELVITEN Strategic Objectives



- Develop **replicable usage schemes** of EL-Vs for owners, sharers and light goods deliverers based on the deployment of:
 - EL-Vs **innovative parking and charge services** (including e-charging hubs, integration of public and private charge points in Brokering service, interoperable eRoaming platform)
 - EL-Vs **sharing and rental services**
 - **Support ICT tools to facilitate the usage** of EL-Vs (Brokering service to book and pay, Management system for the e-charging hubs) and **support ICT tools to motivate** the usage (Fleet Monitoring application with Digital Coach app, Serious Game app, Incentives Management Smart Card).
 - **Appropriate policies and incentives**
- Organise **long-term demonstrations** of the ELVITEN usage schemes in **6 Cities**



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Slide 8/25

ELVITEN Strategic Objectives



- Create a **big data bank of real driving and usage data** and users' experiences and opinions
- Derive **guidelines** towards EL-V manufacturers and Planning Authorities
- Develop **business models** for EL-V sharing, rental, parking and charge services
- Achieve a mind-shift among users, so that they become **e-Owners**, **e-Sharers** or **e-Deliverers**.



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The ICT tools

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Slide 10/25

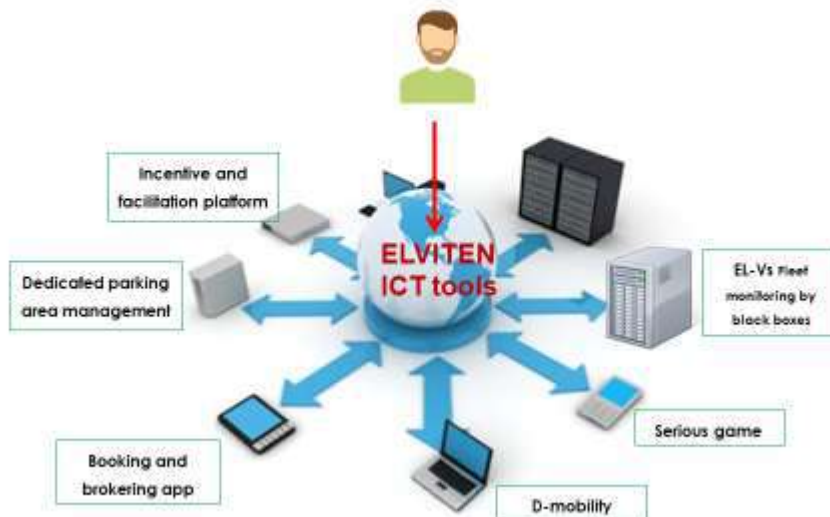
Methodology

- **Study of the actual context**, by analysing the existing ICT assets available in each city for the EL-Vs management.
- **Identification**, on the basis of the foreseen EL-Vs usage schemes, the types of EL-Vs, and other facilities (e-hub), **of the required ICT assets** to be deployed in each city.
- **Definition of the ICT functionalities** to be adapted and implemented, by identifying interactions between the various service providers.
- **Develop, adapt and deploy existing ICT tools**, applications and services.
- **Set-up the infrastructure for the proper data collection** during the demonstration

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Slide 11/25

The ELVITEN tools



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Slide 12/25

Booking app

End user: ELVITEN short-term (sharing) EL-Vs drivers

Main Goals:

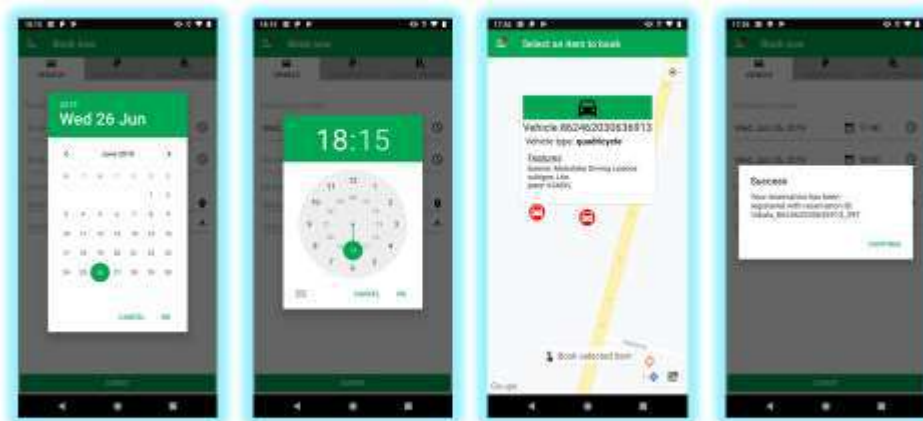
- Allow ELVITEN users to book resources with a handheld device

Features:

- Book vehicles
- Book charging points
- Book parking spaces
- Cancel bookings
- Fill in questionnaires



Booking app



Digital Coach app

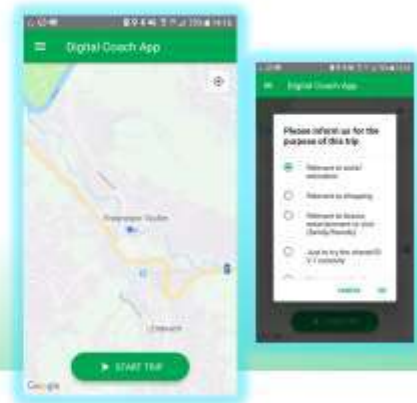
End user: ELVITEN registered user

Main Goals:

- Collect trips' data
- Collect questionnaires

Features:

- User-reported trip start / stop
- User-reported trip purpose
- Fill in app-related questionnaires
- Discover trip score
- Access historical data (trips and score history)



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Slide 15/25

Digital Coach app



Questionnaire
overview page



Trip feedback
questionnaire



Trip score

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Slide 16/25

Fleet Monitoring tool

End user: ELVITEN city operator

Main Goals:

Provide a GUI to visualize EL-Vs on a map.

Features:

- Visualize black box data in real time
- Localize vehicles on a map
- See driven routes



Detailed view on vehicle

Serious Game

End user: ELVITEN registered user

Main Goals:

- Engage users into the project via gaming
- Collect questionnaires

Features:

- Show data regarding the City and Electric Light Vehicles
- Ask questions to gain points
- Collect points to reach achievements
- Reach point of Interest in the city to discover the city
- Fill in app-related questionnaires



Serious Game



Incentive Smart app

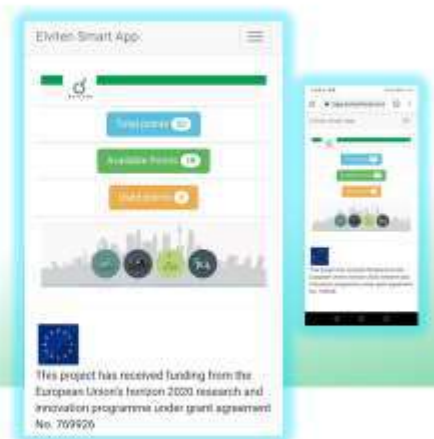
End user: ELVITEN registered user

Main Goals:

- Incentivize the use of ELVITEN services
- Collect questionnaires

Features:

- Discover rewarded actions (rules)
- Browse and claim awards
- Monitor available and used points
- Access historical data (rewarded actions and vouchers)
- Fill in app-related questionnaires



Incentive Smart app



Menu

Descrizione	Punti	Città
Ricerca	4	genoa
Questionario sul background a Genova	5	genoa
Questionario sulla esperienza di viaggio a Genova	5	genoa
Questionario sulla partecipazione agli ELVITEN ICT-soci a Genova	5	genoa
Questionario sui veicoli leggeri elettrici privati a Genova	5	genoa
Questionario sui veicoli leggeri elettrici aziendali a Genova	5	genoa
Setout Game	1	genoa
Kin	3	genoa

Rules and corresponding points (Italian, Genoa)

Incentive Administration Console

End user: City Operators only

Main Goals:

- Manage the incentive settings and objects:
 - Rules
 - Incentives
 - Awards (verifiable by awards provider)

Features:

- Customize City-specific rules, needed to gain points
- Define the awards that can be obtained for each City
- Manage general incentive settings





List of rules of type
"recharge"



Insert/editing rule of
type "Km Travelled"

In the smart mobility context, the ICT solutions:

- allow significant improvement in the mobility sector;
- **incentivize and facilitate the use of Electric Vehicles (EV)** by providing different services;
- **ensure high flexibility** in order to sustain a good and motivating experience for EL-Vs users.
- allow the transition to the smart mobility by improving the urban traffic and mobility on the basis of sustainability, innovation and safe transport.

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Slide 25/25

5.1.3.5 Electric Vehicles (EVs), Sharing System, Reallocation and Balancing of sharing EVs within a city through an incentive system

*Electric Vehicles (EVs),
Sharing System,
Reallocation and
Balancing of sharing
EVs within a city through
an incentive system*

Eng. Bartolomeo SILVESTRI, PhD candidate
Polytechnic University of Bari



Slide 1/35

Mobility issues



Slide 2/35

Transport Externalities

- Air pollution
- Climate change
- Congestion
- Noise pollution
- Accidents
- Infrastructure wear and tear
- Land use
- Oil dependence

Slide 3/35

Transport Externalities in Urban Areas

Different approaches to negative impacts proposed in some EU projects:

- **Environment** (air and noise), **Energy** (consumption) and **Economy** (transport efficiency, safety, land use and urban planning)
- **Travel time, employment, road safety and environmental pollution**
- **Economic, environmental and social**
- **Environmental and quality life** (air pollution, noise, traffic and road deaths)

Slide 4/35

Transport Externalities in Urban Areas

Mobility produce positive impacts and negative impacts (externalities).

These negative impacts are mainly related to:

- Number of km travelled
- Number of people
- Emission factors of i-th transport mean given transport speed (vehicle technology and driving behaviour influenced primarily the factor)
- Average speed

Slide 5/35

Innovations

New Technologies

- EVs
- ICT systems and tools
- Smartphones

New mobility concept especially in urban area

- Mobility as a Service (MaaS)
- Sharing systems

Innovative mobility strategies

- Incentive system
- Gamification

Slide 6/35

Electric Vehicles (EVs) in urban area



Slide 7/35

Electric Vehicles (EVs) in urban area

EVs	On the road	Mainly widespread vehicles. There are different types and sizes.
	Water	Not very common as they can be used in the cities with waterways.
	Air	In the experimental phase, especially small and unmanned aerial vehicle (UAV)

Slide 8/35

Electric Vehicles (EVs) in urban area

EVs	BEV	Battery Electric Vehicle (electricity only)
	HEV	Hybrid Electric Vehicle (electricity, petrol/diesel)
	PHEV	Plug-in Hybrid Electric Vehicles (electricity, petrol/diesel)
	E-REV	Extended Range Electric Vehicles (electricity, petrol/diesel)
	FCEV	Fuel Cell Electric Vehicles (electricity, hydrogen)

Slide 9/35

EVs on the road in urban area

EVs	Pedalec	Cycle with pedal assistance equipped with an auxiliary electric < 250 W, cut off when cyclist stops pedalling and/or vehicle speed reaches 25 km/h
	E-scooter, segway and hoverboard	New urban means of transport for passenger transport. Fast, agile, light and easy to carry.
	E-car	Different technologies developed for EVs for passenger transport
	E-Van	EVs for utility purposes
	ELVs (L1e – L7e)	<p>L1e: L1e-A (powered cycle) and L1e-B (two-wheel moped)</p> <p>L2e: L2e-P (three-wheel moped for passenger transport) and L2e-U (three-wheel moped for utility purposes)</p> <p>L3e: L3e-A1 (low-perform.), L3e-A2 (medium-perform.), L3e-A3 (high-perform. motorcycle), L3e-A4E (enduro motorcycle) and L3e-A4T (trial motorcycle)</p> <p>L4e: two-wheel motorcycle with side-car</p> <p>L5e: L5e-A (tricycle) and L5e-B (commercial tricycle)</p> <p>L6e: L6e-A (light on-road quad), L6e-BP (light quadri-mobile for passenger transport) and L6e-BU (light quadri-mobile for utility purposes)</p> <p>L7e: L7e-A1 (A1 heavy on-road quad), L7e-A2 (A2 heavy on-road quad), L7e-B1 (all terrain quad), L7e-B2 (side-by-side buggy), L7e-CF (heavy quadri-mobile for passenger transport) and L7e-CU (heavy quadri-mobile for utility purposes)</p>

Slide 10/35

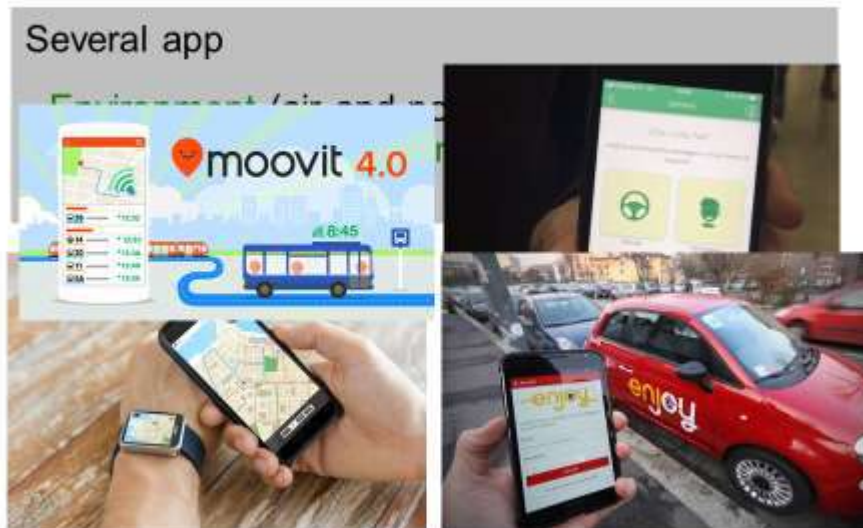
ICT systems and tools



Slide 11/35

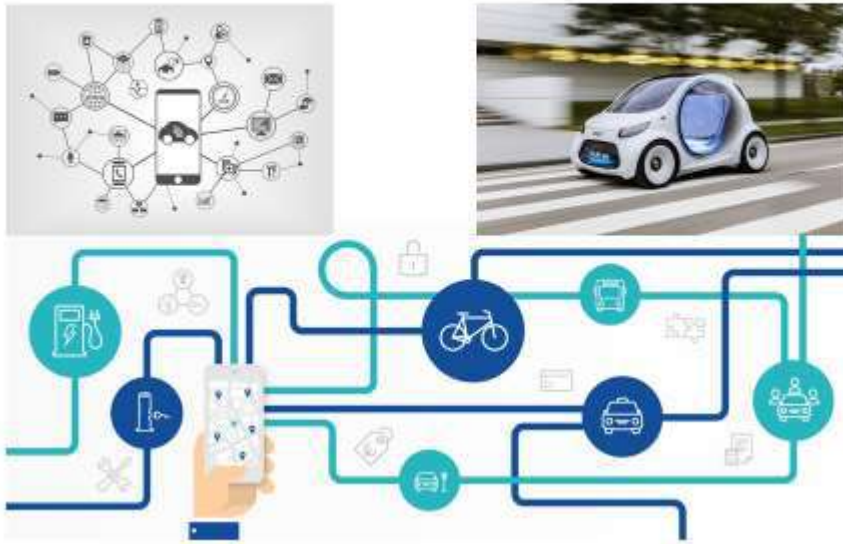
Smartphones

Several app



Slide 12/35

MaaS – Mobility as a Service



Slide 13/35

Sharing System



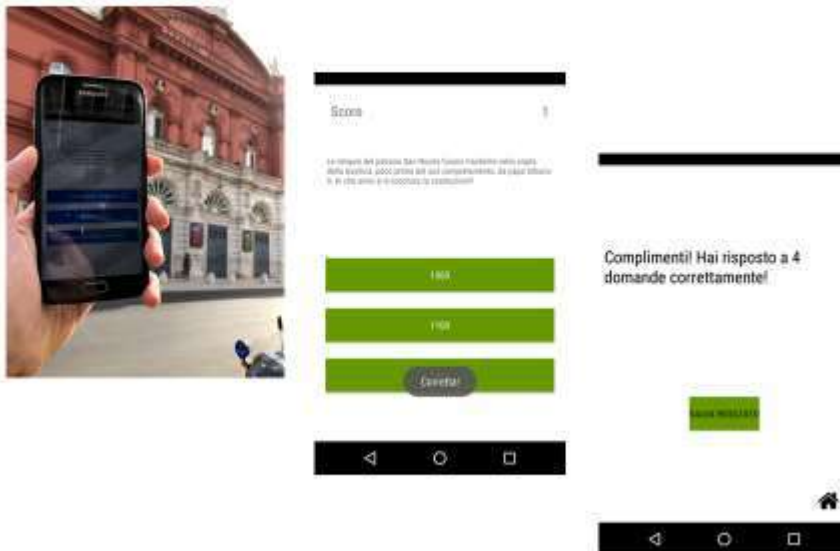
Slide 14/35

Incentive system



Slide 15/35

Gamification



Slide 16/35

Sharing System with EVs

- Station based

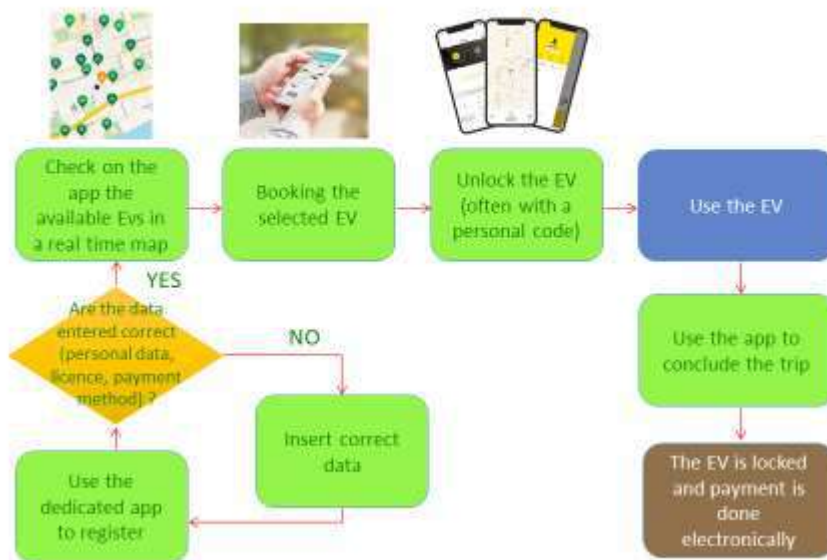


- Free floating



Slide 17/35

Sharing System with EVs



Slide 18/35

Issues of Sharing System with EVs

- Ensure the EVs availability in different city areas
- EVs charging activities
- Reallocation activities
- Stations location and permitted area of use
- Charging points location
- Charging time (EVs availability)

Slide 19/35

Reallocation activities in a sharing system with EVs

Reallocation activities

- Move EVs from one station/area to another in order to ensure the availability in all the urban areas. It is important for a high level of service for users which alternatively they would not use it more.
- Charging the EVs in order to guarantee the minimum EV autonomy to reach the destination
- The sharing company ensures this service with its staff. This service is an operative cost.
- The reallocation activities are expensive because are proportional to the number of reallocation, but moving the EVs to the most demands areas, at different times of day, ensures an increase in profits.
- Innovative approach could increase profits and reduce costs.

Slide 20/35

Positive Incentive

Concept of "Nudge" defined in Behaviour Economics

"SET OF MATERIAL AND VIRTUAL OBJECTS THAT HELP MODIFYING THE MOBILITY BEHAVIOUR TO OBTAIN REDUCTION OF DRIVING AND/OR USE OF ALTERNATIVE MODES"



Slide 21/35

Advantages to introduce Incentive System to reallocate sharing vehicles with user involvement

- Reduction of reallocation costs for the sharing company
- Engage users to the sharing system with reward to be used for mobility services
- Reduction GHG emission and negative impacts (Externalities) due to vehicles involved in the reallocation service by company staff



Slide 22/35

Design of an Incentive System



Slide 23/35

Reallocation and balancing of shared vehicles through an incentive system

- Propose the reallocation service to users in exchange for an incentive
- Incentive based on 3 ranges of values (all values are lower than the reallocation cost faced by the sharing company)
 - User 1 -> 50% of company reallocation cost
 - User 2 -> 70% of company reallocation cost
 - User 3 -> 90% of company reallocation cost
- Acceptance of users based on probability

Slide 24/35

Innovative approach to the reallocation activities in a sharing system with EVs

Goal

Minimization of reallocation costs

ASSUMPTION and DATA:

- Consider a EVs (or ELVs) sharing system **station based** (or restricted areas as few blocks)
- **Distances and costs** in the reallocation service defined
- **Max and min number** of EVs (or ELVs) defined in each station to be balanced
- **Number of EVs (or ELVs) in charging** during the reallocation defined
- All the EVs (or ELVs) performing a trip during the reallocation are not considered
- Number of EVs (or ELVs) in each station before the reallocation is known

Slide 25/35

Data and decision variables



$$C_{i,j}$$

	1	2	...	n
1	-	5	4	9
2	5	-	7	10
...	4	7	-	3
n	9	10	3	-

C : reallocation cost to move one vehicle from the one station to an other station (data)

X : vehicle reallocated by the sharing company from a station/area to an other station/area (decision variables)

\hat{S} : number of vehicles in a station/area before the optimization (data)

S : number of vehicles in a station/area after the optimization (decision variables)

Slide 26/35

Model of minimization of the reallocation costs service

Objective Function:

Minimization the total reallocation costs related to the distance to move the EVs from one station to an other

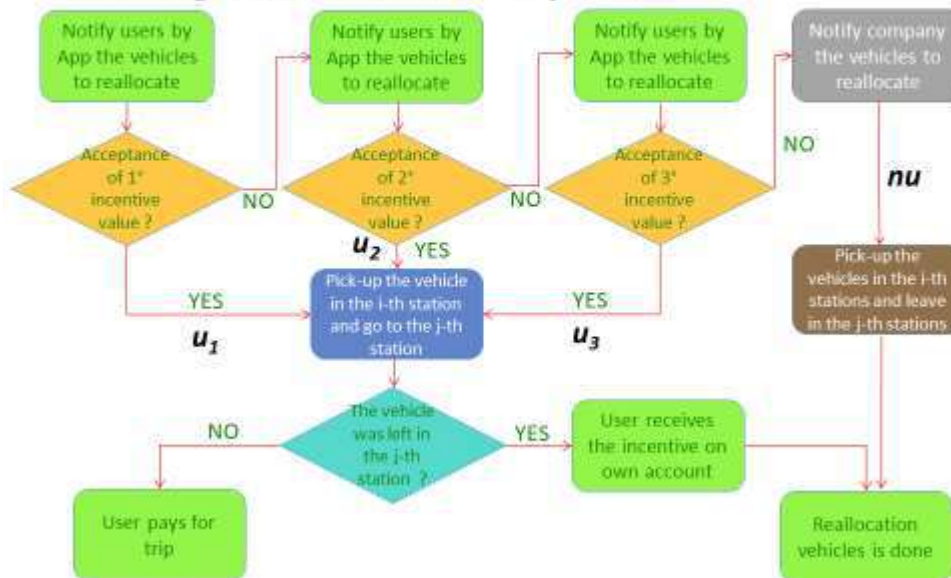
Subject to constraints:

- total number of EVs is the algebraic sum of the EVs leaving each station and those entering
- Min number of EVs in each station
- Max number of EVs in each station
- EVs in charge not considered in the reallocation process*

*This constraint is not present in the case of ELVs that are reallocated by van (such as: e-bikes, etc.)

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Process of the reallocation vehicles through an incentive system



Slide 28/35

Model of reallocation costs minimization with incentive system for users

Objective Function:

Minimization the total reallocation costs related to the distance to move the EVs from one station to an other, also considering the users reward

Subject to constraints:

- total number of EVs is the algebraic sum of the EVs leaving each station and those entering, also considering the reallocation by users
- Min number of EVs in each station
- Max number of EVs in each station
- Acceptance rate of users in the reallocation process
- EVs in charge not considered in the reallocation process*

*This constraint is not present in the case of ELVs that are reallocated by van (such as e-bikes, etc.)

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Simulation with electric car sharing system

Assumptions and data

6 stations

60 electric car

$i \in \{1, \dots, 6\}$

$j \in \{1, \dots, 6\}$

$k \in \{1, \dots, 60\}$

User acceptance constraints:

$u_1 = 1$

$u_2 = 2$

$u_3 = 4$

Recharge constraint:

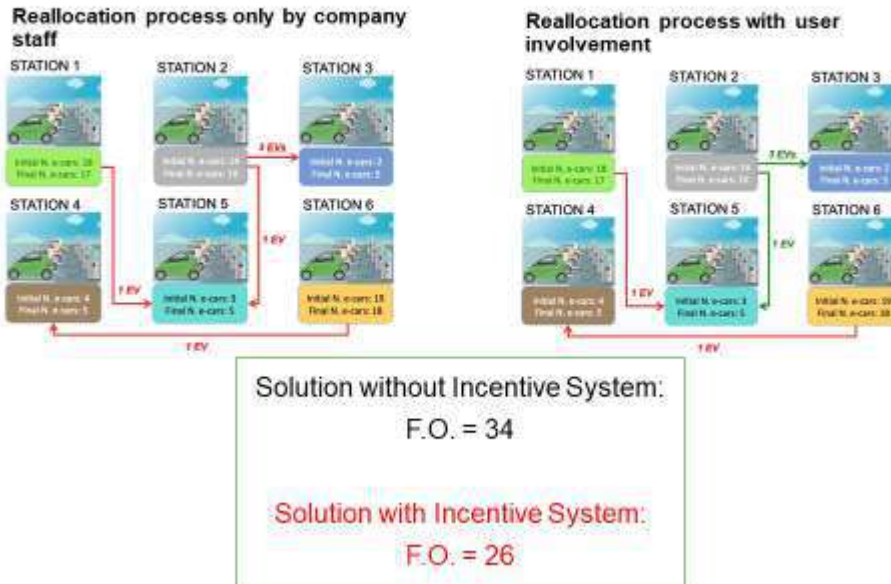
$X_{i,j,k,u} = 0 \quad \forall k = 2, 5, 7, 19, 30, 35, 36, 45, 47, 50, 56, 59$

Distance costs

	1	2	3	4	5	6
1	-	5	8	4	4	9
2	5	-	6	7	10	10
3	8	6	-	3	8	5
4	4	7	3	-	3	2
5	4	10	8	3	-	4
6	9	10	5	2	4	-

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Simulation with electric car sharing system



Slide 31/35

Simulation with electric bike sharing system

Assumptions and data

6 stations

60 electric bike

$i \in \{1, \dots, 6\}$

$j \in \{1, \dots, 6\}$

$k \in \{1, \dots, 60\}$

User acceptance constraints:

$u_1 = 1$

$u_2 = 2$

$u_3 = 4$

Recharge constraint:

$X_{ij,k} = 0 \quad \forall k = 2, 5, 7, 19, 30, 35, 36, 45, 47, 50, 56, 59$

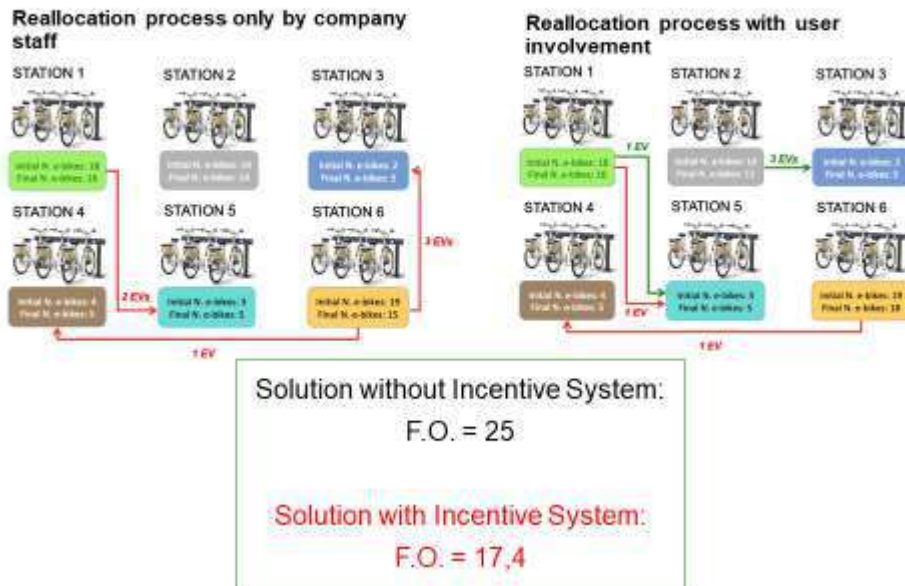
Distance costs

	1	2	3	4	5	6
1	-	5	8	4	4	9
2	5	-	6	7	10	10
3	8	6	-	3	8	5
4	4	7	3	-	3	2
5	4	10	8	3	-	4
6	9	10	5	2	4	-

Recharge constraint is not applied in the case of reallocation by company staff

Slide 32/35

Simulation with electric bike sharing system



Slide 33/35

Conclusions

- The innovative EV reallocation approach to minimize the relocation cost for the sharing company on the basis of user involvement by means of an incentive scheme is presented
- The cost of reallocation with users involvement is always lower than that without users or at least is the same (in the simulation we observed about 20-30 % of decreased)
- The problem with the use of ELVs that are reallocated by van (such as: e-bikes, e-scooter, etc.) has all feasible solutions
- The problem with other ELVs or EVs can admit no solution
- User acceptance is based on probability (human behaviour)
- Incentive can be economic (money) or awards (free minutes for mobility sharing, season ticket, etc.). The second choice increases the customer loyalty for this mobility service

Slide 34/35



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5.2 III Training Session: 17 September 2019

After a welcome on behalf of UNITS group of University of the Studies of Trieste, FIAB Association exposed critical points and future strategies concerning cyclism as a fundamental sector within sustainable urban mobility plans, also concerning tourism. They stressed governance and policy issues that stand as barriers which could be overcome through specific strategies.



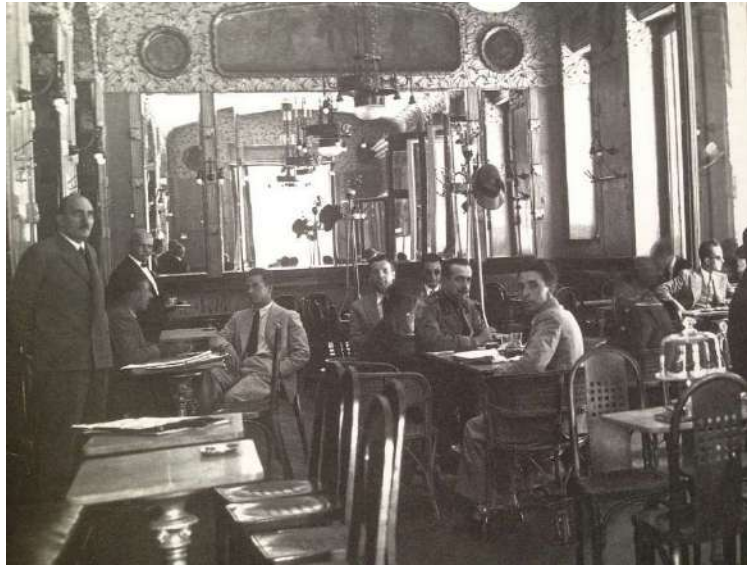
After that, guests were invited to the light buffet to continue the networking, and to listen to the presentations of the experts who have been involved in the three training sessions. UNITS' personnel remained available throughout all the duration of the event, to answer to the audience's questions.



5.2.1 Venue III Training Session

The event took place on 17th of September 2019 at Antico Caffé San Marco in Trieste, between 15:00 and 18:00.





It became famous as a rendezvous for intellectuals and writers including Italo Svevo, James Joyce and Umberto Saba, a tradition that continues to date with Claudio Magris. today it is known as a literary café and a meeting place for leisure and business as well as for families and students. a great place to meet people active in the pursuit of the well-being of the city from a cultural and practical point of view.

5.2.2 Agenda III Training Session



STEP-UP Third Training Sessions

NEW SCENARIOS ON MULTIMODAL MOBILITY

INFOMOBILITY FOR SUSTAINABLE PASSENGERS' FLOW BETWEEN ITALY AND CROATIA

Public Event

15:00 – 15:20 **Welcome on behalf of University of the Studies of Trieste**

15:20 – 15:30 **Greeting on behalf of STEP-UP Partners (City of Šibenik)**
Petar Mfiura

15:30 – 16:00 **FIAB, Trieste bicycle mobility general overview**
Luca Mastropasqua, FIAB Association President
Jacopo Rothenaisler, FIAB Association

16:00 – 18:00 **Networking Buffet and**
Presentation on topics related to STEP-UP Project:
available on multiple pc workstation

- Sustainable destination management plans fostering climate change mitigation in the tourism sector, including transnational multimodal transport.
- STEP UP INTERREG IT-HR Project.
- An overview of STEP-UP Project, INTERREG IT-HR.
- Improving maritime and multimodal transport services between Italy and Croatia: the experience in MOSES project and the expectations from ICARUS project.
- The role of Mobility as a Service
- Electro-mobility integrated into transport and mobility networks
- Intermodality for a seamless solution
- Improving passengers' mobility, new ideas and methods to ensure sustainable mobility
- Smart Cruise Destination
- The beauty of small villages. Intermodality: the path to encounter it.
- Cultural routes – potential for info-mobility services
- EU projects of the Port of Trieste: several tools for a smart port
- The role of Mobility as a Service
- The economics of electric vehicles
- ICT tool in use at the Port of Trieste: The Port Community System Sinfomar
- How to use GTFS
- MaaS Business Models
- Planning mobility to support sustainable rural tourism
- Participatory governance as a model for urban mobility planning
- Sustainable transport and SUMP
- ICT tools for a more efficient and sustainable e-mobility model
- Electric Vehicles (EVs), Sharing System, Reallocation and Balancing of sharing EVs within a city through an incentive system

YouTube channel: **Project Step-Up**

link to Web Page: www.step-up.training

e-mail: info@step-up.training

link to questionnaire: <https://step-up.training/questionnaire/>

5.2.3 Attendance III Training Session




EVENT: III TRAINING SESSION – European Mobility Week
 VENUE: Antico Caffè San Marco, Via Battisti 18, Trieste
 DATE: 17/09/2019

ATTENDANCE LIST

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9	PISON MARIA			

European Regional Development Fund
www.italy-croatia.eu/stepup












EVENT: III TRAINING SESSION – European Mobility Week
 VENUE: Antico Caffè San Marco, Via Battisti 18, Trieste
 DATE: 17/09/2019

ATTENDANCE LIST

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European Regional Development Fund
www.italy-croatia.eu/stepup










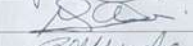
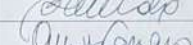

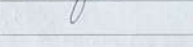
ATTENDANCE LIST

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20	CHIARA GELMINI	UNITS	cgelmin@units.it	<i>[Signature]</i>
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43				
44				
45				

5.2.4 Dissemination III Training Session

5.2.4.1 Press Release III Training Session (English and Italian)

“TURISMO SOSTENIBILE? PUOI DIRE LA TUA!”

Nell’ambito della **Settimana Europea della Mobilità**, l’**Università di Trieste**, insieme a **FIAB** – Federazione Italiana Ambiente e Bicicletta, incontrerà i cittadini martedì 17 settembre, presso l’Antico Caffè San Marco di Trieste dalle ore 15:00 alle 18:00, sui temi del **turismo sostenibile**, sul ruolo delle **nuove tecnologie** nell’ambito della mobilità e sul panorama dei **progetti europei**.

I membri del gruppo di ricerca del **DIA – Dipartimento di Ingegneria e Architettura** dell’Università di Trieste saranno a disposizione per tutta la durata dell’evento per condividere la propria esperienza e rispondere alle curiosità del pubblico.

A tutti gli interessati verranno illustrate le attività e le finalità del progetto europeo Interreg ITA-CRO **STEP-UP - Sustainable Transport E-Planner to Upgrade the IT-HR mobility**.

Saranno inoltre presenti anche alcuni partner croati del progetto per presentare le proprie attività di Pilot Site.

Ai cittadini verrà data la possibilità di esprimersi sulla loro **percezione del turismo di massa** e i loro **suggerimenti verranno raccolti**, nell’ottica di una pianificazione partecipata, al motto: **“Turismo sostenibile? Puoi dire la tua!”**.

Nel corso dell’incontro saranno rese visibili su postazioni pc multiple le presentazioni delle precedenti Training Sessions (sessioni formative organizzate dall’Università di Trieste nell’ambito del progetto STEP-UP). Il materiale, che sarà a disposizione di tutti gli interessati, approfondisce alcuni dei **nuovi scenari della mobilità**: MaaS (Mobility as a Service), Electro-mobility, Info-mobility, Pilastri EUSAIR e Sustainable Tourism, ICT Tools for Tourism ed E-Planning Platforms.

Ad affiancare il DIA ci sarà la **FIAB**, associazione impegnata nella divulgazione e tutela della mobilità dolce e dei ciclisti, allo scopo di illustrare le attività in corso e i progetti futuri.

La partecipazione è libera e non è necessaria la prenotazione.

Durante l’evento ai partecipanti verrà offerto un rinfresco.

"SUSTAINABLE TOURISM? YOU CAN HAVE A SAY! "

As part of the European Mobility Week, the University of Trieste, together with FIAB - Italian Environment and Bicycle Federation, will meet the citizens on Tuesday 17 September, at the Antico Caffè San Marco in Trieste from 15:00 to 18:00 on the issues of sustainable tourism, on the role of new technologies in the field of mobility and on the panorama of European projects. The members of the research group of the DIA - Department of Engineering and Architecture of the University of Trieste will be available for the duration of the event to share their experience and respond to the curiosity of the public. All interested parties will be informed about the activities and aims of the European INTERREG project IT-HR STEP-UP - Sustainable Transport E-Planner to Upgrade the IT-HR mobility. Some Croatian partners of the project will also be present to present their Pilot Site activities. Citizens will be given the opportunity to express themselves on their perception of mass tourism and their suggestions will be collected, with a view to participatory planning, to the motto: "Sustainable tourism? You can have your say! " During the meeting, the presentations of the previous Training Sessions (training sessions organized by the University of Trieste within the STEP-UP project) will be made visible on multiple PC workstations. The material, which will be available to all interested parties, explores some of the new mobility scenarios: MaaS (Mobility as a Service), Electro-mobility, Info-mobility, EUSAIR Pillars and Sustainable Tourism, ICT Tools for Tourism and E-Planning Platforms. To support the DIA there will be the FIAB, an association engaged in the dissemination and protection of soft mobility and cyclists, in order to illustrate the activities in progress and future projects. Participation is free and no reservation is required. During the event participants will be offered refreshments.

UNIVERSITÀ E FIAB

Turismo sostenibile Se ne parla al San Marco

Nell'ambito della Settimana europea della mobilità, Università e Fiab - Federazione italiana ambiente e bicicletta organizzano oggi all'Antico Caffè San Marco dalle 15 per un incontro sui temi della mobilità (nuovo piano urbano della mobilità sostenibile) e del turismo sostenibile, sul ruolo delle nuove tecnologie nell'ambito della mobilità e sul panorama dei progetti europei.

Nel corso dell'appuntamento verranno illustrate le attività del gruppo di ricerca e le finalità del progetto europeo Interreg Italia-Croazia "Step-Up" (Sustainable Transport E-Planner to Upgrade the IT-HR mobility), come terza Training Session. Saranno inoltre presenti anche alcuni partner croati del progetto per presentare le proprie attività di Pilot Site.

SETTIMANA EUROPEA DELLA MOBILITÀ

Trieste si interroga sulla ciclabilità a partire da Muggia e Porto vecchio



Il "Bike Pride" in via Mazzini organizzato da Fiab Ulisse nel 2015

Micol Brusaferrò

Un momento di incontro e confronto, un dibattito su quanto Trieste possa essere proiettata verso una mobilità e un turismo sempre più sostenibili. È l'argomento dell'appuntamento di ieri al caffè San Marco, organizzato nell'ambito della Settimana Europea della Mobilità, e curato dall'Università di Trieste insieme a Fiab, la Federazione Italiana Ambiente e Bicicletta di Trieste. L'evento rientra anche nella cornice del progetto europeo Interreg Italia-Croazia "Step up" con il Dipartimento di Ingegneria e Architettura dell'Università di Trieste, che ha promosso un contatto diretto con i cittadini nel corso del pomeriggio. Il pubblico ha compilato un questionario sul tema del turismo, utile a capire la percezione della gente a Trieste sull'argomento, e ha ascoltato i dettagli di "Step up", il programma che punta a creare uno sviluppo dei collegamenti tra Italia e Croazia all'insegna della tutela ambientale. Un lavoro di gruppo, che vede impegnate realtà italiane e croate, al lavoro anche per

migliorare la mobilità sostenibile nei rispettivi ambiti. A margine dell'incontro è stato fatto anche un punto sui tanti progetti di ciclabilità per il futuro della città. «È in fase di progettazione la Trieste-Muggia - ricorda Luca Mastropasqua, presidente di Ulisse Fiab - che farà parte di una rete europea di ciclabili, c'è poi quella che riguarda il Porto Vecchio, con un primo lotto già pronto, che percorrerà l'intero comprensorio e sarà bidirezionale. E ancora di sta operando anche per la ciclabile del Carso, già finanziata ma ancora non realizzata. Poi c'è la prospettiva di crearne anche una sulla strada Costiera, nell'ambito di una possibile trasformazione della via in strada turistica».

Grandi iniziative ma anche piccole attenzioni. «Lavoriamo anche per l'aumento degli stalli in città e per rendere in generale Trieste sempre più fruibile da chi ama la bicicletta, anche se stiamo constatando con un po' di amarezza - dice - che dal Comune sentiamo una chiusura nei nostri confronti e una scarsa collaborazione».

© FIAB - FEDERAZIONE ITALIANA AMBIENTE E BICICLETTA

5.2.4.3 Article on Bora.la <https://bora.la/2019/09/16/turismo-sostenibile-puoi-dire-la-tua/>

Bora.^{LA}

HOME I NOSTRI LIBRI E GIOCHI COSA FACCIAMO



STEP-UP

Sustainable Transport

E-Planner to Upgrade

the IT-HR mobility

STEP-UP III TRAINING SESSION

www.italy-croatia.eu/stepup

16 Settembre 2019

Turismo sostenibile? Puoi dire la tua!

Redazione

el sunto

Martedì 17 settembre, presso l'Antico Caffè San Marco,
dalle ore 15:00 alle 18:00, un incontro sui temi della
mobilità e del turismo sostenibile

B-Kultur, Eventi nell'EuroRegione, Trieste

Nell'ambito della Settimana Europea della Mobilità, l'Università di Trieste insieme a FIAB – Federazione Italiana Ambiente e Bicicletta sono lieti di invitare i cittadini martedì 17 settembre, presso l'Antico Caffè San Marco di Trieste dalle ore 15:00 alle 18:00, per un incontro sui temi della mobilità (nuovo piano urbano della mobilità sostenibile) e del turismo sostenibile, sul ruolo delle nuove tecnologie nell'ambito della mobilità e sul panorama dei progetti europei.

L'evento è organizzato nella cornice del progetto europeo Interreg ITALIA-CROAZIA "STEP-UP" (Sustainable Transport E-Planner to Upgrade the IT-HR mobility), come terza Training Session (sessione formativa ideata dall'Università di Trieste).

I membri del gruppo di ricerca del DIA – Dipartimento di Ingegneria e Architettura dell'Università di Trieste saranno a disposizione per tutta la durata dell'evento per condividere la propria esperienza e rispondere alle curiosità del pubblico.

A tutti gli interessati verranno illustrate le attività del gruppo di ricerca e le finalità del progetto STEP-UP.

Saranno inoltre presenti anche alcuni partner croati del progetto per presentare le proprie attività di Pilot Site.

Ai cittadini verrà inoltre data la possibilità di esprimersi sulla loro percezione del turismo di massa e i loro suggerimenti verranno raccolti, nell'ottica di una pianificazione partecipata, al motto: "Turismo sostenibile? Puoi dire la tua!".

Nel corso dell'incontro saranno rese visibili su postazioni pc multiple le presentazioni delle precedenti Training Sessions.

Il materiale, che sarà a disposizione di tutti gli interessati, approfondisce alcuni dei nuovi scenari della mobilità: MaaS (Mobility as a Service), Electro-mobility, Info-mobility, Pilastrini EUSAIR e Sustainable Tourism, ICT Tools for Tourism ed E-Planning Platforms.

Ad affiancare il DIA ci sarà l'associazione FIAB, da anni impegnata nella divulgazione e tutela della mobilità dolce e del ciclismo in area urbana, per illustrare le attività in corso e i progetti futuri.

La partecipazione è libera e non è necessaria la prenotazione.

Durante l'evento ai partecipanti verrà offerto un rinfresco.

5.3 III Training Session: Questionnaire

During the preparation of the first training session a questionnaire previously designed has been distributed to the audience. The questionnaire was printed on paper was distributed at the registration desk to those present to the conference room and collected at the end of the conference or at their departure. In this way the participants could quickly view the questions and formulate a response idea following the conference.

The results obtained from the first training session questionnaire gave a useful feedback in regards of the organization of the next sessions.

Follows the list of questions proposed to the audience. For each question the audience was asked to express a preference according to the given assessment grid.

After the list of the proposed questions follows the answers given by the conference participants. Note that each question is marked with a bulleted number. while consulting the answers, refer to it.

		Assessment grid				
		Not at all	Not quite	Neutral	Much	Very much
1	TOPICS					
	1.1 The topics were relevant to me					
	1.2 I was familiar with the proposed topics					
	1.3 The topics offered a good overview on issues related to Passengers' flow					
2	SPEECHES					
	2.1 The material used for the presentations was coherent and clear					
	2.2 I would find it useful to have the presentations material available for future consultation					
	2.3 The presentations were coherent with the title and the topic					
	2.4 The presentations met my expectations					
3	CONFERENCE					
	3.1 The conference contributed to deepen my knowledge on the topics:					
	3.1.1 Multimodality					
	3.1.2 European projects on mobility					

3.1.3	New scenaries on mobility (Maas, Electro-mobility...)				
3.1.4	Info-mobility				
3.1.5	Sustainable Tourism				
3.1.6	ICT Tools for Tourism				
3.1.7	E-Planning Platforms				
3.1.8	Other				
3.2	I think these topics should be more disseminated				
3.3	After the conference my knowledge on the covered topics has improved				
3.4	I am involved in these topics (e.g. in daily life/at work)				
3.5	The conference has been well organised				
General assessments:					
4.1	Which topic was of major interest?				
4.2	Which elements of the presentations could be enhanced? (e.g. the quality of presentations, technical aspects, ...)				
4.3	Which topics would you like to be deepened further in the next Training Sessions?				

		9					10					11					12					
		professional					professional scuola II grado					expert settore turismo					turista di passaggio					
1	TOPIC	Not at all	Not quite	Neutral	Much	Very much	Not at all	Not quite	Neutral	Much	Very much	Not at all	Not quite	Neutral	Much	Very much	Not at all	Not quite	Neutral	Much	Very much	
	1.1					x					x										x	
	1.2			x																	x	
	1.3				x																x	
2	SPEECHES																					
	2.1					x					x											
	2.2					x					x									x		
	2.3				x						x											
	2.4										x										x	
3	CONFERENCE																					
	3.1																					
	3.1.1					x					x										x	
	3.1.2										x											x
	3.1.3										x											x
	3.1.4										x											x
	3.1.5										x											x
	3.1.6					x					x											x
	3.1.7										x											x
	3.1.8							x														
	3.2					x					x											x
	3.3				x																	x
	3.4					x					x											x
	3.5					x					x											x

		13				
		expert citizen fiab				
1	TOPIC	Not at all	Not quite	Neutral	Much	Very much
	1.1				x	
	1.2					x
	1.3				x	
2	SPEECHES					
	2.1					
	2.2				x	
	2.3				x	
	2.4				x	
3	CONFERENCE					
	3.1					
	3.1.1				x	
	3.1.2					
	3.1.3					
	3.1.4					
	3.1.5				x	
	3.1.6		x			
	3.1.7					
	3.1.8					
	3.2					x
	3.3					
	3.4				x	
	3.5					

The feedback received for section 4. **General assessment** follows:

4.1 Which topic was of major interest?

turismo sostenibile (sustainable tourism)
new scenarios on mobility
il ruolo della bicicletta anche nel sistema economico e turistico (the role of the bicycle also in the economic and touristic system)
Tutti (all)
cicloturismo accessibilità delle città (cyletourism and cities accessibility)

4.2 Which elements of the presentations could be enhanced? (e.g. the quality of presentations, technical aspects, ...)

e-planning platforms
eventually connection with train connection from italy and another country
tutto ciò che riguarda Trieste (everything that concerns Trieste)
sulle eventuali ciclovie sul carso triestino ((what concerns the bicycle ways on the Karst around Trieste)

5.4 Smart Tourism Survey for Trieste

During the III Training Session UNITS wanted to be not only a mean for conveying knowledge, but also work as a listener to the citizenship's perception on STEP-UP themes, such as mass tourism and Technology applied to Tourism.

For this reason, we designed a special questionnaire (different from the questionnaire for the overall session evaluation which finds place in a specific chapter).

The questionnaire is based on ETIS (European Tourism Indicators System), which is a guideline set by the European Union dedicated to all touristic destinations towards adopting a more intelligent approach to tourism planning.

This initiative was accepted within the European Mobility Week.

Smart Tourism Survey for Trieste

WHY	WHAT	WHO	HOW
<ul style="list-style-type: none"> • Tourist destinations are increasingly being called upon to tackle social, cultural, economic, and environmental challenges 	<ul style="list-style-type: none"> • perception of tourism in the city • Importance of the personalization in tourist services • Importance of the integration by tourists and local community 	<ul style="list-style-type: none"> • Citizens • Institutions • Private sector • Tourists • ... 	<ul style="list-style-type: none"> • ETIS toolkit <ul style="list-style-type: none"> • + • Smart Tourism <ul style="list-style-type: none"> • Destination • Knowledge <ul style="list-style-type: none"> • + • Typeform program

European Tourism Indicators System (ETIS)

European Tourism Indicators System (ETIS) is a system of indicators suitable for all tourist destinations, encouraging them to adopt a more intelligent approach to tourism planning.

- a management tool
- a monitoring system
- an information tool



https://ec.europa.eu/growth/sectors/tourism/offer/sustainable/indicators_en

Smart Tourism Destination knowledge



- Service personalization
- Experience economy
- Mass tourism
- Tourism flows
- Data standardisation
- New Technology

**TURISMO
SOSTENIBILE ?**

**PUOI DIRE
LA TUA !**



**Non perdere l'occasione
di dire la tua!**

Compila il questionario al seguente link:
<https://it.surveymonkey.com/r/TSTURISMO>

info: scarciotti@units.it

The questionnaire have been fully compiled by almost 400 people and have been started or almost fully compiled by almost 500, making the data collected consistent.

INDAGINE ATTIVA

• • •

444

Totale
risposte

360

Risposte
completate

Tasso di
completamento

81%

Ultima immissione

29/10/2019

Data creazione

05/09/2019

[VISUALIZZA DETTAGLI](#)

[VISUALIZZA TUTTE LE INDAGINI](#)

6. Web repository to training sessions relevant material

All the material produced in relation to the training sessions is available on the repositories web page at the following address: www.step-up.training

This web page was developed to support the Training Sessions Activity within STEP-UP Sustainable Transport E-Planner to Upgrade the IT-HR mobility.

Official Website of STEP-UP Project: <https://www.italy-croatia.eu/web/step-up>

Just connected to the site you can see the home, see the screenshots reported below. Three buttons link to the page dedicated to each of the three training sessions.





6.1 I Training Session

For the First Training Session all the relevant material is available at the following link:

https://step-up.training/new_scenaries_on_multimodal_mobility/



Home Training Sessions ▾ Contacts 🔍

STEP-UP: NEW SCENARIOS ON MULTIMODAL MOBILITY INFOMOBILITY FOR SUSTAINABLE PASSENGERS' FLOW BETWEEN ITALY AND CROATIA

THE CONFERENCE is organised as the first Training Session of **STEP-UP project, INTERREG ITALY-CROATIA** funded by the European Regional Development Funds. The conference aims to promote the knowledge of the fields of tourism, multimodality and ICT systems applied to passenger flows, and bring attention to development projects involving the Adriatic area between Italy and Croatia.

The invited speakers are both experts within the project partnership and external professionals, all of them own renowned experience in the field they present.

The conference will be followed by two other training sessions on topics such as info-mobility and the European perspective in the field of transport and tourism. All the sessions, held in English as official language of the project, are free and accessible remotely via webinar.



Program



Link to the Program:

https://step-up.training/wp-content/uploads/2019/05/STEP-UP_FirstTrainingSession-7May_FinalAgenda.pdf



STEP-UP Training Sessions – Final Agenda

NEW SCENARIOS ON MULTIMODAL MOBILITY

INFOMOBILITY FOR SUSTAINABLE PASSENGERS' FLOW BETWEEN ITALY AND CROATIA

Savoia Excelsior Palace Hotel - Trieste, 7th May 2019

- 08:40 – 09:00** Registration of participants and Welcome Coffee
- 09:00 – 09:15** **Welcoming on behalf of University of Studies of Trieste**
Institutional greetings
- 09:15 – 10:15** **Sustainable tourism destination management plans, focusing on climate change mitigation and multimodal transport**
Cinzia De Marzo, Lawyer, specialized in European Union Law & International Sustainable Tourism Expert
- 10:15 – 10:30** **STEP UP INTERREG IT-HR Project**
Letizia Casonato, Head of Local Public Transport, Logistics and Viability Department, Marche Region (STEP-UP project Lead Partner)
- 10:30 – 10:45** **Improving maritime and multimodal transport services between Italy and Croatia: the experience in MOSES project and the expectations from ICARUS project**
Massimiliano Angelotti, Direzione centrale infrastrutture e territorio, FVG Region
- 10:45 – 11:00** **The role of Mobility as a Service**
Daniela Vasari, Project manager, solution designer in ITS projects and International cooperation, Pluservice, Technical Assistance of Marche Region (STEP-UP project Lead Partner)
- 11:00 – 11:15** **Electro-mobility integrated into transport and mobility networks**
Maria Pia Fanti, Full professor of System and Control Engineering, Department of Electrical and Information Engineering of the Polytechnic University of Bari
- 11:15 – 11:30** Coffee Break
- 11:30 – 11:45** **Intermodality for a seamless solution**
Giorgia Fanesi, Software analyst and project manager, Pluservice, Technical Assistance of Marche Region (STEP-UP project Lead Partner)
- 11:45 – 12:00** **Improving passengers' mobility, new ideas and methods to ensure sustainable mobility**
Stipe Španja, Senior Associate for Development and EU projects, City of Šibenik (STEP-UP project Partner)
- 12:00 – 12:15** **Smart Cruise Destination: a network between territory and cruise tourism**
Sara Carelotti, Architect, PhD Student, University of Trieste, Engineering and Architecture Department (STEP-UP project Partner)
- 12:15 – 12:30** **The great beauty of the small villages. Intermodality: the road to meet it**
Laura Schiff, Director for Quality of Touristic Areas, Emilia Romagna Region (STEP-UP project Partner)
- 12:30 – 12:45** **Cultural routes – a potential for info-mobility services**
Vanja Lipovac, Consultant for EU Projects, Zadar Airport (STEP-UP project Partner)
- 12:45 – 13:00** **EU projects of the Port of Trieste: several tools for a smart port**
Valentina Boschian, Port Network Authority of the Eastern Adriatic Sea
- 13:00 – 13:15** **Closing remarks**

VENUE

Hotel Savoia Excelsior Palace

Riva del Mandracchio, 4, 34124 Trieste TS

+39 040 77941

Note on accommodation: the chosen venue is placed in the main centre of Trieste. In the surroundings of the venue there are several hotel and B&Bs of any level. Since the STC Meeting is approaching and the season will be almost high, we recommend to book an accommodation as soon as possible. We can give further assistance when needed.



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Paolo Ferrari pferrari@units.it

Chiara Gelmini cgelmini@units.it

6.1.1 Link to speaker's presentation, I Training Session

Each involved speaker is presented on the page dedicated to the training session in which he participated. For each of them you can see a photo, the description of the role held, a brief biography, a link to the PDF containing the proposal presentation (already entered in full in Deliverable 5.1.1) and a link to the video of the presentation.

6.1.1.1 sustainable destination management plans fostering climate change mitigation in the tourism sector, including transnational multimodal transport. [Cinzia de Marzo]



CINZIA DE MARZO

Lawyer, specialized in European Union Law & International Sustainable Tourism Expert

“Sustainable destination management plans fostering climate change mitigation in the tourism sector, including transnational multimodal transport”

Abstract

- Short overview about Paris Agreement objectives and UN Sustainable Development Goals
- Alignment to the existing EU policy framework and strategies (Coastal and Maritime tourism strategy for more Growth and Jobs, EUSAIR, A Clean Planet for all, Reflection Paper towards a sustainable Europe by 2030...)
- Geo-political context (Adriatic and Ionian Regions)
- Interregional cooperation between Croatia and Italy for promoting multimodal transports and sustainable mobility

Short bio

Cinzia de Marzo, a lawyer specialising in EU Law and economy, is dedicated to sustainable tourism within the European Union. For several years now, she has been worked on the ETIS system, as an EU national expert at the Commission and as one of the people deeply involved in the implementation of EUSAIR (Adriatic-Ionian) EU Strategy. She talked with Stefan Lazic about the need for quality measurement for sustainable tourism and why is it important to work together to secure a brighter future.



Presentation



Link to presentation's PDF:

https://step-up.training/wp-content/uploads/2019/06/1_PPT_Trieste_07_05_19_Cinzia-De-Marzo.pdf

Link to registration of the presentation on You tube channel:

https://www.youtube.com/watch?time_continue=1&v=0FIBHragoig

6.1.1.2 STEP UP INTERREG IT-HR Project. An overview of STEP-UP Project, INTERREG IT-HR. [Valeria Corina]



VALERIA CORINA

Sinergia, Technical Assistance of Marche Region (STEP-UP project Lead Partner)

"STEP UP INTERREG IT-HR Project"

Abstract

An overview of STEP-UP Project, INTERREG IT-HR.

Short bio

Sinergia, Technical Assistance of Marche Region (STEP-UP project Lead Partner)



Presentation



Link to presentation's PDF:

https://step-up.training/wp-content/uploads/2019/06/2_Corina_STEP-UP_Regione-Marche.pdf

You Tube channel:

https://www.youtube.com/watch?time_continue=1&v=7FZ_HXljzQY

6.1.1.3 Improving maritime and multimodal transport services between Italy and Croatia: the experience in MOSES project and the expectations from ICARUS project. [Massimiliano Angelotti]



MASSIMILIANO ANGELOTTI

Central Department of Infrastructures and Territory, Friuli Venezia Giulia Region

“Improving maritime and multimodal transport services between Italy and Croatia: the experience in MOSES project and the expectations from ICARUS project.”

Abstract

The presentation is intended to provide an overlook on the concrete contributions provided so far in the framework of Standard+ project MOSES, based on the capitalization of the previous strategic project EASEAWAY (IPA Adriatic 2007-2013), in terms of new sustainable passenger mobility options made available in the cross-border Programming area, showing two best practices developed during summer 2018, with a final focus extended also to the expected outputs of the ICARUS project, recently approved among the Standard projects, which is strongly based on the concept of Mobility as a Service.

Short bio

Civil servant at Autonomous Region of Friuli Venezia Giulia, Central Directorate for infrastructure and territory, Coordinator of the European Programmes Unit. He graduated at the University of Trieste (Italy) in Political Sciences. He started working as free lance journalist for a regional newspaper in 1994 and kept working as free lance until 2004. In 1995 he moved to London for a six months working postgraduate experience in the Shipping management sector and then he worked from 1996 until 2000 for an Italian company as assistant technical manager (shipping sector – commercial vessels). In 2000 he moved to work for Friuli Venezia Regional administration, in the field of programmes and projects co-financed by EU.

He has worked in over 30 cooperation projects since Programming period 1999 – 2001 co-financed by EU structural funds in logistic, freight and passenger transport sectors, and acted as a co-ordinator in four of them, where selected ones are: TRANSITECTS, ALPFRAIL and ALPINNOCT (rail freight sector, Alpine Space Programme), SONORA and BATCo (Baltic – Adriatic freight transport axis, Central Europe Programme), FUTUREMED (ICT and port-hinterland freight links, MED Programme), ADB multiplatform and Acrossee (freight intermodal transport, SEE Programme) PORTUS and EA SEA-WAY (passengers mobility in Adriatic and Ionian area, IPA Adriatic Programme), MOSES and ICARUS (mobility of passengers, Italy-Croatia Programme).

He is currently managing, as project manager, the project CROSSMOBY, which is a strategic project approved in the framework Interreg Italy-Slovenia Programme, developing and promoting environmentally friendly, intermodal transport solutions for passengers across the cross-border area.



Link to presentation's PDF:

https://step-up.training/wp-content/uploads/2019/06/3_Angelotti_Improving-maritime-and-multimodal-transport.pdf

You Tube channel:

<https://www.youtube.com/watch?v=sEjkzcGvM-I>

6.1.1.4 The role of Mobility as a Service [Daniela Vasari]



DANIELA VASARI

Project manager, solution designer in ITS projects and International cooperation, Pluservice. Technical Assistance of Marche Region (STEP-UP project Lead Partner)

“The role of Mobility as a Service”

Abstract

An overview on Mobility as a Service

Short bio

Daniela Vasari graduated in Computer Engineering in March 2009. She works in Pluservice since 2009 as Solution Designer for ITS in Passenger Transportation and since 2014 as Senior Project Manager.

She is involved in EU-International-National projects on topics such as Demand Responsive Transport, Multi-modal Traveller Information Systems, Automatic Vehicle Monitoring systems.

She is the Project Manager of several European funded projects.



Link to presentation's PDF:

https://step-up.training/wp-content/uploads/2019/06/4_Vasari_The-role-of-Mobility-as-a-Service.pdf

You Tube channel:

https://www.youtube.com/watch?v=EtckMkf64yg&feature=emb_logo

6.1.1.5 Electro-mobility integrated into transport and mobility networks [Maria Pia Fanti]



MARIA PIA FANTI

Full professor of System and Control Engineering, Department of Electrical and Information Engineering of the Polytechnic University of Bari

“Electro-mobility integrated into transport and mobility networks”

Abstract

Electro-mobility integrated into transport and mobility networks concerning: open problems related to electromobility as the major factor towards transport decarbonization, two in progress European H2020 projects for electromobility underlining their strategic objectives, some developed ICT tools for electromobility (Virtual Sensors) and their implementation methodology, hyper-networks, personal mobility probability and charge price prediction.

Short bio

Maria Pia Fanti is full professor of System and Control Engineering at the Department of Electrical and Information Engineering of the Polytechnic of Bari (Italy). She received the Laurea degree in Electronic Engineering from the University of Pisa (Italy), in 1983. She was a visiting researcher at the Rensselaer Polytechnic Institute of Troy, New York, in 1999. Since 1983 she has been with the Department of Electrical and Electronic Engineering of the Polytechnic of Bari (Italy), where she was Assistant Professor from 1990 till 1998 and Associate Professor from 1990 till April 2012.

Maria Pia Fanti is IEEE fellow for contributions to modeling and control of discrete event systems.

Her research interests include Discrete event systems, Petri net, consensus algorithms, networked and control systems, management and modeling of logistic systems, automated manufacturing systems, automatic guided vehicle systems, traffic networks, and healthcare systems.

Maria Pia Fanti is author of 2 books and 280+ papers including 85 journal papers including, 11 book chapters and many conference proceeding papers.



You Tube channel:

https://www.youtube.com/watch?time_continue=1&v=erNivRUZC1A

6.1.1.6 Intermodality for a seamless solution [Giorgia Fanesi]



GIORGIA FANESI

Software analyst and project manager, Pluservice, Technical Assistance of Marche Region (STEP-UP project Lead Partner)

“Intermodality for a seamless solution”

Abstract

Definition of Intermodality, exploring the opportunities it offers

Short – bio

After her Master Degree in industrial engineering at the University of Bologna and an internship at IRU, Giorgia Fanesi has worked on ICT projects for PluService s.r.l. and is currently Software Analyst and Project Manager at myCicero.



Presentation



Link to presentation's PDF:

https://step-up.training/wp-content/uploads/2019/06/6_Fanesi_Intermodality-for-a-seamless-solution.pdf

You Tube channel:

https://www.youtube.com/watch?v=LyL5zKj4KWM&feature=emb_logo

6.1.1.7 Improving passengers' mobility, new ideas and methods to ensure sustainable mobility [Petar Mišura]



PETAR MIŠURA

Senior Associate for Development and EU projects, City of Šibenik (STEP-UP project Partner)

“Improving passengers' mobility, new ideas and methods to ensure sustainable mobility”

Abstract

Ideas and ways to improve passenger mobility in the city. Basically, every city due to its specific morphological, cultural, social and economic features has to develop specific transport solutions that suits the needs of local resident living in it. Which are the crucial steps to do it? An indication about where to start and how EU funds can help us to resolve this issue. The City of Šibenik as an example: what it has done so far and what is planned next.



Presentation



Link to presentation's PDF:

https://step-up.training/wp-content/uploads/2019/06/7_Misura_Improving-passengers-mobility.pdf

You Tube channel:

<https://www.youtube.com/watch?v=OtyRUbNTCho>

6.1.1.8 Smart Cruise Destination [Sara Carciotti]



SARA CARCIOTTI

Architect, PhD at Engineering and Architecture Department at the University of the Studies of Trieste

“Smart Cruise Destination”

Abstract

The research introduces the concept of smart cruise destination in order to manage in an innovative way the cruise tourist flows. The network of cruise destination is based on the principle of sustainable tourism. It considers a framework consisting of a combination of distributed knowledge, data and models. Through this framework, the stakeholders have the possibility to base on sound and rational bases all decisions concerning policies, infrastructure development and the managing system. Moreover, the smart cruise destination is based on the evolution of the well-known tourism destination concepts with the aim to enhance both the residents' wellbeing and tourists' enjoyment and satisfaction. To fulfil this aim, the knowhow of experience economy is adopted in different scale.

Short bio

Sara Carciotti is a young Italo-Slovenian architect specialized in exhibit design. After her master degree she has worked in the Architectural industry for a long period. Her international experience covers a wide range of projects and competitions from home units, commercial and retail mixed-use projects to urban design and sustainable strategy planning. After Venice, Paris and Ljubljana she has started the PhD program at the University of Trieste where actually works with the group of the prof. Ukovich. She is mostly focused on projects regarding urban mobility, people mobility and tourist's wellbeing.



Link to presentation's PDF:

https://step-up.training/wp-content/uploads/2019/06/8_STEP-UP_Carciotti.pdf

You Tube channel:

<https://www.youtube.com/watch?v=W8nfQ0M-HkA>

6.1.1.9 The beauty of small villages. Intermodality: the path to encounter it. [Laura Schiff]



LAURA SCHIFF

Director for Quality of Touristic Areas, Emilia Romagna Region (STEP-UP project Partner)

“The beauty of small villages. Intermodality: the path to encounter it”

Abstract

When you can only move with your private vehicle to reach the historic villages you arrive in small towns, where it becomes difficult to move and park. When in this situation the desire to visit authentic places arises, to discover the true traditions and the soul of a community that is different from the usual, once you have chosen a real place that you would like to know ... often you give up. What is the waiver due to? The frustrating idea of having to plunge into traffic and get back to parking problems. That's why we need a new intermodality, along the coast and towards the small charming villages of the hinterland. Train, bicycle and public buses are the means that, interconnected and made available and usable by smart technologies, can bring new travelers to the discovery of art, history, nature and local products, and contribute to the economic development of small towns without altering their features.

Short bio

Laura Schiff is graduated in Agricultural Sciences in 1977 at the University of Bologna, with specialization in territorial planning. She held the positions of Manager of the Planning Office of the Mountain Community of the Appennino of Bologna and that of Head of the floriculture sector and public green. From 1991 to 2017, she was the urban quality manager of the tourist resorts at the Tourism Department of the Emilia-Romagna Region. From 1991 to 2017 he designed and managed numerous projects – both at the regional and European level – for sustainable development of tourist areas for the creation and enhancement of new tourist products. From 2017 she directs the Communication, promotion, coordination of European projects and special projects of the Emilia-Romagna Region; is coordinator for the Italian Regions for managing important projects financed by the Ministry of Tourism, with the purpose of deloping the Network of Italian Historic Villages, Landscapes and Accessible Tourism.



Link to presentation's PDF:

https://step-up.training/wp-content/uploads/2019/06/9_Schiff_RegioneEmiliaRomagna.pdf

You Tube channel: https://www.youtube.com/watch?time_continue=1&v=UZyGyShKI4Q

6.1.1.10 Cultural routes – potential for info-mobility services [Vanja Lipovac]



VANJA LIPOVAC

Consultant for EU Projects, Zadar Airport (STEP-UP project Partner)

“Cultural routes – a potential for info-mobility services”

Abstract

The presentation will consist of three parts providing context and information for utilizing info-mobility services in current touristic trends. First part will elaborate what Cultural routes are, focusing mainly on the EU initiative of Cultural Routes, but also will elaborate how this touristic/business model can be developed on local/regional/europe level. Second part will focus on current touristic trends and developments. Cultural routes as a cultural tourism service fits in well with current trends, strategic priorities such as sustainability etc. Finally, third part will focus on how can info-mobility services fit in the Cultural routes and what are the best ways to approach it.

Short bio

Vanja Lipovac has master degree in cultural sociology (2015). Shortly after, he started an internship in Zadar County department for EU projects and development, where he participated on preparation and implementation of several national and international EU projects.

After finishing a year of internship he started working as a project manager for „Foster children rights“ project, financed from European social funds. After the project ended, he started working as a consultant for EU project for Driope. He is mostly focused on projects regarding urban mobility, intermodality, info-mobility and sustainable development.



Presentation



Link to presentation's PDF:

https://step-up.training/wp-content/uploads/2019/06/10_Lipovac_Cultural-routes-and-info-mobility_ZadarAirport.pdf

You Tube channel:

<https://www.youtube.com/watch?v=1lb5mOahx08>

6.1.1.11 EU projects of the Port of Trieste: several tools for a smart port [Valentina Boschian]



VALENTINA BOSCHIAN

Port Network Authority of the Eastern Adriatic Sea

“EU projects of the Port of Trieste: several tools for a smart port”

Abstract

The presentation gives an overview of the European Projects that the Port Network Authority of the Eastern Adriatic Sea – Port of Trieste is participating, as lead partner as well as project partner. EU projects represent a fundamental instrument to pursue the mission of the Port of Trieste and to optimise the existing port infrastructures with the final aim to make the Port of Trieste more competitive and more attractive to investors. The port of Trieste is involved in 22 co-funded projects, for an overall budget of 126.7 mln euros and an EU contribution of 32.3 mln euros in the following domains: infrastructures (3 projects), environment and energy efficiency (6 projects), port-inland optimisation (3 projects), culture (1 project), development cooperation (1 project), ICT (8 projects). With a particular focus on ICT, the following projects are presented. One project related to maritime access: INTESA – Improving maritime transport efficiency and safety in the Adriatic (Interreg Italia-Croazia 2014-2020); two projects related to road access: “PORTIS – Sustainable mobility solutions for port cities (Horizon 2020), URSA MAJOR neo (Connecting Europe Facility – CEF); four projects related to railway access and fast corridors: AlpinnoCT – Alpine Innovation for Combined Transport (Interreg Spazio Alpino), PROMARES – Promoting maritime and multimodal freight transport in the Adriatic Sea (Interreg Italia-Croazia 2014-2020), SMARTLOGI – Logistica transfrontaliera sostenibile e intelligente (Interreg Italia-Austria), COMODALCE – Enhancing COordination on multiMODAL freight transport in CE (Interreg Central), FENIX – A European FEDerated Network of Information eXchange in Logistics (Connecting Europe Facility – CEF).

Short bio

Dott. Ing. Valentina Boschian, Ph.D., works at the Port Network Authority of the Eastern Adriatic Sea – Port of Trieste, in the Digital Port Area. Since 2008, her expertise is focused on consultancy activities related to the analysis of ICT impact on new business cases, mainly in the field of transport and logistics. After obtaining a degree in Management Engineering and a PhD in Computer Science Engineering, she worked as a project manager in several international research projects. She is also expert in business model innovation.

Main skills: Analysis and modelling of processes; Assessment analysis (based on KPIs definition); Management of complex systems with analytical models; Analysis of business scenarios, Use Case identification and User Requirement definition; Project management, ICT applications in logistics and transportation management.

Education

- Dottorato (Ph.D.) in Information Technology Engineering, University of Trieste (2012)
- Degree in Management Engineering and Integrated Logistics (graduation with first class honours, “110/110 e lode”), University of Trieste (2008)
- Degree in Management Engineering (graduation with first class honours, “110/110 e lode”), University of Trieste (2003).



Presentation

PDF presentation:

https://step-up.training/wp-content/uploads/2019/10/11_Boschian_EUproject_070519_v01.pdf

6.2 II Training Session

For the Second Training Session all the relevant material is available at the following link:

<https://step-up.training/training-session-ii/>



Home [Training Sessions](#) ▼ [Contacts](#)

STEP-UP: TRAINING SESSION II

INFOMOBILITY FOR SUSTAINABLE PASSENGERS' FLOW BETWEEN ITALY AND CROATIA

THE WEBINAR is organised as the second Training Session of **STEP-UP project, INTERREG ITALY-CROATIA** funded by the European Regional Development Funds. The webinar aims to promote the knowledge of the fields of tourism, multimodality and ICT systems applied to passenger flows, and bring attention to development projects involving the Adriatic area between Italy and Croatia.

The invited speakers are both experts within the project partnership and external professionals, all of them own renowned experience in the field they present.

The session, held in English as official language of the project, is free and accessible remotely via webinar.



[Program](#)



Link to the Program:

<https://step-up.training/wp-content/uploads/2019/07/Program.pdf>



STEP-UP Second Training Sessions NEW SCENARIOS ON MULTIMODAL MOBILITY

INFOMOBILITY FOR SUSTAINABLE PASSENGERS' FLOW BETWEEN ITALY AND CROATIA

Webinar

- 10:30 – 11:00** **The role of Mobility as a Service**
Daniela Vasari, *Project manager, solution designer in ITS projects and International cooperation, Pluservice, Technical Assistance of Marche Region (STEP-UP project Lead Partner)*
- 11:00 – 11:30** **The economics of electric vehicles**
Romeo Danielis, *Department of Economics, Business, Mathematics and Statistics, University of Trieste*
- 11:30 – 12:00** **ICT tool in use at the Port of Trieste: the Port Community System Sinfomar**
Valentina Boschian, *Port Network Authority of the Eastern Adriatic Sea*
- 12:30 – 13:00** **How to use GTFS**
Giorgia Fanesi, *Software analyst and project manager, Pluservice, Technical Assistance of Marche Region (STEP-UP project Lead Partner)*
- 13:00 – 13:30** **MaaS Business Models**
Andrea Molinaro, *Consultant at Studio Peloso & Associati - expert in design thinking, business organization and subsidized finance*

YouTube channel: **Project Step-Up**
link to Web Page: www.step-up.training
e-mail: info@step-up.training
link to questionnaire: <https://step-up.training/questionnaire/>

6.2.1 Links to speaker's presentation, II Training Session

Each involved speaker is presented on the page dedicated to the training session in which he participated. For each of them it is proposed a photo, the description of the role held, a brief biography, a link to the PDF containing the lecturer presentation (fully available in the related Deliverable) with a link to the video of the presentation (on the official YouTube channel).

6.2.1.1 The role of Mobility as a Service [Daniela Vasari]



DANIELA VASARI

Project manager, solution designer in ITS projects and International cooperation, Pluservice, Technical Assistance of Marche Region (STEP-UP project Lead Partner)

"The role of Mobility as a Service"

Abstract

An overview on Mobility as a Service

Short bio

Daniela Vasari graduated in Computer Engineering, in March 2009. She works in Pluservice since 2009 as Solution Designer for ITS in Passenger Transportation and since 2014 as Senior Project Manager.

She is involved in EU-International-National projects on topics such as Demand Responsive Transport, Multi-modal Traveller Information Systems, Automatic Vehicle Monitoring systems.

She is the Project Manager of several European funded projects.



Presentation



Link to presentation's PDF:

https://step-up.training/wp-content/uploads/2019/07/The-role-of-Mobility-as-a-Service_2nd_TS.pdf

Link to registration of the presentation on You tube channel:

<https://www.youtube.com/watch?v=FtibHZDoMFM>

6.2.1.2 The economics of electric vehicles [Romeo Danielis]



ROMEO DANIELIS

Department of Economics, Business, Mathematics and Statistics, University of Trieste

“The economics of electric vehicles”

Abstract

The presentation discusses the economics of electric vehicles. I will answer the following questions: Why do we need for Evs? Are EVs technologically feasible? Is there an economic case for EVs? Which EVs are available and for which transport modes? Is it possible to decarbonise transport?

Short bio

Romeo Danielis is full professor of Economics at the University of Trieste. He teaches Industrial Economics, Transport Economics and Logistics, and Market and Business Economics.



Link to presentation's PDF:

<https://step-up.training/wp-content/uploads/2019/07/Presentazione-Danielis-18.6.2019.pdf>

Link to registration of the presentation on You tube channel:

https://www.youtube.com/watch?v=E_4vX7wXKbc

6.2.1.3 ICT tool in use at the Port of Trieste: the Port Community System Sinfomar [Valentina Boschian]



VALENTINA BOSCHIAN

Port Network Authority of the Eastern Adriatic Sea

“ICT tool in use at the Port of Trieste: the Port Community System Sinfomar”

Abstract

Sinfomar is the name of the PCS implemented since 2014 and currently in use at the Port of Trieste. It is an on-line platform designed for the management of administrative, tax and customs procedures in compliance with the specificities regarding the Port Authority logistics chain. Indeed, during the design phase of the Sinfomar, the distinctive legislative nature of the Port of Trieste international free zones areas was taken into consideration in all its regulatory peculiarities. The leading stakeholder is the Port Network Authority of the Eastern Adriatic Sea – Port of Trieste. The development project of Sinfomar involved the entire local and regional maritime industry stakeholders. In particular, having regard to public actors, the following main stakeholders were involved: Harbor Masters, Customs Agency, Finance Police and Maritime Health Authority. Considering the private operators, the following main stakeholders were involved: shipping agents, terminal operators, freight forwarders and inland terminal operators.

From the architecture perspective, the ‘Sinfomar’ is structured in modules and sub-modules based on code languages and international Open Source standards. In particular, technologies related to web-services use XML. The software is constantly under development in order to guarantee the full adaptation of its functionalities/features to the dynamics of constant change related to the global international maritime transport domain as well as its capability to elaborate the increasing volumes of data associated with the Port of Trieste traffic growth rates. Indeed, the constant commitment in ensuring the adaptation capability of the ‘Sinfomar’ is one of the main objectives of the Port Authority, as to ensure the system compliance with the relevant national and EU applicable rules and international standards.

Short bio

Dott. Ing. Valentina Boschian Ph.D. works at the Port Network Authority of the Eastern Adriatic Sea – Port of Trieste, in the Digital Port Area. Since 2008, her expertise is focused on consultancy activities related to the analysis of ICT impact on new business cases, mainly in the field of transport and logistics. After obtaining a degree in Management Engineering and a PhD in Computer Science Engineering, she worked as a project manager in several international research projects. She is also expert in business model innovation.



Presentation



Link to presentation’s PDF:

https://step-up.training/wp-content/uploads/2019/07/BOSCHIAN_STEP-UP_webinar ICT.pdf

Link to registration of the presentation on You tube channel:

<https://www.youtube.com/watch?v=b0oKhY5Oryk>

6.2.1.4 How to use GTFS [Giorgia Fanesi]



GIORGIA FANESI

Software analyst and project manager, Pluservice, Technical Assistance of Marche Region (STEP-UP project Lead Partner)

“Intermodality for a seamless solution”

Abstract

The presentation is focused on the importance of the Mobility Data to feed travel planner systems with particular attention to the GTFS format.

During the presentation it will be explained what a GTFS is, the structure of the GTFS and how it is possible to create a GTFS based on the dependency through the files.txt.



Link to presentation's PDF:

https://step-up.training/wp-content/uploads/2019/06/6_Fanesi_Intermodality-for-a-seamless-solution.pdf

Link to registration of the presentation on You tube channel:

<https://www.youtube.com/watch?v=utK6EF-DhTQ>

6.2.1.5 MaaS Business Models [Andrea Molinaro]



ANDREA MOLINARO

Consultant at Studio Peloso & Associati – expert in design thinking, business organization and subsidized finance

“MaaS Business Model”

Abstract

With this webinar we want to transfer to you specific and clear concepts about business analysis and we will describe strategic tools that we really use working with our clients. Everyday! We will define business model meaning, and then we will talk about design thinking approach for the develop of business models; in particular we will describe the Business Model Canvas method. In the end part we will apply the theory of business model Into the world of Mobility as a Service (M.a.a.S.).

Short bio

Degree in economics and business at the at the University of Udine.

Senior consultant expert in design thinking techniques, analysis of business models, sales area development plans and business organization.

Senior funding and grant consultant for R & D and Innovation projects.

Has been collaborating for 10 years with the Studio Peloso & Associati.



Presentation



Link to presentation's PDF:

<https://step-up.training/wp-content/uploads/2019/07/MaaS-Business-Models.pdf>

Link to registration of the presentation on You tube channel:

<https://www.youtube.com/watch?v=VW3xqtWT-Ec>

6.3 Didactic materials III Training Session

For the Third Training Session all the relevant material is available at the following link:

<https://step-up.training/training-session-iii/>

STEP-UP: TRAINING SESSION III

NEW SCENARIOS ON MULTIMODAL MOBILITY INFOMOBILITY FOR SUSTAINABLE PASSENGERS' FLOW BETWEEN ITALY AND CROATIA

The third and last Training Session wants to be an open and dynamic appointment with citizens, to tell the aims of the STEP-UP project and to explore some new mobility scenarios: MaaS (Mobility as a Service), Electro-mobility, Info-mobility, EUSAIR Pillars and Sustainable Tourism, ICT Tools for Tourism and E-Planning Platforms.

The invited speakers are both experts within the project partnership and external professionals, all of them own renowned experience in the field they present.

The session, held in English as official language of the project, is free and accessible remotely via webinar.



Program



BARTOLOMEO SILVESTRI

PhD student and research fellow in the Polytechnic University of Bari, Italy

“Electric Vehicles (EVs), Sharing System, Reallocation and Balancing of sharing EVs within a city through an incentive system”

Abstract

The presentation shows new mobility technologies and concepts to improve the citizen life in the urban area. Moreover an innovative approach with incentive scheme in a sharing system with Electric Vehicles (EVs) is presented.

Transport externalities are more relevant in urban areas because there are more vehicles and more people. New technologies in mobility sector allow reducing these negative impacts.

Sharing system with EVs is a valid alternative to the current concept of urban mobility with private vehicles. The reallocation task, strongly affects the company operating cost, and consequently the service price for users. An incentive scheme is proposed to involve users in the reallocation with a dual purpose: reduce the reallocation cost and increase user loyalty.

Short bio

Bartolomeo Silvestri is a third-year PhD student and research fellow in the Polytechnic University of Bari, Italy. His doctoral research investigates sustainable transport in smart cities, both for the mobility of people and for the last mile logistics. He is focusing on EVs, ELVs and new mobility concepts such as Mobility as a Service, sharing system and innovative approach to engage users. He analyzes also the transport externalities, especially in urban area and energy consumption with the use of EVs as storage in a smart city. He co-authored of several scientific papers in international conference and journal. He holds a master's degree in Management Engineering with specialization in environmental management of companies, from Polytechnic University of Bari, Italy, with a thesis on the optimization of the plants configuration for recovery and treatment of solid urban waste in metropolitan Bari area. He holds a degree in Management Engineering from Polytechnic University of Bari, Italy, with a thesis on the optimization of the train seller point in Apulia region.

Link to presentation:

https://step-up.training/wp-content/uploads/2020/01/STEP-UP_Silvestri.pdf



VANJA LIPOVAC

Consultant for EU Projects, Zadar Airport (STEP-UP project Partner)

“Participatory governance as a model for urban mobility planning”

Abstract

The presentation will be a short introduction to participatory governance model, exemplified with an EU project REMEDIO that used this approach to tackle Split city urban mobility issues. The presentation will focus on relevance of participatory governance and why can it be beneficial to stakeholders as well as the public, stakeholder distribution and characteristics and some approaches how to develop participatory governance in practice. Finally, a showcase of REMEDIO methodology and achievements will be discussed.

Short bio

Vanja Lipovac has master degree in cultural sociology (2015). Shortly after, he started an internship in Zadar County department for EU projects and development, where he participated on preparation and implementation of several national and international EU projects. After finishing a year of internship he started working as a project manager for „Foster children rights“ project, financed from European social funds. After the project ended, he started working as a consultant for EU project for Driope. He is mostly focused on projects regarding urban mobility, intermodality, info-mobility and sustainable development.

Link to presentation:

<https://step-up.training/wp-content/uploads/2019/10/Participatory-governance-as-a-model-for-urban-mobility-planning-1.pdf>



ALESSANDRO RINALDI

Research fellow and research doctor at the Department of Electrical and Information Engineering (DEI) of the Polytechnic of Bari.

“ICT tools for a more efficient and sustainable e-mobility model”

Abstract

With reference to the specific topic on “European Project on mobility and sustainable tourism”, the work shows how ICT tools can allow and assist the transition towards smart and sustainable mobility. In this context, the ICT tools and services developed within the European project H2020 ELVITEN (GA nr. 769926) are described. In particular, the ICT tools are described, including the search service and the booking service for vehicles and charging stations, the ICT platform for monitoring the fleet of electric vehicles, the serious game app and a smart app for incentives. These tools were suitable and indispensable to incentivize and encourage users towards a new mobility that is electric and sustainable.

Short bio

Experience and expertise in the specific disciplinary area of IICAR 10 with particular regard to the issues of energy efficiency and sustainability of buildings, also demonstrated through active participation in national and international conferences, as well as constant scientific production with contributions to international journals. Dottorato (Ph.D.) in Information Technology Engineering, University of Trieste (2012)

Link to presentation:

<https://step-up.training/wp-content/uploads/2019/10/ICT-tools-for-a-more-efficient-and-sustainable-e-mobility-model-1.pdf>



LUCA LUCIETTI

Civil engineer expert in mobility and transport currently in service at Roma Capitale

“Sustainable transport and SUMP”

Abstract:

A Sustainable Urban Mobility Plan (SUMP) is a strategic plan designed to satisfy the mobility needs of people and businesses in cities and their surroundings for a better quality of life, on a long term vision. The policies and measures defined in a SUMP cover all modes and forms of transport in the entire urban agglomeration, including public and private, passenger and freight, motorised and non-motorised, moving and parking. A SUMP grows on the principles of integration, participation, and evaluation principles following a transparent and participatory approach.

Participatory planning is a prerequisite for citizens and stakeholders to take ownership of the SUMP and the policies it promotes. It makes public acceptance and support more likely and thus minimises risks for decision-makers and facilitates the plan implementation.

The presentation explores the importance of SUMP and the integration of new transport technologies in the development of transport effectiveness and efficiency, and the role of these factors in the achievement of the sustainability policy targets set by the EU.

Short bio:

Luca Lucietti – Graduated in Civil Engineering (Transport) in 2001 at the University of Rome La Sapienza. He worked from March 2002 up to June 2019 in FIT Consulting srl, an Italian independent SME, where he held the role of Project Manager several projects. FIT built up remarkable national and international experience in research & innovation, demonstration and supporting action projects in mobility of people and goods. He carried out feasibility studies in the urban logistics sector for the cities of Padua, Ferrara, Parma, Frosinone and Prato. He provided technical support for the SUMP elaboration for the cities of Piacenza, Parma, Trieste and Verona, with specific focus on the reorganization of the urban goods distribution. He has lectured and trained on logistics issues in the Link University of Rome's master of sustainable mobility and logistics. He works in the Municipality of Rome (Roma Capitale) since July 1st 2019.

Link to presentation:

<https://step-up.training/wp-content/uploads/2019/10/Sustainable-transportSUMP.pdf>



PETRA GRGASOVIĆ

a director of Erkon Ltd, an independent expert in fields of urban mobility and integrated urban development, also active as an ad-hoc URBACT expert Airport (STEP-UP project Partner)

“Planning mobility to support sustainable rural tourism”

Abstract

Objectives of the training are:

- *to establish a clear connection between tourism and transport system development*
- *to identify the impacts of tourist mobility on destination points and their surroundings*
- *to learn about challenges and optimal approaches to tourist mobility management, with a focus on the development and preservation of life in rural areas*
- *to explore existing solutions and approaches to mobility planning as tools to support overall local and regional development in line with the sustainability objectives*

The training aims to help all individuals and entities which participate in tourism or mobility planning, regardless of the level of their engagement on the topics in question (local and regional administration engaged in strategic planning processes, key private and public stakeholders of local and regional transport systems, parties involved in sustainable tourism development, professionals and researchers in fields of transport, mobility, tourism, integrated regional, urban or rural development). Taking the defined training objectives and target groups into consideration, the structure of the training is the following:

- *PART 1 Tourism and mobility: two sides of the same coin*
- *PART 2 The role of mobility management in rural tourism*
- *PART 3 Existing approaches and solutions related to (rural) tourist mobility.*

These parts are designed to guide the listener from the more general issues related to tourism and its dependency on transport, towards specific challenges and solutions related to mobility management that has the potential to support sustainable tourism (and life) in rural areas. Some examples of the already undertaken initiatives are also presented.

Short bio

Petra Grgasović is a director of Erkon Ltd and an independent expert in fields of urban mobility and integrated urban development, also active as an ad-hoc URBACT expert. During the last decade she has been working both in public and private sector, mostly on project evaluation, development and implementation, strategic planning and policy analysis. Petra is currently a PhD student in field of Geography, already holding a Master's degree in Architecture and Urban Planning and a specialisation in Eco – engineering.

Link to presentation:

https://step-up.training/wp-content/uploads/2020/01/STEP-UP_IITS_Grgasovic.pdf

7. Overall assessment, evaluations and conclusions

The main aim of WP5 - Creation of new job profiles, professional training and business model development, was to ensure transferability and durability through two main activities, Act. 5.1 and 5.2.

In this document, we concentrated on Activity 5.1 – Training Activities, whose expected outputs, deliverables and activities have been fully achieved.

We have taken into account barriers encountered in previous projects: very limited knowledge of these subjects and on how to deal with them slowed the progress and made it prone to errors. For this reason, we stressed the importance of creating a common ground knowledge for all the PPs and making available to all the partnership the knowledge already owned by singular PPs.

As expected outputs for Activity WP5.1 (Training Activities) we produced three training sessions, which have been recorded and made available on the project's YouTube channel and our training sessions' webpage (www.step-up.training). On this webpage we uploaded didactic material, to help anyone interested in improving his/her knowledge about multi-modal passengers' mobility.

Thanks to a careful selection of the lecturers, the topics, the modalities for the sessions, and also given the positive feedback collected after each training session, we can say that the goal of educating on mobility and travel planner aspects, and on collecting, sharing and managing transport data has been fully achieved. Moreover, the webpage created and the links to the official YouTube channel will make it easier for partners and interested stakeholders to reach the didactic materials, fostering the formation of new professional figures and the professional growth of the already existing ones.