THE
S.LI.DES.
STRATEGY

a cross-border strategy to foster
sustainable tourism in European
destinations through the promotion
of cultural heritage and the smart
management of visitors' flows

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Strategy
Introduction

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1.1
An overall profile
of the S.LI.DES. strategy

The S.LI.DES. project aims at devising a common strategy to foster sustainability and territorial economic development in EU destinations through the promotion of cultural heritage and the smart management of visitor flows.

As is well known, many cultural cities that are big or small tourist destinations currently suffer damaging anthropic pressure on local natural and cultural heritage, especially on the most popular points of interest and during peak seasons or special events.

The concentration of visitor flows in space and time is the most shared problem among these destinations, also in cases where the total amount of visitors over a year is not so excessive if compared with the total population. Also cruise tourism in some cases contributes to increasing the volume of visitor flows already present in the urban territory, and often without generating a comparable positive impact in economic terms.

Sustainable tourism is a complex and global issue, thus it cannot be considered as an 'entirely internal' tourism topic. Tourism, 'for better or for worse', participates in local development with the other businesses and forces of the territory in a process of mutual influence, and shares its benefits and costs.

It lives (or should live) in reciprocity with the wider social and economic development of a place. Hence the need for a comprehensive approach capable of bringing together the complexity of the many interacting aspects. It should be underlined that there cannot be sustainable tourism in an unsustainable city/territory and vice versa.

In each destination there is a multiplicity of public and private parties who operate in conditions of interdependence though at the same time quite autonomously. This other complex factor makes it difficult to find adequate forms of governance, capable of composing the numerous different instances and interests and making medium-long term choices.

The innovative and distinctive character of the S.LI.DES. strategy lies in the focus on a smart and dynamic decision support system to guide policy makers in the definition and promotion of innovative tourism policies to valorise tangible and intangible cultural assets in a sustainable way.

It is indubitable that the use of technologies and all data-related applications is rapidly developing. The chances, in terms of availability of platforms and structures, contribute to a "leap" forward in the ability to monitor phenomena in real time, make informed decisions on more reliable analyses and forecasts, and control by intervening on the

systems. The quality of the "visit experience", in terms of accessibility, usability, involvement - in a physical, cognitive, emotional and social sense - also benefits from the vast potential of applications. We can indeed consider two relevant and unprecedented possibilities offered by new technologies: a distributed participation of the "individuals" who, thanks to the platforms, can connect with their own behaviours, contents, offers in an effective and compatible way, expanding the networks and their value; a better usability of spaces and services, thanks to the very large, fast, lower cost creation/circulation of information and its applications.

The growing unsustainability of the mass tourism development model and the changes taking place, reinforced by the dynamics of the pandemic period, call in fact for a much more differentiated and rich tourism proposal of visiting experiences, raising the awareness that 'space and time' must be managed as destination resources subject to scarcity.

So, the wide possibilities offered by digital technologies must be accompanied by a reconceptualization of the interaction between suppliers and visitors, of the control of mobility, and of the development of transversal relationships between all the sectors that make up the ecosystems in the destinations. This approach can trigger a significant change in the mix of visitors, in favour of demand profiles with more sustainable numbers, concentration and user behaviour.

As for the excessive concentration of visitor flows, in particular with the pandemic, it has been dramatically understood that places, environments, services, space and time are shared and not unlimited resources (indeed for a certain period they have become very scarce under constraints such as social distancing). Booking, made simple and effective with the help of digital technologies, is an organizational tool that helps to use these resources - and others - in the best possible way. In fact, at the beginning we perceived the "compulsory" booking tool as a constraint, a necessary limit imposed by extraordinary events, but when looking at the other side of the coin, we realized that it can be an instrument that provides a plus to the visitor experience and to the organization and allocation of resources by the operators: in terms of sustainability, it is a renewed tool of civilization.

Any strategy can hardly be general in the strict sense. Rather it is modelled and must adapt to the context in which it matures and evolves. Therefore the S.LI.DES. strategy has experienced similar but different contexts in the five destinations being part of the project, both in terms of the characteristics of the environmental, social, economic, cultural, and tourist aspects, but also with respect to the presence of different resources, structures, projects and past experiences in terms of local development, digital transformation, collection and use of data, especially for monitoring purposes. Thus, along the project, common and specific characteristics emerged, both in the problems and in the solutions adopted. In the end, it was possible to identify three reference scenarios: "Destinations subject to high human pressure and flows concentration and that need to change course from mass tourism trend", "Destinations that need to enhance their city centre and the links with the neighbourhoods and other places in the area to valorise", and "Destinations that need to develop their tourist potential and overcome a strong seasonality issue", for each of which relevant elements emerge that characterize them and can help the understanding of the situation of other European destinations and the transfer of good practices.

1.2
How to develop
an effective strategy

In the frame delineated above, the S. LI. DES. strategy focused on three interconnected challenges considered strategically crucial:

* the lack of specific and dynamic knowledge on visitor flows and local economic and social activities adequate to guide decision makers and stakeholders;
* the need for a better distribution in time and space of visitor flows;
* the risk that local identity disappears or becomes homogenised by mass tourism and the need to promote it as a leverage to revitalize the social and economic urban environment.

In terms of process, the strategy can be outlined in four pillars: know your territory and its tourism and non-tourism dynamics; involve main local stakeholders; gain political endorsement; learn and adapt results during the path.

To address these challenges and pillars, the S.LI.DES. project has adopted a specific approach and developed a set of tools (the 'Smart Destination Ecosystem') at its core. The approach was participatory, seeing both the public administration and stakeholders involved and contributing to the definition and implementation of the activities. The direct engagement of local community stakeholders all over the project development ensured that their needs were translated into concrete tools, projects and actions to direct their efforts to positive effects on the territory. Given its nature, the methodology was based on some principles of "action research". The protagonists of the changes in fact are involved in the processes of defining the problem and implementing actions. Feedback of actions taken and tested helps improve vision and share solutions while contributing to knowledge improvement.

Regarding the set of tools developed, at the centre of the project's strategy there is the realization of the 'Smart Destination Ecosystem', an integrated knowledge system based on innovative tools, methods, and technologies. It is formed by four main components (the smart destination datahub; the destination mobility models; the mapping of tangible and intangible cultural heritage and Cultural and Creative Industries; the destination dashboard) that together aim to help city managers and stakeholders to make informed decisions, assess the results, and have better control in real time.

The core of this ecosystem is a multi-dimensional Destination Datahub, which integrates in a unique repository a huge set of data on each partner city retrieved from different internal and external sources, from the analysis of mobility patterns and the mapping of

craft activities, as well as by means of primary data collection.

The collection and sharing of data proved to be the most challenging issue and the experience gained in the project provides several indications on the problems to be addressed.

During the development and implementation of the project, some parts were fully implemented as planned, others only partially or were modified and adapted following the learning process, still others emerged along with some recommendations and new ideas. Together they become a sort of a framework, a collection of strategic drivers and priorities to be taken into account, even if they still need to be shaped and adapted according to the specificities of each destination as the experience of the project has largely demonstrated. So not recipes, but ingredients to design effective smart strategies in destinations. The main drivers can be summarized in the following: **a)** The need to improve data collection and accessibility; **b)** The need to target more precisely the use of information; **c)** Provide IT tools to support stakeholder engagement (with particular attention to small businesses and visitors) in the data challenge; **d)** Training & Education; **e)** The opportunity to expand the types of initiatives, format, and location in the destination; **f)** Organization and Governance of the actions has to be focused; **g)** Greater coordination and synergy among stakeholders and networking strategies.

The approach, the tools, and the pilot actions that were built during the project must be thought of as experimental, prototypes capable of tracing a path. They concretely experienced the wide possibilities offered by digital technologies combined with the "analogical", tangible and intangible, aspects: the physicality of places, mobility, people, knowledge and traditions. Future chances to fully exploit their potentialities greatly reside in the strength to motivate and encourage administrations and stakeholders to continue their investments and cooperation.

These prototypes have been designed to be adaptable to different specific contexts, such as the destinations in Italy, Croatia, Europe, that are different in terms of characteristics and evolutionary situation.

In this sense, one of the most important legacies of the project is the repository of methodologies, schemes, elaborations, reporting of pilot actions and meetings, which are richly documented in the deliverables.

The S.LI.DES. Project

2.1
The project and its objectives

"Heritage as leverage for sustainable tourism" is the slogan of the European project "Smart strategies for sustainable tourism in Lively cultural DEStinations (S.LI.DES.), funded by the INTERREG Italy-Croatia Programme, started in January 2019 involving 11 partners: Ca' Foscari University of Venice, CISET - the International Centre of Studies on Tourism Economics, ECIPA Soc.Cons. to R. L., SIPRO Development Agency - Ferrara, Municipality of Bari, City of Venice, CAST - University of Bologna, Institute for Tourism Zagreb, Craft College, DURA - Dubrovnik Development Agency and Šibenik Tourist Board.

The project aimed at developing a cross-border smart methodology and strategy to preserve and valorise unexploited tangible and intangible cultural heritage and to promote sustainable territorial development, focusing on 'living heritage' - craft activities and creative industries.

Through a set of innovative tools and methods, S.LI.DES. has developed a "Smart Destination Ecosystem" to dynamically analyse different aspects of the cultural heritage

destinations project, monitor visitors' mobility patterns and identify the potential of valuable skills and "know-how" to enhance visitors' experience. All data have concurred to assess the competitive and sustainable performance of the destinations, to support the development of actions aimed at diversifying the tourism offer through targeted investments in cultural heritage and design a cross- border smart strategy transferable at EU level.

S.LI.DES. takes a systemic participatory approach based on the design and joint implementation of methodologies, tools, and strategies to be discussed and shared with the main local stakeholders in the destinations involved in the project. Cross-border cooperation has also benefited from the diverse and valuable experiences and expertise brought by partners, thus generating high multiplier effects in the Programme area. The innovativeness of the approach lays in combining a wide range of smart technologies and methods to integrate destination data and analytics thus supporting decision-makers in adopting a new sustainable perspective to valorise cultural heritage, preserve local identity, promote territorial development and then make their destinations livelier and more liveable for visitors and the local community. The main project outputs (Smart Destination Ecosystem methodology, Destination dashboard and S.LI.DES. strategy) have benefited decision-makers and public authorities, local

craftsmen, cultural associations and SMEs, tourism industries visitors and citizens. All the S.LI.DES. outputs will be made available for transferring to other EU cultural destinations within and outside the Programme area.

S.LI.DES. project tackles three common challenges of the Programme area:

∗ the lack of dynamic and specific knowledge on visitors flows and local economic activities to guide decision makers in designing and implementing innovative strategies aimed at increasing sustainability and quality of tourism offer and fostering a more balanced and sustainable territorial development.

∗ the need of a better distribution in time and space of visitors flows to alleviate seasonality of tourism and reduce human pressure on territorial natural and cultural heritage.

∗ the risk that local identity disappears or becomes homogenised by mass tourism and the need to promote it as a leverage to revitalize the urban environment – making it livelier and more liveable – and diversify local economy, increase the competitiveness of both economic activities and the tourism industry and provide new job opportunities.

Interreg
Italy - Croatia
S.LI.DES.

EUROPEAN UNION

Project S.LI.DES. Basic Information

START DATE
01.01.2019

END DATE
30.06.2022

ERDF
€ 2.129.235

TOTAL BUDGET
€ 2.504.981,90

SPECIFIC OBJECTIVE
3.1: Make natural and cultural heritage a leverage for sustainable and more balanced territorial development

TARGET GROUPS
General public; local, regional and national public authorities; cultural and natural heritage management bodies; regional and local development agencies, enterprises; associations, regional innovation agencies; education and training organisations as well as universities and research institutes.

2.2
The project partners

Lead Partner

Ca' Foscari University of Venice
Venice School of Management

Ca' Foscari
University of Venice

About us

Ca' Foscari University of Venice, founded in 1868 as "Advanced School for Commerce" was the first Italian and the second European business school to be constituted. In 1971 The School of "Economia e Direzione Aziendale" launched together with Bocconi the first Bachelor's degree in management in Italy. In 1984 the School was formally transformed into "dipartimento", according to national regulations, as an institution integrating theoretical exploration with field research, to offer the most advanced higher education.
The current denomination of "Venice School of Management" (VSM) was decided by the School in 2021 in order to be better recognised at international level.

Scope of work

VSM is quoted as one of the best Schools in Italy in the major fields of business and management:

"Rooted in the history of Venice, we view our school as a nexus with the world, where teaching, research and engagement with practice respond to global as well as local calls to action. As a public academic institution, we are committed to granting everyone access to the opportunity of achieving a responsible impact. We generate and spread knowledge needed to reimagine our common future. We promote a hybrid mindset where business growth intertwines with sustainable development."

Role in S.LI.DES. project

The Venice School of Management acted in the Project S.LI.DES. as the Lead Partner both in the management of the project and the thematic implementation. In particular, it proposed an approach, content, tools, and actions within the fields of smart destination and sustainable tourism. Together with the other partners, through the S.LI.DES. project it has offered its interpretation of the sustainability and enhancement of intangible heritage by proposing tools and actions that select and focus on some specific aspects of the "problem". It urged its partners to identify the

specific issues that each of them locally encountered in carrying out the concrete implementation of the project and will encounter in future developments, with reference to, for example, establishing the conditions to start and then move the project forward, achieving that data collection and monitoring become systematic, designing and implementing pilot actions, involving stakeholders, providing opportunities for synergy with other projects, communicating/disseminating and gathering consensus. Furthermore, the Venice School of Management acts for the improvement and further development of the proposals set forth within the pilot experiences in the S.LI.DES. project framework.

Impact

The impact of project S.LI.DES. on the University Ca' Foscari of Venice – Venice School of Management relies on some keywords: sustainability, smart destination, visit experience.
Several research and teaching topics have been developed throughout the course of the SLIDES project, as well as an improvement of the dialogue with the public administration on these themes. The sustainable city is now seen as to be promoted and be perceived as a welcoming, inclusive city, which is well organized and usable in an "easy" and safe way. Sustainability is therefore linked to the idea of Smart Destination. The use of technologies and all applications related to "data" is evolving to create the conditions, in terms of platforms and structures, for a "leap" forward in the ability to monitor phenomena in real time and for long periods, make informed decisions on more reliable analyses and forecasts, and control by intervening on the systems.
Moreover, the concept of "visit experience" is now being empowered, at both involvement and usability dimensions - in a physical, cognitive, emotional, and social sense - which depend on how the environments, mobility, services, information have been organized, prepared, made accessible and inclusive, also with easy and appealing booking systems.

Project Partner 1

CISET

Ciset – International Centre of Studies on Tourism Economics

About us

CISET, the International Centre of Studies on Tourism Economics, was established in 1991 by Ca' Foscari University Venice, the Veneto Regional Government, and the Italian Touring Club.
The Centre carries out research, consultancy and training activities for students and professionals at an international, national and local level.
The combination of academic expertise and business know-how and the adoption of a multidisciplinary approach, thanks to a staff with different competences and skills, are the main strengths of CISET.
Tourism as a whole is analysed, with main focus on: market intelligence; economic impact and sustainability; links with culture and mobility; innovation technologies; business performance analysis and improvement

Scope of work

Promoting tourism that creates material and cultural wealth and acts as driving force of economic and social development for businesses, destinations, and local communities in Italy and abroad. This is CISET's core business since its foundation, over 30 years ago.
The synergy not only with the University but also with the tourism industry and the public administration is very strong and creates benefits for all parties involved.
Over the years, the Centre has participated in a number of EU/international projects and its team works on a regular basis with national and international partners.

Role in S.LI.DES. project

Together with Turizam, CISET coordinated the development of the Smart Destination Ecosystem (WP3) and, within it, planned the Datahub framework and contributed to the design of the City Dashboards, in co-operation with other partners.
The Centre has brought to the project its knowledge of the common challenges that popular tourist destinations face, its expertise in creating innovative and customized tools for data collection and assessment as well as in using an integrated approach to monitor and analyse destination competitiveness and measure the value of tourism at territorial level.
CISET staff involved in the project participated in the Dashboard training sessions for cities and supported them in testing the tool during the planning and development of the pilot actions (WP4).

The Smart Destination Ecosystem as a whole and the pilot actions support the definition of the S.LI.DES. Strategy (WP5). CISET contributed to its design and work on the development of transferability scenarios to other EU destinations, considering the different characteristics of the partner cities involved (popular tourist destinations which suffer of over-tourism before COVID vs. destinations who wish to enhance their tourist attractiveness in a sustainable way).

Impact

S.LI.DES. project has offered CISET the opportunity to capitalise the approaches, solutions and strategies developed in other research projects and related to topics such the role of tourism within other urban functions, the importance of data intelligence for decision-making and, in particular, of data analytics for destination marketing and management. The project has allowed the Centre to test the models in the eligible area and compare the results obtained, to further enhance and fine-tune the methodological tools in a transnational context and, finally, benefit of the established co-operation for future scientific development and business opportunities.

Project Partner 2

Ecipa
Società consortile a responsabilità lLimitata

About us

Ecipa is a Digital Innovation Hub located in Venice since 2017, with the goal to provide support to SMEs and their ecosystems to facilitate their digitalisation processes in cooperation with the regional public and private key players. The competences and skills of its services/projects are strengthened and adopted case by case thanks to the cooperation approach we have established with a consolidated network of regional, national and European experts.

In order to take advantage of (and manage) the digitalisation, ECIPA integrates the SME digitalisation process with the design and management of the specific upskilling of HRs with an idea that digital tools are an essential flywheel for a sustainable approach in economy as a whole. This is the reason why ECIPA has been involved in a project such as S.LI. DES.

Scope of work

ECIPA's work addressed to SMEs, is focused mainly on:
Orientation activities, Assessment of digital company maturity, Demonstration activities to approach digital technologies practically, Training for SMEs, Feasibility analysis of digital and sustainable transformation processes, Support to the elaboration of digital transformation strategy, Consulting services, Support for identification of and access to funding opportunities for a digital and sustainable innovation, Networking among relevant stakeholders, Support for scaling up digital transformation with the help of Competence Centres.

The Projects conducted are focused on digitalisation, circular economy, energy efficiency, and creativity.

Role in S.LI.DES. project

The core of the S.LI.DES project and the focus of ECIPA is a multi-dimensional Destination Datahub: a unique repository that integrates a huge set of destination data, mobility patterns and a dynamic map of craft businesses. The data (retrieved by each partner city from different internal and external sources) are collected in the datahub and visualized in a dashboard.

The S.LI.DES. Destination Dashboard works as a sort of business smart system that, through specific analytical tools, processes and transforms data into systematic and neat information. Meaningful relationships among data (KPIs) are identified and displayed into handy tabulars, visual reports and dynamic maps.

The Dashboard is divided into six key areas: Smart Economy, which also includes Tourism and Crafts; Smart Society; Smart Environment; Smart Accessibility and Mobility; Smart Living. It is a crucial tool for stakeholders in tourism with a decision-making role: the data provided by the dashboard allows the user to define the right strategy to manage tourist turnout/pressure on the destination, to enhance and exploit local tangible and intangible heritage and safeguard the environmental impact. Ecipa is the partner in charge to develop the dashboard, because of its expertise as a Hub in data analytics and big data.

Impact

Impact of the SLIDES project on ECIPA Hub can be summarized in a few points, namely:
* a dashboard designed and developed in cooperation with other partners: a tool useful and suitable for the public sector, meeting the specific needs of each destination.
* a way to exploit the local heritage and adopt an environmentally friendly approach to manage tourist flows in the destinations. The ECIPA Hub is located in Venice characterised by a remarkable tourist pressure and serves as the Service agency of the regional federation of SMEs and crafts association, aimed at finding solutions to protect made-in-Italy crafts and providing a tool useful to manage the tourist impact.
* possibility to develop a dashboard model that can be customized and supplied, as a DIH, to other destinations.
* strengthened competences in the bid data and data analytics field.
* validated "spider approach", as a Hub ECIPA to outsource custom services (for the most suitable performances). The SLIDES project enabled the involvement and commitment in a concrete experimentation of ECIPA's approach.

Project Partner 3

Sipro Development Agency – Ferrara

About us

SIPRO is the Development Agency of Ferrara, active for over 40 years for the economic development of the territory.
Its shareholders are the Holding Ferrara Services, the 20 Municipalities of the Province of Ferrara, the Province of Ferrara, the Chamber of Commerce of Ferrara, therefore Sipro has the necessary institutional management to improve policies and strategies.

The Agency focusses on the promotion of sustainable development of the territory by supporting local stakeholders for the optimization of the structural funds and European instruments. Sipro is in charge of territorial marketing, energy planning and sustainable tourism.

Scope of work

Sipro is one of the main key players of the Municipalities and the Province of Ferrara to support the territorial development through:
* The promotion of enterprise networks.
* The exploitation of regional and European incentives and funds to develop actions with local effects.
* The cooperation with local stakeholders

for the identification of solutions to consolidate the local economic system.

Sipro have a long experience in EU funded projects, both in terms of management-coordination as well as implementation, testing and activities transfer. In recent years Sipro has dealt with several EU projects, especially based on sustainable cultural and experiential tourism and heritage enhancement.

Role in S.LI.DES. project

Sipro was responsible for the project communication activities coordination (realization of media contents and newsletters, official web-platform management, making of the promotional destination video).
Sipro was also active to support the finalization of the S.LI.DES. Smart Destination Ecosystem and for the local pilot action.
Sipro planned the project activities in a collaborative way with the Municipality of Ferrara in order to enhance the destination and local craft activities, representing the cultural tangible and intangible heritage. The main results of Sipro's works was the mapping of crafts activities in Ferrara and the installation of 6 sensors to better understand the mobility flows and define an innovative tourism strategy. These data - together with other key data about the destination (e.g. national and international arrivals/ overnight stays) that were provided by Ferrara's administration -

were helpful for the realization of the dashboard of the main project.

Finally, a more participatory phase has been promoted through the pilot action, divided in four main activities: educational tours with tourism operators, local authorities and journalists to encourage new itineraries connecting Ferrara with its hinterlands; lectures on the territory to raise awareness on our traditions; a showroom located in the city centre to promote craft's products. In addition, a brochure will be implemented to present the "Botteghe Storiche" label, supporting historical shops in Ferrara.

Impact

Thanks to S.LI.DES. project, Sipro had the opportunity to develop new strategic operations, along with the mapping methodology to collect not only information about crafts activities in Ferrara and its territory, but also about data on tourist flows for a broad analysis of the destination and the influence of its

expected actions. We encouraged and fostered cooperation both with craftsmen, started during the previous European projects, such as ADRION 5 SENSES, and with local stakeholders in the AIR-BREAK project.

This project provides a novel methodology to study and observe tourist flows in order to implement sustainable strategies related to mobility in the destination. This is considered a good practice which has paved the way for new projects and collaborations to share knowledge on the characteristics of the destination demand. For example, the AIR-BREAK project will continue this study on tourist data.

Project Partner 4

Municipality of Bari

About us

Bari with its 310,000 inhabitants is the 9th Italian city by extension. It is the capital of the Puglia (Apulia) region with a metropolitan area ranking sixth in Italy. The Municipality has a very strong technical and administrative structure (with about 1,700 employees), is recognized as an urban authority by Article 7 of EU Regulation 1301/2013, featuring an organizational model to manage European funds and investments. The department involved in the S.LI.DES. project is the Department of Cultures, Religions, Equal Opportunities, Communication, Territorial Marketing and Sport.

Scope of work

The Municipality of Bari is committed to the valorisation of the historical and architectural heritage for tourism and cultural purposes. Bari is today the first tourist destination of the Puglia region. It is focussed on strengthening innovative policies to improve tourism management, exploiting the potential of the material and immaterial heritage and promoting the competitiveness of the local economy. The Municipality is also committed to the implementation of environmental protection strategies, dedicated to the sector of social inclusion and local development, through actions that involve citizens and local stakeholders, and that see it as the protagonist of several regional, national, and European projects.

Role in S.LI.DES. project

Among the activities carried out by the project there is the creation of a Smart Destination Ecosystem Methodology for modelling visitors' flows and mapping tangible and intangible cultural heritage. The Municipality of Bari has implemented the activity related to the development of visitors' mobility models; it purchased and installed 23 cameras between via Sparano and the old town to monitor the pedestrian flow. The Municipality of Bari carried out the identification and mapping of its cultural heritage, with a specific focus on local handicrafts. About its pilot action, the Municipality of Bari carried out the realization of a tourist-cultural itinerary in the city centre with the involvement of the intangible heritage sectors. This action saw the realization of four events on 12, 13, 19 and 20 November 2021, aimed at enhancing the local intangible cultural heritage. The selected exhibitors belong to the food and wine sector (bakeries, street food, restaurateurs) and to the arts and crafts sector (shops, ateliers, art masters, wireworks, ceramics, design stores). WP5 will devise a common strategy, developed in WP3, and tested in WP4, to foster sustainability and

territorial economic development in EU destinations through the promotion of cultural heritage and the smart management of visitors flows.

Impact

The project had several positive impacts. First, an impact on tourist mobility, because it has attracted tourists, visitors and citizens to the lesser-known areas of the city, where the local activities involved in the project are located, and an improvement in tourism management that reduces anthropogenic pressure on the local cultural and natural heritage, ensuring a sustainable use of the places thanks to seasonal adjustments and a better distribution of visitor flows. A second positive impact concerns the promotion, enhancement, and innovation of craft activities. The promotion of the itinerary and the organization of activities such as workshops, tastings, etc. offer local businesses the opportunity to promote their work as the truly authentic cultural intangible heritage. Finally, the project makes it possible to achieve positive effects on the local economy, which has become increasingly sustainable and competitive. Furthermore, the creation of a Smart Destination Ecosystem, which includes a set of intelligent and dynamic tools that make it possible to know and monitor tourist flows by relating the demand for "tourist mobility" with other mobilities, allowed a better integration between tourism, crafts, and intangible heritage to quickly verify the impacts of policies and strategic decisions concerning tourism.

Project Partner 5

City Of Venice

About us

The City of Venice is the local administration responsible for the government of the Venetian territory, an area of 414 Km2 and 254.000 inhabitants circa, 53,000 of them in the historical city centre. The territory ranges from the historic city, built on more than 100 islands, the fragile lagoon environment, and the seafront, to the mainland with the medium sized city areas of Mestre and Marghera. Venice is one of the most important international tourism destinations for its exceptional historical, architectural and artistic heritage, integrated into an environmental and landscape context that is unique in the world.

Scope of work

The City of Venice represents the local community, protects its interests, and promotes its development. Among its competences, the municipal administration is responsible for the development of local policies on Tourism. Tourism constitutes one of the main economic resources for the city and a constant source of cultural exchange, however in recent years it has also been producing negative impacts on the social structure and on the conservation of natural and cultural heritage. To develop a renewed integrated strategy to improve

tourism management, the City has promoted participation in various projects co-financed by EU funds, among which S.LI.DES. is the most relevant.

Role in S.LI.DES. project

The City of Venice is one of the 5 cities involved in the S.LI.DES. project. In cooperation with the whole project partnership, and in particular with the other local partners - Ca' Foscari, Ecipa and Ciset - it contributed to the development of the S.LI.DES. Smart Destination Ecosystem by providing data recorded by the video cameras installed throughout the city and by purchasing a workstation dedicated to the video-analysis through neural networks.
Venice tested the Smart Destination Ecosystem by implementing a local pilot action called "The Routes of Venetian craftsmanship and creativity". The pilot action consists of the development of 10 itineraries in the less known parts of the city aimed at safeguarding and enhancing the craftsmanship, artistic and creative heritage of the Venetian territory, paving the way for an artisan culture that can promote the sustainable development of the sector and support the recovery from the coronavirus pandemic crises.

Venice is also the partner responsible for developing the S.LI.DES. Strategy together with the other involved destinations where the

The Venetian Lagoon, Venice, Italy

S.LI.DES methodology was tested (Ferrara, Bari, Sibenik and Dubrovnik). Developing the strategy includes signing specific cooperation agreements with local stakeholders and promoting the strategy's transferability to other European cities facing similar challenges.

Impact

The participation in the S.LI.DES. project and the creation of the city Smart Destination Ecosystem has supported Venice in the development of an innovative strategy by improving knowledge of the tourism phenomenon under various aspects: the role that tourism plays within the local urban environment; the volume of visitor flows during different time slots (days, hours of the day, etc.); knowledge of the behaviour of day trippers and overnight tourists. This improved knowledge has enhanced the management of tourist flows in order to preserve and enrich the local identity and the tangible and intangi-

ble cultural heritage, with a specific focus on a "living culture" (crafts and Culture and Creative Industries). Furthermore, sharing and enhancing common strategies for the development and conservation of cultural heritage serves as a support for the City in identifying policy guidelines to update and improve the current Destination Management Plan.

Project Partner 6

Cast –
Alma Mater Studiorum –
University of Bologna

About us

The University of Bologna (UNIBO) was founded in 1088 and is the most ancient University in Western Europe. The academic offer is composed of more than 200 Bachelor and MA programmes (45 of which are joint programmes and 62 of which are completely taught in English) and around 40 Doctoral Programmes.
The Rimini CAST (Center for Advanced Studies in Tourism) is known for its innovative research programs on tourism economics, cultural heritage management, quantitative analysis and policy, sustainable development. CAST is an inter-departmental body set-up by UNIBO for connecting research, consultancy and advanced teaching in the area of tourism studies.

Scope of work

CAST is an inter-departmental body set-up by UNIBO for connecting research, consultancy and advanced teaching in tourism studies.
It is participated by four departments: Department of Economics, Department of Management, Department of Statistics, Department of Well Being and Quality of Life. CAST is in-

volved in several European projects related to tourism, among which SOCLIMPACT (from December 2017 to March 2021) focussed on climate change and the blue economy sectors, including tourism, and INNOXENIA also connected to climate change.

Role in S.LI.DES. project

The CAST unit was involved in all the WP of the S.LI.DES. project, but, in particular, it was in charge of developing the visitors' mobility models, of the project of the experimental systems to collect real time mobility data in the cities, of monitoring data acquisition in the data hub and mobility data analysis and visualization of the simulations results in the dashboard. As for visitors, Mobility models are able to simulate and to predict the visitors flows and presences on a road network, integrating both the available statistical data on tourist flows and the real time data recorded by the experimental systems. The experimental systems take advantage from the possibility offered by ICT technologies to detect data using the mobile phone mobility and provide information on the presences at Points of Interest or the pedestrian flows on a given road, having these data plotted on the dashboard. The model simulations are provided through a web service system built by the CAST-Unibo unit using a query from the dashboard. The relevant information is shown by the Dynamic Flow Maps that give the

expected mobility flows on the road network and a Heat Map for the distribution of presences in the cities. In the near future, CAST will be involved in monitoring pilot actions and completing WP5 activities.

Impact

The Rimini CAST is known for its innovative research programs on tourism economics, cultural heritage management also thanks to its location in an area with a high tourist vocation (the Romagna Adriatic coast). The S.LI.DES. project activities allowed to propose a new approach to tourism management based on the strategy aimed at creating a smart destination ecosystem which integrates ICT big data into dynamical models. In such a way, relevant information on tourist flows on the whole road network can be obtained. In particular, the system allows to highlight the mobility flows evolution at different times and spatial scales while analysing the effects of new actions to expand the tourist offer.

Implementing the S.LI.DES. strategy requires smart systems for real time data collection by means of distributed sensors or mobile phone data, the use of the visitors' mobility models through a web service provided by CAST and a smart interface on a dashboard for the stakeholders. CAST has planned a dissemination activity towards the municipalities of the Romagna Adriatic coast and the local stakeholders to illustrate these new tools for a future governance of sustainable tourism.

Project Partner 7

Institut for Tourism

About us

The Institute for Tourism is the only scientific public institute in Croatia specializing in research and consultancy services in tourism. It was established in 1959 by the Chamber of the Hotel and Hospitality Industry. Its original name was Bureau for Investments in Tourism. Soon the tasks and activities of the institute outgrew the institute's original purpose – drafting of investment studies and analyses, which was the main motive behind its inception in the initial stages of tourism development in late 1950s. The Institute for Tourism began to deal with, not only the economic aspects of tourism, but also with other tourism-related issues such as spatial, ecological, socio-cultural, etc. Currently, there are 34 employees that make a multidisciplinary team (experts in geology, traffic, architecture, economy, marketing, statistics, ecology, etc.).

Scope of work

Expertise of the Institute for Tourism is based on scientific work, permanent research activities and the continuous education of its multidisciplinary team. The institute's activities are governed by an integrated approach to tourism development and management, which considers the development aspects of a company or a tourist destination, as well as the national tourism policies. The Institute for Tourism works together with tourism industry players with whom it shares a common goal – to achieve a higher level of competitiveness for Croatian tourism.

Some projects:
* Tomas – Survey of Tourists and Visitors' Attitudes and Expenditures
* Competitiveness of Croatian Tourism
* Strategic documents (national, regional, local, micro-level: companies)
* EU projects (Interreg, ERASMUS+, etc.)

Role in S.LI.DES. project

Institute for Tourism is the responsible partner for Work package 3, and alongside CISET has worked on the activity 3.1. which is focused on creation of central destination data hub which collects data on majority of urban functions. Institute for Tourism supervised the data collection process and other activities within work package 3. Currently, Institute for Tourism actively participates in dissemination activities within work package 2 (e-newsletter, social network, external event). Also, it prepares deliverable within work package 4 that is focused on destination dashboard efficiency and further improvements. At the same time, it works with other project partners on development of the S.LI.DES. strategy that is part of work package 5.

Impact

The Institute for Tourism had the opportunity to participate in the design of innovative strategies that aimed at increasing sustainability and quality of tourism offer and fostering a more balanced and sustainable territorial development. Since tourism supply in Croatia is highly seasonal, there is a need for better distribution of visitors flows in time and space that will help to reduce human pressure on territorial natural and cultural heritage. To achieve that, the project S.LI.DES. developed a Smart Destination Ecosystem to dynamically analyse different aspects of the project cultural destinations heritage, monitor visitors' mobility patterns and identify the potential of valuable skills and "know-how" to enhance visitors' experience. This tool will help to make destinations more lively and liveable for visitors and the local community.

Project Partner 8

Craft College – Institution for Adult Education

About us

Craft College is an adult education institution founded in 2006 by the Association of Craftsmen Zagreb, Chamber of Trades and Crafts Zagreb and Croatian Chamber of Trades and Crafts. Its role is the continuous development of vocational experts and VET educational offer based on labour market needs, linking of VET with the economy and regional development, encouraging innovation in crafts and a responsible and sustainable development. Craft college cooperates with around 140 external experts providing courses and expert consultant services and has 20 full-time employed persons.

Scope of work

The main target of Craft college are SMEs, companies, unemployed persons, vocational schools and training centres. Besides close cooperation with Croatian Employment Service, OU works with local and regional authorities, as well as business support institutions. With the aim of harmonizing the supply and demand for professional training and development, Craft College is continuously developing educational programs compliant with Croatian qualification framework which, along with a lot of practical work, enable students to acquire the necessary competencies for independent work. In these activities, it cooperates with the Croatian Employment Service, and through international cooperation it transfers examples of good practice into its work and the Chamber of Crafts system as a whole. It cooperates with many partners in the EU and the region in order to transfer good practice, introduce innovations and harmonize learning outcomes, promote learning based on practical work in the field of vocational education.

Role in S.LI.DES. project

Craft college acts as technical, research and advisory partner in the project and especially on Work package 3 – The S.LI.DES. Smart Destination Ecosystem and Work package 5. – The S.LI.DES. Strategy. It mainly contributed to the creation of the S.LI.DES. Smart Destination Ecosystem by participating in development of a database and data mining tool as a part of central destination datahub which allows destinations and local stakeholders to access data on different aspects of their territory to assess competitive and sustainable profile (Data hub framework).
Craft college is also the partner responsible for the developing the S.LI.DES. Strategy together with work package 5 lead partner – City of Venice and the other involved destinations where the S.LI.DES. methodology was

tested (Ferrara, Bari, Sibenik and Dubrovnik). Developing the strategy also includes local stakeholder events, signing specific cooperation agreements with local stakeholders and building transferability framework with transfer scenarios to other European cities facing similar challenges.

Impact

Over the last 5 years Craft college invested a lot of its capacities in development and straightening its focus in a three main sectors, among of them sector of tourism and hospitality on which Croatian economy is mostly based. Thus, S.LI.DES. project have strong impact on the promotion of tangible and intangible cultural heritage, and the most important - local traditional handicrafts. The Destination Dashboard developed in WP3, which equipped destinations with a user-friendly dynamic tool which contain a lot of general and specific real-time statistic data can be used for future initiatives and transfer

to another potentially relevant destinations such as City of Zagreb. The pilot actions proved the S.LI.DES. methodology and its tools and reduced the crowd pressure on the destination popular attractions thus promoting cultural heritage and handicrafts which also resulted in empowerment of local SMEs. Since Craft college is founded by Croatian craftsmen chamber system, impact made by S.LI.DES. project is in accordance with its mission and vision and highly important because it interconnects with development of educational offer and making a connection between tourism and local economy.

Project Partner 9

DURA
Dubrovačka razvojna agencija
Dubrovnik Development Agency

Dura – Dubrovnik Development Agency

About us

The City of Dubrovnik Development Agency DURA Ltd., established in 1997, is a professional and non-profit organization established by the City of Dubrovnik, whose primary aims are to prepare and implement EU-funded projects as well as to support the overall economic, social and cultural development of the City. Currently there are 15 employees working at the agency full time. DURA offers individual consulting services for preparation of projects in the areas of tourism, SMEs, civil society, youth, culture, energy efficiency, sustainable mobility, and protection of the environment. DURA has successfully implemented more than 25 EU projects, as well as numerous national projects, hence it has strong international and national reach.

Scope of work

DURA's mission is to plan, create, and implement progressive, socially responsible, and ecologically sustainable projects in cooperation with economic entities, public institutions, and other stakeholders. The agency provides the following services: technical support in the preparation of EU-funded projects, preparation of nationally funded project proposals, man-agement and coordination of projects, support for start-ups, education and a one-stop shop for investors. The Agency's activities represent a link between the City and other major institutions and organizations in supporting local development. The scope and area of expertise includes implementation of the City of Dubrovnik Development Strategy (of which business development is a key theme), encouraging development of entrepreneurship and the tourism industry, SMART CITY strategy, coordination and assistance in projects applying for EU funds, national funding, and support of civil society.

Role in S.LI.DES. project

Aside the regular ongoing activities related to management and coordination, as well as communication activities, DURA conducted the activities related to the creation of a Smart Destination Ecosystem Methodology for modelling visitors' flows and mapping tangible and intangible cultural heritage. Within this activities' package, DURA bought and installed 9 new access points for free Wi-Fi that were integrated in the City Wi-Fi network system. DURA carried on the identification and mapping of cultural heritage, especially "live heritage" as handicrafts. DURA holds responsibility for all the project activities related to pilot actions on the project level, dealing with coordination, communication with all the project partners and official deliverables

Walls of Dubrovnik, Croatia

production. DURA itself implemented the pilot action constructed as a 2-days traditional arts and crafts fair located in less visited, yet highly valuable area of Dubrovnik (the Lazareti Dubrovnik). Through this pilot action, DURA tested the smart destination ecosystem by analysing the pedestrian mobility data collected by previously installed smart equipment. The aim was to distribute the visitors from the Old Town Dubrovnik towards the location of the pilot action, and at the same time to promote the tangible and intangible heritage, including the local handicrafts and tradition. DURA will contribute to the creation of the project common strategy aimed to foster sustainability and territorial economic development in EU destinations through the promotion of cultural heritage and the smart management of visitors flows.

Impact

S.LI.DES. project had impact on the tourist mobility as it provided new possibilities for the management and monitoring of tourist flows. The Destination Dashboard developed in WP3, equipped DURA with a user-friendly tool that would easily extract some of the statistical data about the City of Dubrovnik crucial to plan future initiatives. The pilot action implemented in Dubrovnik managed to distribute tourist crowds from the City core towards the pilot action location and that way reduced the crowd pressure on the popular city attractions. Also, project S.LI.DES. had large impact on the promotion of cultural heritage, tangible and intangible, especially the "live" heritage - local traditional handicrafts. At the same time, the project contributed to the local economy, supporting local SMEs to produce authentic products that represent local tradition and identity. This way, a greater connection between sustainable tourism and local economy was established.

Project Partner 10

Šibenik Tourist Board

About us

Šibenik Tourist Board is a public organization in charge of destination management for the city of Šibenik. Established in 1994 by the Board of stakeholders from tourism sector, it employs 11 people. The mission and main strategic objective of the Šibenik tourist board is to develop awareness of the importance of the economic and social effects of tourism, as well as encouraging, organizing and carrying out actions to preserve the tourist space, improve the tourist environment and offer, protect the human environment, natural and cultural heritage in accordance with requirements of sustainable development. It represents interests of various tourism operators at national and international level.

Scope of work

Šibenik Tourist Board is in charge of destination management, vision and strategic planning of tourism for the city of Šibenik. It oversees creation of innovative, sustainable touristic products and improvements of existing offer. Šibenik Tourist Board additionally actively participates in supporting the creation of cultural and heritage related programmes as well as various other initiatives in the local community.

Through Tourist Informative Centres, 1 permanent and 8 seasonal offices, it is providing tourist's information directly and digitally through official website www.visitsibenik.hr and various other applications (Audio guide, Šibenik Card, http://www.sibenik.travel/ specialized site and app for finding accommodation)

Role in S.LI.DES. project

Šibenik Tourist Board as a partner of Slides project has been involved as one of 5 pilot project sites participating in various activities linked to the creation and testing of Smart Destination Eco system Dashboard. Following the purchase of 4 camera-counters and their positioning and putting into operation, the system was tested through Šibenik Heritage Day - Pilot action implemented on 8 Thursdays in July and August 2021. Pilot action focus was on promotion of heritage and valorising less known areas of the historical city centre, putting the focus on Mala loža square as an area with huge potential for touristic use. Arts &Crafts fair and Evenings of a capella singing were the main activities taking place on this square but through pilot action we tested several other activities which proved the potential for growth of the use of this area. Guided tour, kids' corner, were some of the tested activities but potential is huge and will be discussed at the Regional workshop with all interested stakeholders, including busi-

Areal View,
Šibenik, Croatia

nesses located around the square. Additional fine-tuning of the tools for promotion of tangible and intangible heritage will be also in the focus of the upcoming regional workshop. Through this pilot action, DURA tested the smart destination ecosystem by analysing the pedestrian mobility data collected by previously installed smart equipment. The aim was to distribute the visitors from the Old Town Dubrovnik towards the location of the pilot action, and at the same time to promote the tangible and intangible heritage, including the local handicrafts and tradition. DURA will contribute to the creation of the project common strategy aimed to foster sustainability and territorial economic development in EU destinations through the promotion of cultural heritage and the smart management of visitors flows.

Impact

Pilot project – Šibenik Heritage Day provided many opportunities for creativity and innovation. New tools and materials have been tested for 8 Thursdays and provided some new experiences for tourists and locals. These programmes for promotion of tangible and intangible heritage were different from the usual offer existing in Šibenik city centre and confirmed that there is space for improvement and innovation in this domain. Many lessons were learnt during the pilot action which will be discussed with involved stakeholders but also with potential new ones. The concept has the potential for growth and improvement. Through the use of Dashboard and cameras –counters we were able to track the mobility of tourists and locals and make comparisons between an average day and the day of the pilot action in terms of tourist's mobility and duration of their stay.

By being able to analyse the tourist 's flows and to establish peak hours of their presence in the historical city centre by using the data from the Dashboard will provide us with necessary information to better plan our cultural, entertainment and arts&crafts offer and to tailor-make events on specific days and in different locations Good spatial distribution of tourists is linked with dispersed programmes and offers and this project is providing us with tools to do so more successfully in the future.

The S.LI.DES. Methodological Approach

3

3.1
The smart destination ecosystem

To achieve its objectives, the S.LI.DES. project aims to build an integrated knowledge system, supported by innovative tools and methods i.e., the Smart Destination Ecosystem. This system will help cities to identify their tourism and urban profile from different perspectives (economic, social, environmental, cultural, accessibility and local mobility, reputational); to assess visitor mobility patterns within the urban environment, with a focus on pedestrian mobility, and monitor it over time and space, taking into account the location of points of interest, and the effects related to the organization of specific events; to dynamically analyse different aspects of the destination culture, with a specific focus on craft activities, in order to promote them as a driver of local development and job creation; and to identify the potential of valuable skills and 'know-how' to enhance visitor experience. All data collected will contribute to the assessment of the competitive and sustainable performance of the destinations, to support the development of actions aimed at diversifying tourist attractions through targeted investments in tangible and intangible cultural heritage, and to design a cross-border smart strategy transferable at the EU level.

The S.LI.DES. Smart Destination Ecosystem is formed by four main components, which correspond to the activities carried out in WP3 (see Figure 1):

1) The smart destination datahub
2) The destination mobility models
3) The mapping of tangible and intangible cultural heritage and Cultural and Creative Industries (CCIs)
4) The destination dashboard

The core of the S.LI.DES. Smart Destination Ecosystem is a multi-dimensional Destination Datahub, which stores and manages a huge set of data on each partner city retrieved from different internal and external sources, from the analysis of mobility patterns and the live monitoring of mobility flows, and the mapping of craft activities.
The output of this system is accessible to city managers (and other stakeholders, if agreed by local decision makers) through a Destination Dashboard prototype, a user-friendly panel accessible via Web, which displays the city performances, using tabular and visual reports (tables, charts, graphs, dynamic maps).

Figure 1
The S.LI.DES. destination ecosystem:
main components

Smart Destination
Ecosystem

Smart Destination
Datahub

Repository of **economic, social, tourist, cultural, accessibility
and mobility, environmental and reputational data**
(retrieved from internal/external sources:
local/country/national, offline/online) or primary collection

Mobility
Model &
Maps

Mapping
of Craft
Activities
& CCIs

Destination Dashboard

Control panel prototype, which combines relevant KPIs,
correlations and models using tabular/visual tools
(tablets, charts, graphs, figures, maps)

3.2
The design of the Destination Datahub: methodological approach and main challenges

As mentioned before, the Destination Datahub is a data warehouse that retrieves data on each partner city (economic, social, touristic, cultural, environmental, transport, reputational). These data should be available as open data but are currently scattered in a number of different territorial sources (local/county/national datasets/databases) managed by public or private bodies or, furthermore, owned by external offline and online sources, such as Google and TripAdvisor. But data can also be obtained through primary data collection, using specific devices (e.g., video cameras and beacons in the case of mobility data) or direct surveys.

Through specific analytical tools, the Datahub processes and transforms these data into systematic information and identifies performances and meaningful relationships among them (Key Performance Indicators and correlations).
The methodology adopted to build the Datahub combines a top-down and a bottom-up approach.
The S.LI.DES. technical partners firstly defined the general structure of the data warehouse,

starting from a thorough inventory of existing city indicator systems developed at the local, national, and international level, with a focus on those created to assess city sustainability, city 'smartness' and the role of cultural and creative sectors in the urban environment.

The inventory included:
1. Review of academic and grey literature on the development of a city/destination system of analysis to assess its competitiveness/sustainability, with a focus on those based on a set of indicators (e.g., studies by WTTC - World Travel & Tourism Council ; WEF - World Economic Forum; UNWTO - World Tourism Organization)
2. Investigation of general cities indicator systems related to smart cities, sustainable cities, and cultural cities,
3. Check of existing indicator systems in partner cities and/or data sources already developed by cities in other EU and non-EU projects (where available).

More than 200 types of data/indicators were found, divided into the general categories characterizing a city profile (economy, society, tourism, culture, environment, accessibility and mobility, living).
Then the five partner cities or the partners representing them were asked to check the technical partners' proposal, to express the cities' information requirements about the Datahub, and, once agreed on the general

framework, to act as a 'data collection hub' at a local level. Their tasks were to: identify the data available and the main data sources, according to the agreed Datahub framework; investigate projects/initiatives already developed at a local level (existing data and/or indicator systems and dashboards); involve main local stakeholders and data owners, in order to ensure a regular data feed.

The combination of the two approaches led to the re-organization of the data into six key areas of analysis, which represent the six sections of the S.LI.DES. Destination Dashboard:

* **City at a glance,**
* **Tourism,**
* **Culture and crafts,**
* **Environment,**
* **Accessibility and mobility,**
* **City popularity and attractiveness.**

Regarding the last key area of analysis, during the development of the project, it was decided to further enhance the knowledge system following a 'Big Data Perspective' and then to integrate the dataset of each partner city also with data provided by external online sources, in particular by the most important search engine (Google Trends) and from one of the major international tourism platforms (TripAdvisor). The data retrieved from Google Trends help to analyse how much a 'city brand' is

searched at an international and national level, in general, and with a focus on tourism. The data retrieved from TripAdvisor provide the updated list of Points of Interest (POIs) present in the city from the visitors' point of view, i.e., according to what they find worth visiting, which is usually more complete than that retrieved from the supply side (i.e., by local administrators or other stakeholders), and can be considered a good proxy to express the 'cultural vibrancy' of the city. Usually, the more popular the POI, the more reviews are published on the platform.

Despite the initial design drawing, the data collection process encountered a huge number of problems in each city, due to a lack of data culture but also to data nature and the characteristics and management of both territorial and external sources.
These problems directly affect the volume and typology of data uploaded in the Datahub, in comparison those initially identified by the technical team, for all cities involved or part of them (e.g., Croatian vs. Italian cities or vice versa), as well as the timing of data and the upload methodology. The main challenges faced were as follows:
* high data dispersal in several internal and external databases, managed by different city departments, but also by local private companies and online platforms,
* difficulties (in some cases) in identifying the data holder/owner,

* low data availability and accessibility, both at public and private level,
* lack of open data and no possibility of automatic data upload, especially at municipality level,
* unsuitable data format for manual upload (e.g., not machine-readable such as .pdf),
* differing data structure and organization among cities: local sources often adopt different procedures, so it is difficult to implement a common algorithm to elaborate data,
* differing levels of territorial disaggregation,
* limited data timing and duration series,
* differing measurement modes in Italy and Croatia,
* difficulties in data retrieval and acquisition from private sources.

These difficulties have to be taken into account for the future development of the Datahub and the Dashboard, the planning of other projects in the field, and more in general, the transferability of S.LI.DES. to other EU cities.

Data availability and format shape contents: this means that not all Dashboard sections provide the same information for all cities. The weight of indicators that are common and comparable in all analysed destinations is equal to 100% in the Popularity & Attractiveness section, where the data retrieved from Google Trends and TripAdvisor are used for all cities. This drops to 71% in the Tourism section (10 indicators out of 14 are comparable across cities), to 60% in the Culture & Craft section, and 36% in the Cities at a Glance section. In the Environment section and the Accessibility and Mobility section, the weight is around 10-18%. In other cases, indicators are available for Italian or Croatian cities only, or for some cities only, independently from the country; furthermore, the high data heterogeneity among cities or the total lack of data means they could not be established.
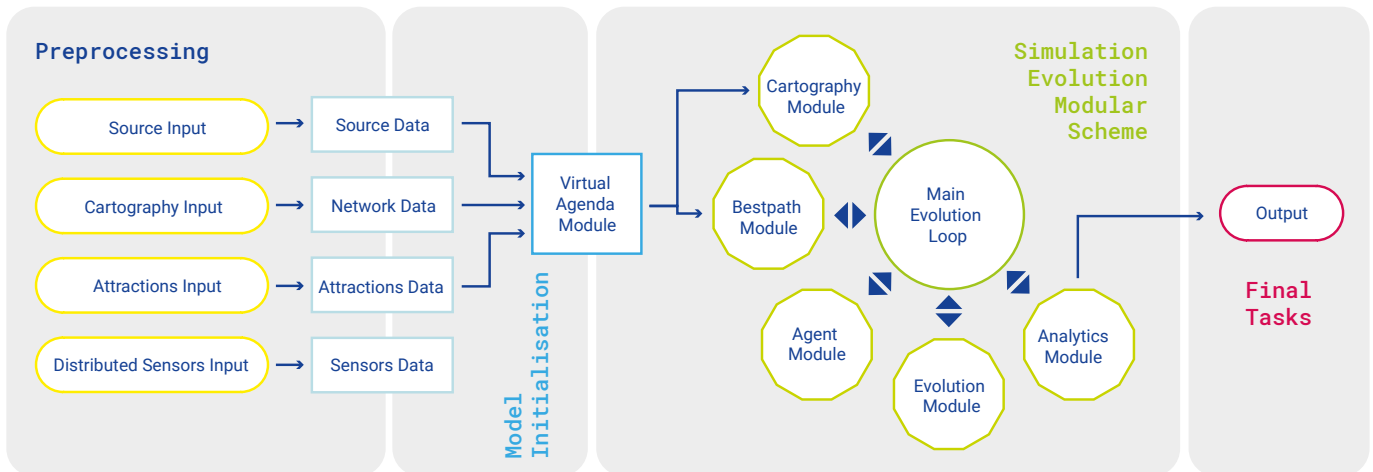
3.3
The mobility models

Figure 2 Diagram of the visitor mobility model

The visitor dynamic models (D.3.2.2 and D.3.2.4) have been developed by the S.LI.DES. project to simulate and to predict visitor flows and presences on a road network, integrating both the available statistical data on tourist flows and the existing attractions and the data recorded by the S.LI.DES. experimental systems. The aim of the models is to prove that the possibility offered by the new Information Communication Technologies to collect a great amount of dynamic data on presences and flows on a road network and the CPU power of modern computes, allows for the building of data driven complex models as useful tools for the stakeholders to plan tourist activities.

The following diagram gives the block structure of the visitor mobility model as it has been implemented to integrate the data from the experimental systems.

The model simulations provide dynamic information on the evolution of the pedestrian flows on the road network (dynamic mobility maps) and the distribution of presences in the considered area or at a specific Point of Interest during the considered period. In the Nowcasting mode the models provide the evolution of the mobility flows during a specific day integrating the mobility data; in the forecasting mode the models simulate possible future scenarios according to the actual observations. The usability of the model by the stakeholders required it to manage the following problems:

1) The interface with the datahub,
2) The definition of a standard input for the different cities using different types of statistical data,
3) The interface of the simulation results with the dashboard,
4) The presentation of the relevant information to the stakeholders.

The solution proposed by of the S.LI.DES. project represents each city by road network (see Figure 3 for an example), uses an input file containing information on the main city attractions to define the visitors' agenda according to their time and opening hours, and allows running the models from the dashboard through a web service system built by the CAST-Unibo unit and to visualize simulation results.

The results of the simulations are visualized by a dynamic flow map to highlight the main paths used by the visitors at different hours and a heat map to show the distribution of presences in the city. The models are able to simulate the mobility of virtual individuals divided into the categories of residents, commuters, and tourists, according to their mobility agenda. The mobility flow along each road and the presences in the area are recorded during the simulation. An example of the dynamic flow map and the heatmap of Dubrovnik historical centre is shown in the following figures. The thickness of each line is proportional to the daily tourist flows simulated by the models, whereas the colour scale gives information on the visitor presences.

Certainly, the usability of the mobility data in the dashboard and of the model simulations can be improved to make the dashboard smarter, but the S.LI.DES. project has proven that a possible strategy to create a smart destination ecosystem is the integration of ICT big data into dynamical models, that provide relevant information on tourist flows, and highlight the evolution at different times and spatial scales and the effects of new actions to expand the tourist offer. This strategy has been considered in the implementation of the pilot actions in the cities (WP4).

Figure 3
The road network of the Dubrovnik historical centre as represented by the mobility model
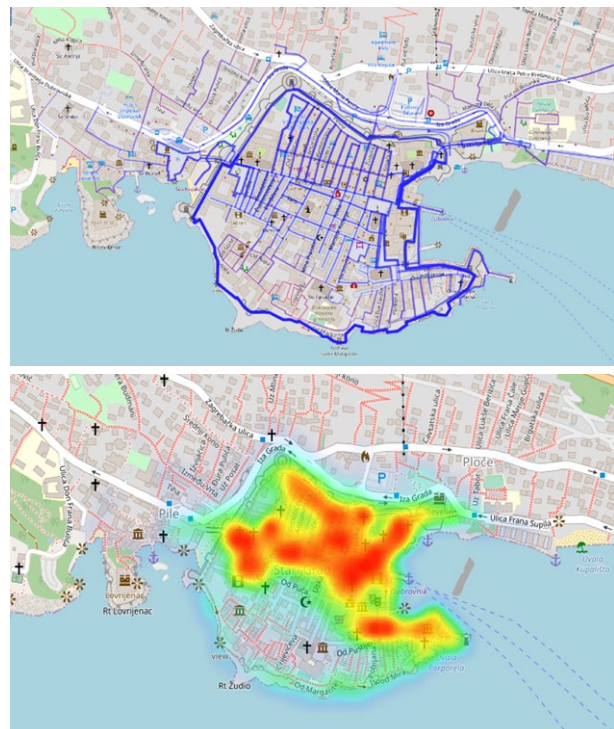
Figure 4
Dynamic flow map (↑) and heatmap (↓) in Dubrovnik historical centre

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3.4
The mapping of tangible and intangible heritage

As shown in Section 3.1. the mapping of tangible and intangible cultural heritage and Cultural and Creative Industries (CCIs) is one of the main components of the S.LI.DES. Smart Destination Ecosystem and it provides data that contribute to populate the related section of the city Datahub.

Mapping cultural assets is an essential activity when it comes to developing effective strategies aimed at the valorisation and promotion of the cultural heritage, including for tourism purposes. It means identifying and documenting the tangible and intangible resources on which the cultural heritage is based. While tangible heritage is made up of physical artefacts such as buildings, monuments, works of art, books, etc., intangible heritage has to do with folklore, traditions, performing arts, language, knowledge, and skills related, for example, to handicrafts. The recognition and identification of intangible heritage is particularly challenging due to its 'immaterial' nature and to the role played in this process by the local community, who collectively creates, spreads, and transmits that heritage from generation to generation. Therefore, to be kept alive, intangible heritage must be relevant first of all for the community. Cultural mapping is then a wide range of participatory techniques and activities that involve the local community in identifying and documenting local intangible – and tangible – cultural resources.

Intangible cultural heritage was the focus of the S.LI.DES. project, in particular that connected to traditional craftsmanship and folklore and to the related Cultural and Creative Industries. Consider, for example, wickerwork production, artistic pottery, and food production in Bari and Ferrara, or traditional dancing and singing in Dubrovnik and Sibenik, or artistic glass, masks, and lace in Venice. Mapping these assets concretely meant identifying existing local craftsmen, artists, firms, and associations who are still today the custodians of this know-how, skills, and traditions and who can ensure the conservation and the regeneration of this heritage.

Going into detail, in each partner city, existing craftsmen, artists, firms and organizations were identified, included in a database providing information about them and georeferenced and profiled in a dynamic map. The identification and collection of information was based on two main steps:

* preliminary research through several sources, including official registers, press releases, relevant specialised magazines, interviews with local authorities and trade organizations, experts, and opinion leaders, in order to build a list of relevant actors whose activity is based on local handicrafts and traditions;

* an online survey among the preliminarily identified actors, in order to collect more detailed information about their core activity and engagement in the cultural conservation and valorisation, including tourism experiences for visitors (guided visits, workshops, live shows and performances, tastings, etc.).

Then, starting from the database, the dynamic map was built, so that all the assets were precisely located and displayed with a marker on the map of the city. The dynamic map was also designed to provide other useful functions. By clicking on the markers on the map, users can visualize additional information about the points of interest (for example the name, the kind of product/activities, the kind of activities/experiences offered to visitors, etc.) and filter them according to several parameters. For example, if the user is interested only in the businesses/organizations related to a specific activity (for example dancing), he/she could select that parameter and the map returns the relevant points of interest only.

The 'filter function' included in the map responds to the need for ranking craft activities in order to have an idea of their touristic potential. This is not a ranking strictly speaking, in which artisans, craft associations and organizations are assessed and ordered according to a scale of values from best to worst. Since the aim of the mapping activity is to promote and valorise cultural heritage, while enhancing visitor experience, the ranking is instead intended as a sort of clustering/profiling, which categorizes the points of interest according to several criteria. Therefore, these parameters are mainly about the kind of activity, the type of tourism experience offered to visitors and the ability to address visitors' interests and needs. However, the set of criteria could also include a sort of synthetic indicator about the ability of these assets to answer visitors' needs and interests. This indicator could be built as a combination of the criteria on the number, seasonality and regularity of experiences offered to visitors, the number of foreign languages spoken, the kind of facilities/services offered in support of visitor experience, and the kind of facilities for people with disabilities. This indicator would allow users to understand which businesses and organizations are currently more organized than others to welcome visitors with a structured offer.

Finally, the map could also include in the future other information such as the position of other points of interest and tangible assets of the cultural heritage (museums, monuments, etc.) and data from the mobility maps and sensors, in order to provide the user with a clearer picture of the context. For example, on the map it could be possible to view how many, and which attractions are present near an artisan shop or to have an idea about the size of visitor flows in the area. All this information can be useful for designing new possible itineraries in the city that integrate handicrafts and cultural and creative industries with the other attractions.
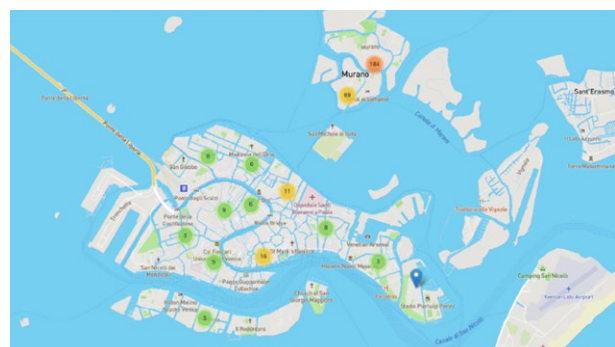
Figure 5
Example of a dynamic map for the city of Venice

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3.5
The destination dashboard

The core of the S.LI.DES. project is a multi-dimensional Destination Datahub: a unique repository that integrates a huge set of destination data, mobility patterns and a dynamic map of craft businesses.

The data (retrieved by each partner city from different internal and external sources) are collected in the datahub and visualized in a dashboard.

The S.LI.DES. Destination Dashboard works as a sort of business smart system that, through specific analytical tools, processes and transforms data into systematic and smart information.

Meaningful relationships among data (KPIs) are identified and displayed into handy tabular, visual reports and dynamic maps.

The Dashboard is divided into six key areas: Smart Economy, which also includes Tourism and Crafts; Smart Society; Smart Environment; Smart Accessibility and Mobility; Smart Living.

The most interesting functionality is mobility management: dynamic maps and heatmaps allow for the monitoring of real-time pedestrian flows in the city centres through a network of cameras and sensors placed in the five destinations.

This function will help city managers and decision makers in the appliance of safety and sustainable policies for tourist flow management and heritage exploitation.

The mobility function could be easily integrated with smart economy aspects, in particular with the crafts and ICCs dynamic map, to create cultural heritage paths connecting the main traditional local activities in the city.

Figure 6
Example of the destination dashboard for the city of Venice

Figure 7
Example of a heatmap for the city of Venice

THE S.LI.DES.
strategy

4

4.1
Testing the S.LI.DES. methodology: pilot actions in the partner cities

The five destinations (Venice, Dubrovnik, Šibenik, Bari, Ferrara) followed a common procedure to plan and develop their own pilot action strategies in order to properly support the specific initiatives aimed at promoting local identity and cultural assets, developing stakeholder engagement and participation, and testing the Destination Ecosystem.

Starting from a draft, discussed with all the partners, each city produced an in-depth description of their pilot action, according to the intervention area selected. The description had to include:

* a list of target groups to be reached through the PA;
* a list of stakeholders relevant to the pilot action and the description of their role in the pilot action;
* the kind of interventions;
* the main steps and the prediction of the deadlines for each step of the pilot action to be implemented;
* a list of specific objectives and their impact on tourist mobility, promotion of cultural heritage and craft activities;
* the kind and degree of innovation of the pilot action;

* the contribution of the PA to the effectiveness of the Smart Destination Ecosystem;
* a list of the cultural and natural (tangible/intangible) heritage to be promoted.

This was followed by the implementation of the pilot actions, during which monitoring was performed in order to make an assessment of initial results, leading to corrective actions (where necessary). Finally, after implementation, the PPs performed a check of the activity realized, and produced a final assessment of the results achieved and the effectiveness in using the Dashboards.

Some key aspects were considered to better define and develop the actions:

1) The range of action: what kind of subjects to involve. Depending on the specific characteristics of the city (types of craft activities, level of craft development, CCI and tourism, socio-cultural specificities, local policies, etc.), the pilot action might be focused on a specific set of local businesses/organizations and stakeholders, appropriately selected on the basis of certain parameters (for example, only the most historic companies/organizations or those companies that have obtained a specific recognition or certification, etc.) or extended to a wide range of subjects.

2) The selection process: how to select and involve subjects. Related to the previous aspect, one important issue was deciding how to select local businesses and stakeholders to be involved in the pilot action. A dual approach was considered: a top-down approach - where the city, as promoter and manager of the intervention, decides (also possibly with the support of a commission of experts) which subjects would be included in the initiative according to certain criteria; or a bottom-up approach - where the selection is based on a sort of self-selection carried out directly by local businesses/organizations who decide to take part in the initiative or not, for example by applying through an open call launched by the city; or even a combination of both approaches.

3) The final target of the pilot action. Although the pilot action could involve several different subjects (local businesses and organizations, other stakeholders such as residents, visitors, etc.), it was appropriate to define, according to the objective of the pilot action, to whom the intervention was ultimately addressed in terms both of supply and demand. In fact, on the one hand, initiatives can stimulate demand, or rather, the final users, in the sense of visitors to the city and customers of craft and CCI products, (for example by making visitors and customers in general more aware of handicraft productions, CCI activities and related tangible and intangible heritage; or by encouraging them to visit other lesser-known areas of the city, to buy local products, etc.) On the other hand, initiatives can stimulate the supply, for example by encouraging business and product innovation, or the revitalization or the requalification of craft activities, or the

generational exchange and knowledge transmission between 'seniors' and 'juniors' through the involvement of young people, etc.

4) The analogue and digital nature of the interventions. Consideration was given to the appropriateness of implementing interventions based on 'analogue' and/or 'digital' actions, or a combination of both, thanks to the great opportunities offered by ICT. Examples of analogue solutions might be new thematic itineraries, or new experiences for visitors (such as workshops, visiting local businesses and other points of interest), training courses for businesses, the development of a local craft hub, or the cooperation between craftsmen and contemporary artists for stimulating business and product innovation, etc. Digital solutions might be, instead, mobile applications to promote cultural heritage and craft activities and to stimulate the co-creation of content by visitors, augmented and virtual reality to enrich customer and visitor experience, digital storytelling, or online platforms for e-commerce, etc.

5) The 'degree' of innovation. Since the S.LI. DES. project aims to valorize the unexploited tangible and intangible cultural heritage and to promote sustainable territorial development, these objectives represent challenges that cities had to face through innovative approaches. Innovation can be considered in absolute terms or in a relative sense. In other words, the pilot action could be based on initiatives so unique and original that they have never been developed in any other context; or on initiatives already implemented in other places (which could be good practices and

significant case studies) but which were entirely new and therefore innovative for the city. The city could also decide to repeat an intervention already carried out in the past, in order to capitalize on the results obtained and produce new ones.

The areas of intervention initially identified by the cities to generate added value in the sustainable promotion of tangible and intangible cultural heritage as well as in the reduction of pressure due to the concentration of visitors over time and space were:

1) New thematic itineraries/improvement of existing ones,
2) Mobile applications to promote craft activities and stimulate content co-creation by visitors,
3) Concept of a 'food & craft destination hub' to stimulate the re-opening of traditional craft shops in the city centre, exploiting the appeal of contemporary design stores and typical restaurants/food shops to attract visitors.

During the development of the project, the topics of the pilot actions, the actors selected and involved, the management of relationships and communication, the use of the Dashboard digital tools, were focused and defined according to the priorities of the cities. Three cities, Bari, Dubrovnik, and Šibenik, focused on the organization of repeated or occasional events. One city, Ferrara, focused on a mix of initiatives; and one partner, the city of Venice, on the organization of thematic itineraries.
In each of the cases, the strategy led to the involvement of a rather large group of subjects as one of the key points: in addition to the public administration, tourist bodies, chambers of commerce, regional and local associations of artisans, consortia, cultural associations, museums, and tourist guides collaborated in various ways.

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The city of **Bari** organized 'Turisti per Bari': four evenings of events dedicated to the discovery and valorization of the historical centre of Bari and the Murat district through a series of activities, events and exhibitions linked to the history of the territory. The pilot action involved about sixty selected exhibitors, among the food and wine sector (bakeries, delicatessens, street food, restaurateurs) and artistic craftsmanship (shops, ateliers, art masters, shops, design stores). The operators organized demonstrations, practical workshops, and tastings of their products. The mobility of visitors was facilitated by the presence of qualified tourist guides and cultural animators, who accompanied the participants to discover the beauties of Bari Vecchia and Borgo Murattiano, animated for the occasion by musicians and street artists. The Dashboard helped the selection of the artisans to be involved and in the monitoring of visitor mobility. Among the actors involved there was a regional tourism agency Puglia Promozione, engaged in the designing of the pilot action together with the Municipality of Bari. The Chamber of Commerce of Bari was the key actor supporting the Municipality in the direct and active involvement of the local

handicrafts and eno-gastronomic businesses in the realization of the pilot action and in general supporting the valorization of the intangible heritage of Bari. The Chamber provided the list of registered crafts and gastronomic businesses in Bari. The regional and local artisans association CNA Bari - representing local traders, artisans, consortia, cooperatives, SMEs, small producers, and commercial enterprises - was involved by the Municipality in the process of designing the PA, as well as the trade association Confartigianato Bari that represents small businesses and artisans in Bari. The last actor involved in the PA activities was the Museo Civico Bari, because of its great historical importance.

An art and crafts fair was the pilot action developed by **Dubrovnik** to reduce overcrowding in the historical centre and enhance the local cultural heritage and traditions. The fair was organized in the complex of Lazareti, outside the city walls, an area often insufficiently valorized and visited. Aside from the exhibition of traditional products and handicrafts, four thematic workshops were

organized and traditional folk dances, as well as acapella singing, were performed during the event. The initiative was also promoted through the homepage of the free city Wi-Fi, in order to inform participants about the various scheduled events. The use of Wi-Fi also made it possible to monitor their movements and enrich the Dashboard and the database connected to it with real-time information. The City of Dubrovnik as a public body administrating the city, was the main actor, in cooperation with whom the pilot action was organized. The Dubrovnik tourist board also supported the pilot action and provided publicity and promotion through its internal channels. The company Dubrovačka baština was very important, as it is responsible for managing some of the most valuable historical buildings in Dubrovnik area, including the Lazareti complex. Local craftsmen (private businesses) participated in the trade fair as part of sales/exhibition by performing presentations/interactive workshops intended for visitors. They also cooperated with DURA in creating the event programme. Some associations with core activities based on traditional crafts were included in the pilot action as well. The Linđo Association played an important role in the pilot action as it brought one of the main outputs to be promoted in Dubrovnik – Linđo folklore. The Conservation Department of the Croatian Ministry of Culture and Media provided permissions for smart equipment installation in the Old Town of Dubrovnik. Two museums -The Natural History Museum and the Ethnographic Museum in Dubrovnik, provided their premises for the Wi-Fi access points installation and the source of the Wi-Fi system. Tourist guides in Dubrovnik supported the initiative by leading customized tours towards the fair location. Even three external experts were engaged for providing either thematic equipment (Croatian Telecom inc.)

or services (Brilliant Events Ltd. for event organization and Flare, for video production). Most of the actors were planned to be involved, but some new actors were involved during the process.

Šibenik, between the months of July and August, organized a weekly 'Heritage Day' to promote local cultural heritage and crafts and facilitate the mobility of visitors in less frequented areas of the historical centre. A rich programme of events involved residents and tourists, combining workshops, film screenings, and arts and crafts fair. Sensors along the streets helped monitor visitor movements and the presence of overcrowded areas. As for the actors that were included in the pilot action implementation process, the Museum of Šibenik prepared the workshop content and provided the premises and staff (both internal and external) for its realization. The City of Šibenik, which signed a Memorandum of Understanding at the beginning of the S.LI. DES. project, lent great support and provided the necessary permits for event organization. The Civitas Sacra – The Interpretation Centre

of Saint James Cathedral, served as a location for the projection of the film about Šibenik button production. The Polytechnic of Šibenik provided the equipment for the trade fair in synergy with the project RECOLOR (Interreg Italy-Croatia) that is also aimed at the promotion and revitalization of the Šibenik heritage. The Polytechnic planned the creative painting workshops and green market, all at the same location as the trade fair, to valorize the location of great historical and cultural value by providing various content at different times during the day. The Association of tourist guides Mihovil in Šibenik provided eight guided tours based on the gastronomic history of Šibenik. The company 'Hoopla komunikacije' provided the media coverage of all the events, public relation services and the management of the social networks during the eight pilot action weeks. The final actor was the Tourist Board of Šibenik-Knin County, involved in the promotion of local vineries, olive oil producers and craft beer makers, providing the PR material, connections and know-how for the identification and engagement of different companies in tasting events as part of the Heritage Day programme.

The Municipality of Ferrara (Tourism, Trade, and ICT sector), was involved in the processing of Dashboard data, identification of the itinerary and involvement of trade operators and stakeholders for marketing and promotion of live demonstrations to tourists (laboratories). The Province of Ferrara was included in the identification of itineraries for the entire territory of the province. The sectoral agency AMI Ferrara, as well as the Ferrara Chamber of Commerce, participated in the dissemination of the data on the mobility flows. The sectoral agency Visit Ferrara Consortium promoted the itineraries among its members, tour operators, and journalists. The members of the Crafters Business Associations were involved in the itinerary preparation with their customers. Hospitality associations also promoted the itineraries to their

customers. The Dedagroup Public Services sectoral agency in collaboration with the Municipality processed the data from the sensors. The Botteghe Storiche shops participated in delivering live demonstrations (laboratories) of craft activities to visitors. The itineraries were promoted regionally as well, thanks to the institution Destinazione Romagna.

Based on the data and maps provided by the Dashboard, the Municipality of **Venice** developed 'Routes of Venetian craftsmanship and creativity'. The pilot action included 10 thematic itineraries in the historical centre of Venice aimed at the valorization of the history and uniqueness of Venetian excellence. The itineraries are designed to encourage visits to lesser-known places and itineraries in the city, along which it is possible to discover excellences in traditional Venetian craftsmanship such as artistic glass, lace, fabrics, and mosaics, besides modern and creative products, as well as local food and gastronomy. Among the relevant actors, the action involved the Venice 'OGD' (Venice Tourism Destination

Management Organization) as part of the decision-making process; the Vela Spa (a company within the Municipality of Venice that operates in local public transport and manages the city's digital ticketing and booking platform VENEZIA UNICA) which was involved in the decision-making process through its participation in the OGD; the Chamber of Commerce of Venice (public trade association) as a key actor, supporting the City in actively involving local handicrafts and cultural and creative businesses in the realization of the pilot action and in general by supporting the valorization of the Venetian intangible heritage; the Venice Civic Museums Foundation (MUVE), which promoted the PA initiatives through their communication channels, involved in the decision-making process through their participation in the OGD; and the private trade associations Confartigianato, Confcommercio Venezia, and CNA-Regional, as well as local crafts associations which promoted the public call linked to the pilot action among their associates and will be involved in the activities.

The pilot actions implemented by the five cities were crucial to test different possible content, formats and modalities to organize the offer and the encounter with visitors, to highlight the needs and usability of the information available to profile demand and better match expectations, hours, languages and so on, and also to prove the value of the engagement and cooperation among destination actors who brought together different skills and competences in synergy.

4.2
The S.LI.DES. project: strategy highlights and future opportunities

4.2.1
Strategic aims and guidelines

The high vulnerability of most popular sites and attractions is well accepted and, conversely, there is an inadequate promotion of other valuable tangible and intangible cultural assets which are at risk of abandonment or of disappearing, leading to social, urban and economic decline. Planning innovative actions and strategies to preserve and develop these assets is crucial to improving the spatial distribution of visitor flows, extending seasonality, and promoting the high quality both of tourism and the life of residents.

In this scenario, the S.LI.DES. project has chosen to focus on three interconnected challenges considered strategically crucial:

* the lack of specific and dynamic knowledge on visitor flows and local economic and social activities adequate to guide decision makers in designing and implementing innovative strategies aimed at increasing sustainability and the quality of tourism, and consequently its contribution to more sustainable territorial development.
* the need of a better distribution in time and space of visitor flows in order to alleviate the seasonality of tourism and reduce human pressure on territorial natural and cultural heritage.
* the risk that local identity disappears or becomes homogenised by mass tourism and the need to promote it as a leverage to revitalize the urban environment – making it livelier and more liveable – and diversify the local economy, increase competitiveness, and provide new job opportunities.

To address these challenges, the S.LI.DES. project has adopted a specific approach and the development of a set of tools (the 'Smart Destination Ecosystem') at its core.
Referring to the approach, it was considered essential to give an adequate response to the complexity of sustainable development that combines multiple civil, social, cultural, economic, anthropic, and natural aspects.

There is a multiplicity of public and private actors operating in conditions of interdependence, which makes it difficult to find adequate forms of governance. The fact that the sustainability of tourism is not an 'entirely internal' issue of tourism itself is sometimes underestimated. Indeed, tourism, 'for better or worse', participates in local development with the other activities and forces of the territory that it influences and is influenced by, and shares its benefits and costs. It lives (or should live) in symbiosis with the wider social and economic development of a place. Therefore, the project was inspired by a participatory approach in which the public administration and stakeholders are involved and contribute to the definition and implementation of the activities. This approach supported a continuous knowledge sharing and co-operation among partners and guaranteed the homogeneity, comparability and monitoring of processes and results. The direct engagement of local community stakeholders throughout the project development ensured that their needs were translated into concrete tools, projects, and actions able to direct efforts towards positive effects on the territory. Given its nature, the methodology of the project was implicitly based on various principles of 'action research'. The protagonists of these actions are involved in the process of defining the problem and in the implementation of actions. Feedback on the actions taken and tested helps improve vision and sharing of solutions while contributing to knowledge improvement.

Moreover, the project considered the 'knowledge system' necessary to support the process and the application of the sustainability principles indicated by the EU, as wide and comprehensive of many aspects to integrate, in particular related to:
- the mutual relationships between the development of tourism and other urban functions as well as other local activities and services, and therefore the need to assess the cities' tourism and non-tourism performances from different perspectives (economic, social, environmental, cultural, accessibility and local mobility, etc.) and at different time scales;
- the main characteristics of visitor mobility within the urban environment, with a focus on pedestrian mobility, and the need to monitor it over time and space taking into account the location of Points of Interest and the effects related to specific events;
- the mapping of craft activities and CCIs, which are an important expression of the local identity, and their tourism potential, in order to promote them as drivers of local sustainable development and job creation.

At the centre of the project's strategy there is the realization of the 'Smart Destination Ecosystem', an integrated knowledge system based on innovative tools, methods, and technologies. It is formed by four main components (the smart destination datahub; the destination mobility models; the mapping of

tangible and intangible cultural heritage and Cultural and Creative Industries; the destination dashboard) together aimed to help city managers and their stakeholders to take informed decisions, to assess the results, and to have better control in real time.

The core of this ecosystem is a multi-dimensional Destination Datahub, which integrates in a unique repository a huge set of data on each partner city retrieved from different internal and external sources, from the analysis of mobility patterns and the mapping of craft activities, as well as by means of primary data collection. It works as a sort of business intelligent system that collects data and, through specific analytical tools, processes and transforms them into systematic information, trying also to identify meaningful relationships among data (KPIs). Collecting and sharing data is probably the most challenging issue of any project that relies on intelligence, data value, and an information-based strategy. And also, for S.LI.DES. it was one of the most challenging aspects of the strategy and its path.

4.2.2
Strategic drivers and priorities

The approach, the tools, and the pilot actions that were built during the project must be thought of as experimental prototypes capable of tracing a path. Future opportunities to continue its development depend very much on the determination to motivate and push administrations and stakeholders to continue to invest and cooperate. They have also been designed to be adaptable to different specific contexts, such as the destinations in Italy, Croatia, and Europe, that are different in terms of characteristics and evolutionary situations. The project aimed to concretely experiment the wide possibilities offered by digital technologies combined with 'analogical', tangible and intangible aspects: the physicality of places, mobility, people, knowledge, and traditions. During its evolution, it became clear that a 'destination ecosystem' can fully exploit its potential if public administrators and stakeholders are aware of the need to collaborate in the fields of data accessibility and governance. But also, in the capability to reconceptualize and innovate the interaction between operators and visitors, the control of mobility models, and the development of transversal relationships between the sectors that make up the ecosystems.

During the development and implementation of the project, some steps of the strategy were fully implemented as planned, others only partially or were modified and adapted following the learning process, yet other aspects emerged along with some recommendations and new ideas.

Together they become a sort of a framework, a collection of strategic drivers and priorities to be taken into account, even if to be shaped and adapted according to the specificities of each destination as the experience of the project has largely demonstrated. The main drivers are summarized as follows:

a)
The need to improve data collection and accessibility

Data need to be timely, personalized and detailed to result in more punctual and differentiated actions taken by policy makers and stakeholders. This is the very challenge that all destinations that want to become smart have to meet. During the building process of the Datahub a number of problems have arisen in each city, concerning both territorial and external sources. There is a high data dispersion among offices/departments in the public administration, public companies, private companies, and other public bodies. Very few data are available as open data, that is to say available in a readable format, published with a licence that allows re-use and redistribution, easily accessible through an API which allows an automatic data upload. In addition, relevant data are not limited to the city level. They can also be managed at a

regional/county or national level (e.g., the regional or national Statistics Office). Unfortunately, in Italy very few data at municipality level are available on the ISTAT (National Statistics Office) open data portal and in Croatia the situation is similar. Other limits arose as regards data formats, structure and organization, level of territorial disaggregation, and time series. To cope with these problems, strategies have to persist in the efforts to raise awareness within public administrations and among local stakeholders. A long lasting commitment should help to enhance the data collection process in the future, as well as the signing of formal agreements for data provision and information exchange with data owners. Also, a joint approach of the interested parties (cities) with the national authorities addressing the issues of data accessibility and management may have an important impact in the further development of such smart ecosystems.

Looking more at the local level, in order for data to be accessible, all parties should collectively participate not only in the data fruition but also in the data building process. Another interesting aspect is the advantage of complementarity: by putting together data from different types of operators (hospitality, transport, catering, crafts, museums, etc.) each one can benefit from information collected by others that they cannot gather by themselves and vice versa. The contents of the interactions that visitors have with the different types of operators and moments of their stay are also different: from faster and in large numbers, to more intense in smaller numbers. The means to promote engagement, in particular for small organizations, is another strategic factor that clearly emerged.

b)
The need to target more precisely using information

Especially during the design and implementation of the pilot action the role of detailed information on visitor profiles, behaviour, and mobility models, came up. The value of tourist data was recognized as a way to understand how visitors travel, from which destination they arrive, and where they go, in order to better target marketing campaigns and propose joint itineraries. From the collection and analysis of data it was possible to obtain excellent information on the impact on the city of individual events in order to better organize subsequent ones and to identify solutions to qualify the reception and plan in a more sustainable way the mobility and access to the points of interest. It was also noted that there was a need to improve details in order to better target the offer in terms of the language, time, culture, and interests of the visitor, and therefore the need of a booking tool in order to better plan the resources to be allocated (time, space, people).

c)
Provide IT tools to support stakeholder engagement (with particular attention to small businesses and visitors) in the data challenge.

Some aspects were considered essential for a broad involvement, both of operators and visitors, in the collection and use of data. On the one hand, this refers to security and respect for privacy, and on the other hand, to the reliability of the information produced and disclosed. Note that sometimes visitors are not inclined to leave data: we are all tracked but who assures us that these data are respected and used correctly? Hence the strategic need to develop systems that guarantee security and privacy.

Another crucial aspect that was recognized is the difficulty of convincing small operators to fully enter the world of digital communication and data enhancement, increasingly necessary to reach demand in a targeted way, to understand its profiles, enter into dialogue with customers, narrating and enhancing the distinctive quality and competence of the offer.

The ability to collect data and information and use them to manage the relationship with demand and communication is absolutely essential for businesses and organizations, even small and artisanal ones. But one factor strongly conditions the development of practices: the scarcity of time and specific dedicated resources. Organizations focused on production have few resources to devote to understanding the public, welcoming it, or using advanced communication tools.

How can this sort of paradox be solved? Small organizations have understood that data can really help, but for their type of visitors/customers and for their resources this is an individually unsustainable cost.

Strategic indications suggest the promotion of the use of 'smart' tools that automate the collection of visitor data (beacons, sensors, etc.), and the use of platforms that allow for the collection and sharing of data as easily as possible. However, it is not only a problem of accessible technology but also of establishing clear rules in order to create sufficient trust. Individual entrepreneurs and organizations participate if they feel protected and if they perceive the value both for everyone and for themselves.

d)
Training & Education

Many of the obstacles for SMEs to make full use of all available digital tools to gather information on potential customers/users can be considered as due to lack of skills and competence, but also to deeply rooted habits. Among others, some points were underlined: a) the lack of knowledge about the potential and possibilities of using digital tools and communication; b) the lack of IT and technical skills and competence in using tools and/or purchasing digital services; c) the lack of experience in using the web, social networks, platforms (so-called 'digital tools'), because they have used them little or never in the past; d) scepticism towards IT innovation, and loyalty to traditional business habits and practices; e) the lack of a data culture, i.e., lack of awareness of the power of information.

Alongside financial and organizational support, training and education measures were considered strategic. One proposal is the design and implementation of projects that would enable continuous free training/education for small and medium-sized enterprises; and the establishment of a fund for tenders through which investments in digital tools and

digital communication will be financed. Also the possibility to arrange a partnership with leading world companies. Other strategic actions suggested related to education on the benefits of knowing the habits and needs of clients and the benefits provided by apps, and initiatives such as free workshops and various types of education for all generations supporting the cultural legacy.

e)
The opportunity to expand the types of initiatives, format, and location.

The growing unsustainability of the standardized and mass tourism development model requires a much more differentiated proposal rich in visitor experiences and the awareness that spaces and times of fruition must be managed as destination resources subject to scarcity. With regard to initiatives for the promotion and enhancement of cultural heritage and creativity, the importance of differentiating the contents and forms of both communication and actions was underlined. In addition, visitor experience should be diversified and rely on efficient information systems and booking instruments. The pilot actions performed during the project and the resulting feedback from the protagonists led to the identification of some strategic aspects. First of all, the great need to exploit the uniqueness and specificities of each destination while avoiding banalization and massification. In terms of communication, this means, on the one hand, that whoever communicates must have far greater professionalism and a profound knowledge of the city, to not automatically repeat clichés; on the other, to cope with the problem of the precision and authority of communication: certain information must come from easily recognizable official sources; it is necessary that visitors

understand when the institutions or subjects of the city are speaking in order to distinguish them from remote or less reliable sources. Secondly, various strategies have been found suitable for empowering the visitor experience, ranging from a more interactive approach involving visitors in the process of making - not only observing but actively participating - to creating spaces for workshops, local concept stores, pop up stores, as well as the promotion of new tourist routes that combine the cultural and architectural heritage with the enhancement of typical products. Also underlined was the possibility of diversifying the locations hosting the different initiatives - itineraries and events - in order to encourage the visit of lesser-known and less-crowded places and routes in the city and also the nearby territory. Thirdly, the need to offer itineraries and events with respect to various interests and narrative keys, and to take a step forward in storytelling and in interacting with visitors. Artisans are 'producers of emotions' but it is not easy to communicate in depth and effectively manage a contact that sometimes lasts only a few minutes. There is also the problem of dialogue with so many different cultures and languages. There is a gap to be filled in terms of skills and tools. It was suggested to try to involve subjects and actors of the city that are usually not very engaged. Artisans have limited resources to devote to promotion / communication. One hypothesis might be to involve young people in school / work training projects. However, the initiatives must be structured in projects that involve several subjects to increase the opportunities on offer (collaboration with schools and training centres).

f)
Organization and Governance of the actions has to be focused

Also calls for proposals for organizations dealing with the preservation of intangible heritage need to be specific and thematic. As part of local calls for proposals, the topic of the promotion of heritage and /or development of digital tools for smarter destination management and improved service provision requires the allocation of separate funding. The usual calls are very generic, and this topic needs to be covered by a more specific call. The call needs to carefully identify the areas of improvement, eligibility of applicants, and criteria for selection.

g)
Greater coordination and synergy among stakeholders and networking strategies

More coordination is needed among all involved stakeholders as individual efforts cannot result in substantial improvements, only synergy between many coordinated actions can result in concrete and more visible achievements. Among others, the following important measures were deemed opportune: **a)** to define a 'guidelines' document to ensure that the various actions in the territory become integrated with each other in a systemic approach; **b)** to organize a series of meetings for the presentation of strategic guidelines and the involvement of both public and private local actors (organizations, associations, tour operators, artisans, etc.) to share common objectives and define mutual roles in the implementation of the territorial strategy; **c)** sharing of the defined commitments and integration with the planning of the organizations in charge at the regional level. Regarding the preservation and exploitation of cultural heritage and to avoid the disappearance of skills and the closure of craft related workshops and shops, establishing forms of collaboration between artisans and the tourist industry was indicated as crucial. Synergy is needed between local stakeholders involved and those responsible for the promotion, preservation, and education about heritage. The dialogue between actors operating in different activities is essential to improve the visitor experience and the ways of use through the alignment of their strategies. Networking, in fact, is essential to set in motion different supply chains that unite several aspects of the tourist offer. Also due to the 'big' problem of data collection and sharing in support of the smart ecosystem, as it is better explained below, collaboration between the actors (internally and externally to the public administration and stakeholders) is mandatory.

Transferability of the S.LI.DES. strategy and tools

A
Introduction – S.LI.DES. outputs level of transferability

A Transferability framework has been developed to promote the S.LI.DES. strategy integration into different contexts/ scenarios, and to propose specific and tailored policy recommendations to any interested EU destination. This Section of the strategy contains the transferability for the S.LI.DES. project (Work Package 5 - Activity 5.3. Deliverables 5.3.1, 5.3.2 and 5.3.3) as follows:

A	**Introduction – SLIDES output level of transferability**	
B	**Transferability scenarios**	Identification of the project main achievements to be transferred and the needed requirements to transfer them in other contexts and themes
C	**Transferability framework**	Describing the project achievements to be potentially transferred and the guidelines for the concrete transfer
D	**Transferability framework template**	The structure of the document to be used to promote transferability – for external cities

At the time of writing, it is possible to identify precisely only the outputs, whereas the outcomes and the impact will be visible only in the coming years. In this context, an effective Transferability strategy can amplify the impact of the project in the long run by expanding the circle of the beneficiaries and stakeholders.

The transferability of the project results is linked with the concept of outputs, outcome and impact:

OECD Definition	S.LI.DES. Main results
According to the OECD DAC (OECD 2010) – one can define the outputs of the project as the products/goods/services which result from a specific intervention. The outputs are based on a set of activities (Work Packages/Tasks) that benefit from several inputs (funds, capacity building and other types of resources) and they are available immediately after the end of the project	**Work Package 3 - Smart Destination Ecosystem** ∗ Smart Destination Data Hub ∗ Smart Destination Ecosystem Methodology **Work Package 4 - Pilot actions:** ∗ Destination dashboard prototype to set the scenarios of each involved destination in which the pilot actions will be implemented ∗ Pilot actions to test and demonstrate the effectiveness of the Smart Destination Ecosystem methodology, each city please fill in the template: Venice, Dubrovnik, Ferrara, Bari, Šibenik: **Work Package 5 - The S.LI.DES. strategy:** ∗ Transnational Strategy ∗ Cooperation agreements ∗ Transferability framework to promote the adoption of the S.LI.DES. strategy (the current document)
From the outputs one can evaluate after some time (1-2 years) the outcomes, namely the achieved short-term and medium-term effects of a project's outputs.	∗ Increased awareness of local decision-makers about the key factors driving the sustainable and competitive performance of cultural destinations and strengthen cooperation with main local stakeholder in order to boost innovative and more effective tourism management strategies and priorities in the Programme area; ∗ Enhanced and dynamic knowledge about visitors' mobility patterns and tangible and intangible heritage and craft activities, in order to implement innovative policies able to better distribute visitors flows in space and time, thus alleviating seasonality in tourism and reducing human pressure on cultural heritage; ∗ Improved management of cultural destinations through the testing of innovative strategies to promote cultural heritage and valorize local productions; ∗ Enhanced synergies between culture and tourism polices in the Programme area; ∗ Stronger cross-border cooperation among Italian and Croatian destinations in order to improve cultural destinations management and tourism policies at EU level.
The outcomes are basis for a wider concept: impact. The impact is a long-term effect that the beneficiaries of our project will bring back in their communities – it will produce its results in the long term and it goes beyond the end date of our project. Impact is challenging to measure and it is necessary a close cooperation with the project partners and relevant stakeholders to further exploit the results of the project.	∗ Increase awareness of local stakeholders about the importance of a data-driven approach for sustainable development of destinations ∗ Enhancement of smart knowledge on destinations sustainable performance and potential of cultural assets ∗ Promotion of the local tangible and intangible heritage to foster sustainable territorial ∗ Development of cross border transferable smart strategies to promote cultural heritage & local products

Transferability potential of S.LI.DES. outputs

Horizontal transferability - The common methodologies, tools, solution and strategies developed within the project have a high transferability potential since they are tailored on five destinations representing different contexts/scenarios of cultural urban tourism development in the Programme area, thus facilitating the identification process of other EU cultural destinations.

Vertical transferability - To achieve durability of project outputs and long lasting impact of results, decision-makers have been directly involved in the implementation and monitoring of project activities, (i.e. the testing of the Smart Ecosystem and its application in planning the pilot actions), as well as in the strategy definition and the cooperation process with main local actors and stakeholders. The involvement of policy makers has fostered and facilitated the integration of the S.LI.DES. strategy within the local policy framework of the project destinations (Venice, Ferrara, Bari, Šibenik and Dubrovnik). The political commitment needed to achieve long-term sustainability will be also guaranteed by the Cooperation Agreements with main local stakeholders signed by destinations.

Communication activities and stakeholder's engagement during the project life

Communication activities have been focused on the promotion of project outputs and results, especially addressed to regional and national authorities, that are in charge of defining policies and of the allocation of funding (regional, national and European) for the sustainable tourism management.

Engagement and involvement of target groups through networking and community relations (direct contacts, social media activities, marketing, newsletters approaches), and improvement of the cooperation among them through community relations and engagement (e.g. cooperation agreements and networks) have been carried out during the lifetime of the project.

These dissemination activities will guarantee the sustainability of the outputs of the project and will increase the degree of transferability of the project results to other EU territories.

On-going Capitalization of project results

The S.LI.DES. results are available for knowledge transfer among communities set up by each partner. The impacts on the quality of the local tourism strategy and on the content related issues have been increased thanks to the S.LI.DES. project. This has been confirmed by the successful implementation of the pilot actions. The Final Conference has contributed to disseminating the results to the cross-border area by sharing and promoting results and experience among relevant stakeholders within Interreg Italy – Croatia (Zadar) and beyond (i.e. Tirana and Florence).

The first "beneficiaries" of the S.LI.DES. results are the partners of the consortium. With the transferability framework the results should find the widest practical application in the longest possible time perspective. The effectiveness of transferability should be the number of persons or institutions outside the project who will benefit from the implementation of these activities. To achieve this, transferability activities have been implemented, both horizontal, i.e. broad information and inclusion of individuals, groups or institutions in the preparation of results, and vertical, i.e. aimed at translating project results into system solutions.

B
Identification of Transferability scenarios

The Project Partners have analysed the main characteristics underpinning the different destination contexts in which the S.LI.DES. methodology was tested, in order to identify reference scenarios for other destinations outside the project in which similar elements can be found (eg. human pressure, destinations that need to become more attractive, destinations with severe seasonality problems, cultural heritage at risk to survive and unexploited, and so on).

The S.LI.DES. destinations share similar problems related to:
* the balanced development of tourism and other urban functions;
* the diversification of the local economy and new job opportunities;
* the need to act on mobility to improve the distribution over time and space of visitor flows;
* the request to promote tangible and intangible cultural heritage as a competitive advantage, thus avoiding the risk that the local identity disappears or becomes homogenized by mass tourism.

These different aspects, when combined, can shape different types of situations/scenarios for other cities and landscape destinations. These scenarios should be used as benchmarks and their traits can be mixed in order to respond to different challenges. In this context, three reference scenarios have been identified:

A **"Destinations subject to high anthropogenic pressure and concentration of flows and that need to change course from the trend of mass tourism "**

B **"Destinations that need to enhance their historic center and connections to neighborhoods, and to valorise other places in the area "**

C **"Destinations that need to develop their tourist potential and overcome a strong seasonality issue"**

Scenario A

Destinations subject to high anthropic pressure and concentration of flows – need to change course from the trend of mass tourism

Main starting features

reduce tourism pressure/concentration, change mass tourism toward more differentiated and sustainable tourism, and enhance less visited neighbourhoods and suburban areas.

* The destinations are included in the UNESCO World Heritage thanks to the uniqueness of their cultural richness, consisting of historical, archaeological, urban, architectural and artistic heritage, and exceptional traditions.
* Tourism is one of main economic resources and represents a continuous source of cultural exchange, an opportunity for economic growth and an important social resource for the development of the community.
* Tourism exerts great pressure on the historic centre with a strong growth of overnight tourism, also thanks to an increase in short-term tourist rentals, and of same-day tourism, which requires a renewed integrated strategy to reduce this pressure, and the spatial and time concentration of flows.
* Urban areas outside the historical centre are not fully valorised and well known.
* There is the need to promote sustainable and responsible tourism, while improving quality versus quantity of tourism.
* Tourism strategies and policies have been adopted by local authorities, and some smart IT investments have been allocated to develop data-driven actions, although they need to be consolidated and further developed.

What is needed?

* To analyse the role that tourism plays within the local urban environment and include tourism development in the local Urban Action Plan.
* To develop a multidisciplinary destination management strategy, supported by an integrated digital knowledge ecosystem that analyses city's performance from different tourism and non-tourism perspectives, and provides data and information to balance different development goals.
* From the tourism point of view, to map the dynamic evolution of visitor flows, according to the location of the Points of interest and during specific events, and to monitor their volume in different time periods (days, hours during the day, etc.). This will help not only to manage accesses, but also to develop a set of simulations and forecasts useful to plan appropriate management and marketing policies and actions.
* To profile daily visitors and overnight tourists in order to adapt, in the most correct and targeted way, the variety of tourism offer in the area, thus preserving and enhancing local identity and the tangible and intangible cultural heritage, with a specific focus on the "living culture" (craft activities and Culture and Creative Industries).
* To create a City Awareness initiative, involving all local city "users" (residents, tourists, same-day visitors for tourism purposes and other visitors) through different forms of communication and engagement, in order to spread a deep understanding of the richness and cultural uniqueness of the historical centre, of how to move and experience it, of how to adopt sustainable behaviours and share its value.
* To develop a stakeholder engagement by creating new networks.
* To broaden and improve data availability, culture, and use of data, etc.

Scenario B

Destinations that need to enhance their historic centre and the connections to neighbourhood areas, and valorise other places in the area

Main starting features

enhance the local tourism offer, revitalize the social and economic environment in historical centres and create a link between the city centre, the neighbourhood urban and rural areas, and other places that need to be valorised.

* The City is not a hub, it does not have a major international airport or port
* It is located between other major cities – there is lower tourism pressure compared to other cities
* Tourism only recently has become a valuable economic activity
* Its city centre needs to be valorised
* High potential in linking the city centre with experiences in rural areas
* The number of same-day visitors can be huge during special events or in occasion of important art exhibitions
* The visitor flows tend to concentrate within the city's ancient walls, and particularly in the central historical area
* City & rural: there is a need for developing links and an integrated promotion with the rural neighbourhood areas

What is needed?

* To understand the role and potential of tourism within the local urban environment and how it relates to local economy, society, culture, environment, mobility, etc. through the development of a multidimensional data repository of the city, which aggregates data coming from different local sources to help monitoring tourism and non-tourism performances;
* To use innovative technologies and simulation models in order to assess the accessibility and mobility of visitors and tourists within the city, and to identify the main routes followed, according to different time periods;
* To promote and requalify the city's tangible and intangible heritage and, in particular, the local trade and crafts;
* To encourage various local stakeholders working on the preservation of both tangible and intangible local traditions;
* To encourage the development of new experiences for tourists: bike routes, cultural and historical routes, gastronomy and various events contribute to the overall positive experience as a travel destination;
* To develop new initiatives by involving local stakeholders, enthusiasts and entrepreneurs to create a mix of experiences among which tourists can find the best fit for their needs;
* To improve road and parking lots infrastructure, and the internal organization of historical centres so to contribute to a future smarter management of tourist flows and improved tourist experience in the destination;
* To create a City Centre and rural areas initiative such as "Linking strategy".

Scenario C

Destinations that need to develop their tourist potential and overcome a strong seasonality issue

Main starting features

* The city is a regional/province capital and plays a fundamental role in connection with other countries
* The city has a mid-size port and/or an airport
* The city hosts international trade fairs
* Tourism plays an important role in the city economy
* Overcrowding during peak summer season, also due to cruise tourism
* Local trade and crafts at risk of being neglected as a driver of economic development

What is needed?

* To analyse from the very beginning, and with appropriate tools, the multilevel performance of the city and the potential of tourism development within the local urban environment;
* To understand how tourism can be a source to support the revitalization of local tangible and intangible heritage;
* To promote the city as a cultural destination, also independently from cruise tourism, and within this action, to improve cultural heritage as a catalyst for sustainable territorial development and more balanced tourism in terms of seasonality;
* To monitor and manage visitor flows, though specific telematics systems, especially in peak seasons and along specific itineraries, given the presence of cruise tourism;
* To use this information to promote cultural itineraries, arranging networking events with local operators and investing in innovative tourism plans;
* To adopt smart strategies to make local cultural resources fully available and develop the cultural elements that make the destination unique, in order to preserve the local cultural heritage at risk.
* To create and promote the official city brand – "Quality tourism attraction strategy".

C
S.LI.DES. strategy
Transferability Framework –
S.LI.DES. outputs:
what can be transferred?

This section contains the Transferability frameworks for the relevant S.LI.DES. outputs. It provides to other EU destinations guidelines to identify the S.LI.DES. solutions most appropriate to be applied to their situation and integrated in their policy framework.

Work Package 3

I) Smart Destination Data Hub

A	**Issues tackled & scenario (a,b,c, - if relevant)**	The main issues tackled during the building of the Datahub refer to the lack of data culture at local level (this issue is common to all scenarios presented). This translates into a set of hindrances to be dealt with. In particular, low data availability and accessibility; high data dispersal among different sources and no data sharing (presence of a number of data silos), no open data. These hindrances are partly common to all cities and partly linked to the type of Scenario and the country they belong to. It also touches upon the understanding of the relevance of cultural heritage to improve the tourist offer in a sustainable way, as well as the Integration of data from different sources in the same datahub.
B	**What can be transferred to other destinations?**	The Datahub represents the first attempt to develop an integrated knowledge system that uses data analytics to provide a comprehensive view of the city and its performances from different perspectives, not limited to tourism. In particular, by relating the evolution of tourism with that of the urban economy, the mobility patterns, the environment and the cultural context, with a focus on craft activities.

At city level, taking appropriate decisions requires first of all that city managers and other stakeholders are adequately informed about what is going on in the city. The availability of great amount of data and an easy and user-friendly access to them are crucial in order to have a comprehensive view of the situation. Gaining knowledge from data supports planning, product and promotional strategies, as well as impact assessment. The main issue is to develop a data culture, which means making each city aware of the importance to retrieve and share data among different administrative departments, as well as with regional and national sources, and to collect primary data regularly, use digital tools and technology to support this process.

C	**How can this transfer be done – in particular the technical/IT characteristics?**	From the technical point of view, this means to spread the importance of open data availability, i.e. data that are openly accessible, exploitable, editable and shared by anyone for any purpose. Or data available in a common suitable format, that can be easily retrieved and uploaded and also shared between the databases of municipality departments. The software should be an open source software available on request using a platform (i.e. github) for non-commercial use. However, the software installation and customization for the new destinations will probably require a supervision process by the project partners that develop the datahub and dashboard.
D	**Where is possible to find the deliverables/instructions/ more info?**	Deliverable 3.1.1. of the project presents the general Smart Destination Ecosystem methodology and the Smart Destination Datahub, describing the Datahub framework. In particular, Section 4 introduces the concept of the S.LI.DES Smart Destination Ecosystem, in terms of general vision and main structure, while Section 5 identifies the Smart Destination Datahub framework, describes its main features and functionalities, goes into detail of the definition of the dataset and related KPIs and discusses the problems encountered by cities during the data collection. An instruction manual for installation will be available with the software. ⟶ **See LIBRARY section of the SLIDES Project:** **https://www.italy-croatia.eu/web/slides/docs-and-tools** **D.3.1.1. Data hub framework** **D.3.1.2. Data hub prototype** **D.3.1.3. Data hub User Manual**

E	**Lessons learned and criticalities**	The available data collection and integration in a single datahub from different sources is still a problem. The usability of the data to get useful information on specific problems requires a non-trivial data processing. The check of data quality comparing different data sources is still problem.
F	**... other important elements if relevant**	The future maintenance and upgrade of the software is not guaranteed after the end of the project.

Work Package 3

II) Smart Destination Ecosystems Methodologies

A	**Issues tackled & scenario (a,b,c, - if relevant)**	The main issue addressed by the project is how to develop smart management and governance of data that support sustainable development of tourism and other urban functions in Adriatic and EU cities, with a specific focus on the promotion of local heritage representing the identity of the territory (this issue is common to all scenarios presented). To do so, the project has built an integrated knowledge system, supported by innovation technologies (i.e. the Smart Destination Ecosystem), which should help cities: identify their tourism and urban profile and assessing their tourism and non-tourism performances from different urban perspectives (economic, social, environmental, cultural, accessibility and local mobility, etc.). It is important to monitor the visitor mobility patterns within the urban environment, with a focus on pedestrian mobility, and monitor it over time and space, taking into account the location of point of interests, and the effects related to the organization of specific events; map craft activities and Creative and Cultural industries and define a sort of "ranking" of these activities according to their tourism potential, in order to promote them as driver of local sustainable development and job creation. The system is common to all cities, whatever the scenario they belong to, even if the ability to perceive its importance can be different, according to the current level of tourism development or, independently from that, to the perception of these problems by local actors.

B	**What can be transferred to other destinations?**	For cities who approach these issues for the first time, the first aspect is to share with them the S.LI.DES general vision and make them aware of the importance that data intelligence can have in order to take informed decisions, for example in terms of planning, product and promotional strategies and impacts assessment. Secondly, to share the methodology followed to build the structure of the Ecosystem and of their components (the Datahub, the mobility models, the dynamic map of craft activities and te Dashboard).
C	**How can this transfer be done – in particular the technical/IT characteristics?**	The development of the Ecosystem requires the integration of innovative technologies (e.g. different IT devices to capture visitor mobility and behavior, interactive database to collect different kind of information in different formats) with traditional data collection tools (e.g. official statistics, surveys). This implies having the skills to manage this complex structure.
D	**Where is possible to find the deliverables/instructions/ more info?**	Deliverable 3.1.1. of the project presents the general Smart Destination Ecosystem methodology and the Smart Destination Datahub, describing the Datahub framework. In particular, Section 4 introduces the concept of the S.LI.DES Smart Destination Ecosystem, in terms of general vision and main structure. ⟶ **See LIBRARY section of the SLIDES Project:** **https://www.italy-croatia.eu/web/slides/docs-and-tools** **D.3.1.1. Data hub framework** **D.3.1.2. Data hub prototype** **D.3.1.3. Data hub User Manual**
E	**Lessons learned and criticalities**	The use of a Smart Destination Ecosystem can help improve tourism planning, product and promotional strategies and impacts assessment at city level. In particular, the pilot actions have shown how the Dashboard and the components feeding it (datahub, mobility models and dynamic map of craft activities) can support the creation of specific events or of alternative tourism routes in a sustainable way. Whether the Ecosystem can be created with a limited investment, the collaboration among local administrations, universities and other technical partners, as well as with other stakeholders, if of crucial importance in order to develop and implement the Ecosystem properly and to support sustainable strategies.

Work Package 3

IIa) Visitors Mobility Models –
Transferability framework

A	**Issues tackled & scenario (a,b,c, - if relevant)**	The Visitors Mobility Models deal with the problem of simulate the pedestrian visitor mobility flows on a routes network using the data and information collected in the datahub. The availability of real time data is important in all scenarios, since it provides short term forecast of the mobility flows. The model simulations are available using a webservice provided by the CAST partner. The models allow to produce the dynamic flows maps and the heat maps of the presences of the considered area in the dashboard.
B	**What can be transferred to other destinations?**	The Visitors Mobility Models are suitable for simulating the mobility in a historical center where the mobility is mainly pedestrian. The software is open source but its installation requires specific IT skills. The use of Open Street Maps cartography allows to get the road network graph of any destinations The transferability to other destinations requires the collection of the data to setup the models: statistical data on the tourist and commuter flows and the presences in the considered area and information on the location of the main tourist attractions and their relevance and accessibility. The existence of real time mobility data in the area is necessary for the forecasting mode and the integration of these data in the models requires the supervision of the CAST researchers depending on the data features. The setup of the models requires a supervision of the CAST researchers and an access to the CAST webservice is required to run the models if the software is not installed on a local server. The Dynamic Flow Maps and the Heat Maps are plotted in the SLIDES dashboard that should be also installed. But the use of different dashboards is also possible using the output files of the models and the OSM road network.
C	**How can this transfer be done – in particular the technical/IT characteristics?**	The software for the Visitors Mobility Models of the cities involved in the SLIDES project is available on the github platform with some technical information for the installation. A description of the Visitors Mobility Models is contained in the SLIDES reports that should be available and the use of the CAST webservice is also described. In the present form the Models require the collection of a datahub to build the input files and the SLIDES dashboard to send a request to the webservice and plot the simulation results. The setup and the customization of the models (to create the road network from the OSM database and the input file using the available data) still requires a supervision from CAST.

D	**Where is possible to find the deliverables/instructions/ more info?**	In the github platform the software source of the models and instructions for installation are available. The reports of the WP3 describe the main features of the visitors mobility models, the simulations results and the use of the webservice at CAST. ⟶ **See LIBRARY section of the SLIDES Project:** **https://www.italy-croatia.eu/web/slides/docs-and-tools** **D.3.2.1. Mobility Database** **D.3.2.2. Now-casting models** **D.3.2.3. Dynamic mobility maps** **D3.2.4. Forecasting model of visitors' flows based on mobility demand computed from the experimental observations** **D.3.2.5. Simulation report on the results of simulations**
E	**Lessons learned and criticalities**	The use of big-data and dynamical models for the governance of tourist flows requires a collaboration among Universities, Public Administration and Stakeholders. The models are tools that help to extract relevant information from the data made available by the communication technologies, but the solutions to specific problems require a multidisciplinary approach. The use of these tools requires an effort to perform a validation procedure in the specific destinations and a setup of some parameters according to experimental observations to improve the reliability of the results. Finally, the future maintenance of such systems is not possible without a collaboration among Universities, Public Administration and Stakeholders where the different competences can work together.
F	**... other important elements if relevant**	The use of the webservice and a collaboration with CAST will guarantee the maintenance and the upgrade of the models in the future. The installation of the software on local servers require specific IT skills. The collaboration among Public Administrations and Universities can be a fundamental issue to create a smart mobility governance of tourist flows.

Work Package 3

IIb) Mapping of tangible and intangible cultural assets and the visitor flows models

A	**Issues tackled & scenario (a,b,c, - if relevant)**	Mapping cultural heritage means identifying and documenting the tangible and intangible resources on which the cultural heritage is based. The focus of the SLIDES project was mainly intangible heritage, in particular that one connected to traditional craftsmanship, knowhow, and folklore and to the related Cultural and Creative Industries. The recognition and identification of intangible heritage is particularly challenging due to the "immaterial" nature of this kind of assets. What are the local traditions, folklore, knowledge, skills values, handcrafts, etc. that can be defined as part of the cultural heritage of a community? And why just these assets and not other ones? Therefore, mapping cultural heritage, in particular the intangible one, is an activity that requires to investigate several sources of information and above all to implement a wide range of participatory techniques involving the local community in identifying, documenting and describing local cultural resources. Indeed, cultural heritage must be relevant and recognized first of all by the community itself.
B	**What can be transferred to other destinations?**	The framework developed by the SLIDES project and concretely implemented in the five partner cities can be useful to other destinations who want to identify and map their cultural heritage, in particular the intangible one, for supporting its preservation and valorisation. In particular, the framework allows firstly to identify and qualify existing local craftsmen, artists, firms, cultural associations who are still today the custodians of a specific tradition, knowhow, skills and who ensure the conservation and the regeneration of this heritage. Secondly it allows to georeference these assets in a map and to profile them according to a set of variables about their tourism potentials. Both the techniques developed for identifying and analysing craftsmen and cultural and creative professionals, and the IT tools for mapping and profiling them, can be implemented by other destinations. The opportunity offered by the SLIDES project to implement the framework in five cities with different characteristics and with a different intangible heritage allowed to test the ability of the framework to adapt to different situations. In addition, the framework has the merit of going beyond mere formal classifications, in order to ensure a more comprehensive and representative mapping of the cultural heritage. Thinking in particular of traditional handcraft, the representatives and

custodians of this heritage are craftsmen and craft firms. The identification of the pertinent firms and craftsmen can be initially based on the analysis of the "NACE codes", a system, that at European level, classify all kind of economic activities. However, since the goals of the cultural mapping, the mere use of the NACE codes gives only a partial view of the phenomenon. By integrating other tools, such as interviews and direct surveys to these people it is possible to better describe their activity; to identify also those artisans that are not included in the NACE system (because they do not have a business activity of because other reasons); and to exclude those firms that are classified with a NACE code consistent with the craft tradition to be mapped but that produce on an industrial level and not on an artisanal one.

A free version of the software developed within the project is available (see point C). Differently, the data collected are not available as it was required by their provider.

| C | **How can this transfer be done – in particular the technical/IT characteristics?** | From the practical point of view, mapping cultural heritage and in particular intangible one, means to stimulate first of all the involvement and commitment of several local stakeholders in the activity (cultural associations, associations of craftsmen, trade organizations, experts, professionals dealing with local cultural conservation and valorization, etc.), in order to identify those assets that are really important for the local community and to increase awareness. The preliminary identification and collection of information can be based on two main steps:
• a preliminary research through several sources, including official registers and archives, press releases, relevant specialised magazines, interviews with local authorities and trade organisations, experts, opinion leaders, in order to build a list of relevant actors whose activity is based on local handcrafts and traditions;
• a survey among the actors preliminarily identified, in order to collect more detailed information about their core activity and the engagement in cultural conservation and valorisation, including tourism experiences for visitors.
Through these activities it is possible to build a database with the list and main information of all pertinent assets. The database can be uploaded in the datahub together with the other data and information about the city.
Then, a dynamic map can be created, starting from the information included in the database, such as the location (address), the kind and years of activity, the kind of tourism proposals, etc. Through the dynamic map all the assets are precisely located and displayed with a marker on the map of the city. The dynamic map can also be designed to include a set of filters (for example the kind of activity, the year of activity, etc). By filtering according to the criteria, the dynamic map displays only the assets that respond to the selected parameters. |

From the technical point of view, the database can be easily built through tools such as excel and/or csv file and maintained by means of the NoSQL database MongoDB.

The software produced within the project is free and each project partner is allowed to download the codes and the manuals necessary to install and run their platforms on their servers. They are also free to decide the future use of their software.

The software installation and customization for new destinations may require appropriate technical skills. For this reason, the project partners that develop the datahub and dashboard remain available to provide additional paid services concerning the future development of the platforms after the end of the project.

In addition, an empty version of the Dashboard is made freely downloadable as a zip file from the project web page https://www.italy-croatia.eu/web/slides/docs-and-tools . Technical and user manuals are also available together with a list of support contacts. It is understood that the service of the support contact is not free of charge.

D	**Where is possible to find the deliverables/instructions/ more info?**	The entire framework for mapping cultural heritage, including the practical and technical instructions, is explained in the reports of the following deliverables:
		
		⟶ **D.3.3.1 - Tangible and intangible heritage database,**
		   D.3.3.2 - The dynamic map of craft activities,
		   D.3.3.3 - Ranking of artisans and CCI activities according to their tourism potential

E	**Lessons learned and criticalities**	The process of mapping cultural heritage, in particular intangible one, requires the involvement of local stakeholders (for example, depending on the specific intangible heritage, cultural associations, associations of craftsmen, trade organizations, experts, professionals dealing with local cultural conservation and valorization, etc.) and the implementation of mixed methods. Indeed, the consultation of official sources, such as registers, archives, etc. must be integrated with interviews, surveys, and other participatory techniques (focus groups, etc.) in order not only to identify the pertinent cultural assets but also to document them. Not only is it important to quantify how many cultural assets there are (for example how many craftsmen, artists, etc.), but also to describe them, by collecting qualitative information. Unfortunately, this takes a relatively long time and it's not always easy to get local people involved. It is therefore important to motivate them and make them understand the relevance of this activity and that it can also have positive effects for themselves (in terms for example of promotion and business). In addition, the activity of "field research" and the development of the database must be coordinated with the technicians in charge of building the dynamic map and the filter function. In such a way, the information that populate the database can be collected and structured in a way that is consistent with the tools and the procedures used for building the dynamic map.

Work Package 4

Destination dashboard prototype to set the scenarios of each involved destination in which the pilot actions will be implemented

A	**Issues tackled & scenario (a,b,c, - if relevant)**	The Dashboard is relevant for all scenarios and answers the city managers' need to have a "one-stop-shop" of data and information about their city, related to different key areas of analysis (economy, society, tourism, culture and crafts, environment, accessibility and mobility, popularity and attractiveness). From a technical point of view, it is a Web panel, divided into six sections, that helps the City managers viewing quickly the main city trends and performances in a user-friendly format, with a focus on tourism, urban mobility, cultural identity and crafts.
B	**What can be transferred to other destinations?**	The dashboard structure and internal development code. The dashboard can be "cloned" and applied to other destinations with the technical support of an experienced IT expert.
C	**How can this transfer be done – in particular the technical/IT characteristics?**	An IT expert is needed, he/she will have to follow the technical documents provided (project deliverables). ⟶ **For more technical info please consult the following deliverable: D.3.4.1. Destination dashboard format, D.4.1.1. Destination dashboard prototype, D.4.1.2. Destination Dashboard User Manual, D.4.2.1. Pilot actions methodology, D.4.3.1 Evaluation report, D.4.3.2. Destination dashboard – final considerations**
D	**Where is possible to find the deliverables/instructions/ more info?**	Parts can be found in the Drive folder of WP3; for front-end use instead, see the WP4 deliverables. ⟶ **See LIBRARY section of the SLIDES Project: https://www.italy-croatia.eu/web/slides/docs-and-tools**
E	**Lessons learned and criticalities**	As pointed out for the Datahub, data availability and updating is crucial for the success of the Dashboard. The tool is useful for reading the state of the art of the city and planning sustainable tourism development only if cities provides a huge amount of data, retrieved from different sources, in an appropriate format.

		Experience gained from the pilot actions have shown that when a specific product/promotional action has been carried out, such as planning a new tourism experience (an event or a tourist route), the most useful indicators are those on tourism trends and the dynamic maps related to tourism mobility and to craft activities. But also the correlations between tourism data and among tourism and non-tourism data proved to be valuable for the scope, especially if other actions are planned (i.e. measuring the impacts of tourism). What is essential is to collect clear/clean data that are comparable in terms of format, so that the correlations make sense. From this point of view, is also important to promote the spread of an "open data approach" into local administrations and data sources and avoid "data silos", based on different standards. Another critical issue is the need to have an IT expert to upload and set up the data that will be visible in the dashboard. This is a direct consequence of the complexity of the tool, as well as of the format of data to be provided
F	**Lessons learned and criticalities**	In the future, the dynamic map of craft activities can be shared in an app, that can be developed as a tool for tourists. It would also make sense to enable the possibility to book experiences (e.g., from artisans) or entrance to museums so that additional data can be collected directly from the tourists who generate it.

Work Package 4 Pilot Action

The pilot actions represent the starting point to analyse strengths and weaknesses of the application of the S.LI.DES. strategy to different context/scenarios. Pilot actions, to test and demonstrate the effectiveness of the Smart Destination Ecosystem methodology, have been implemented in Dubrovnik, Venice, Šibenik, Bari and Ferrara.

Pilot Action / Dubrovnik

A	**Issues tackled & scenario (a,b,c, - if relevant)**	Issues: • over-tourism; a large number of tourists in the same time in the same (limited) area (i.e. city center); • the need for stronger valorization of local cultural heritage, with a focus on that representing the cultural identity of the destination Scenario A: harnessing mass tourism - destination subject to high human pressure The Pilot Action in Dubrovnik was aimed to manage the tourist flows in the old monumental City center by redirecting the pedestrians to the other location outside the city walls. Equally important aim was to increase the valorization of the Dubrovnik region intangible heritage with an emphasis on traditional crafts and arts as the identity of the Dubrovnik region.
B	**What can be transferred to other destinations?**	Knowledge, experiences gathered and methodology tested in Dubrovnik and innovative SMART solutions implemented, could be transferred to other destination with similar issues/scenario. (e.g. redirecting the pedestrians in high tourist season to other less visited/crowded locations in the city; using craft fairs as the main attraction and engaging local craftsmen and artists to promote their work at one place with the help of promotion realized by the city institutions/administration)
C	**How can this transfer be done – in particular the technical/IT characteristics?**	By providing the possibility for other destinations to use the Dashboard by customizing it previously with their own data.
D	**Where is possible to find the deliverables/instructions/more info?**	On S.LI.DES. project webpage and project partners' web pages. $\longrightarrow$ **See LIBRARY section of the SLIDES Project:** **https://www.italy-croatia.eu/web/slides/docs-and-tools** **See the section regarding Dubrovnik:** **D.4.3.1 Evaluation report** **D.4.3.2. Destination dashboard – final considerations and** **D.5.1.3 SLIDES Strategy**
E	**Lessons learned and criticalities**	Criticality could be the finance: in order to implement a valuable mobility system with predictions, the destination should provide smart equipment that would be used to measure pedestrian mobility. Also, each destination that wants to use the Destination Dashboard should be able to enter new destination data independently.

Pilot Action / Venice

A	**Issues tackled & scenario (a,b,c, - if relevant)**	'Routes of Venetian craftsmanship and creativity'. The pilot action included 10 thematic itineraries in the historical centre of Venice aimed at the valorization of the history and uniqueness of Venetian excellence. The itineraries are designed to encourage visits to lesser-known places and itineraries. The pilot aims at reducing mass tourism in the city center and preventing the risk that local identity disappears or become homogenised by over tourism (cfr. Scenario A) .
B	**What can be transferred to other destinations?**	The pilot actions have been developed according to a shared cross border methodology, but capitalising on the different characteristics of each destination and on the initiatives they have already implemented to enhance the economic role of cultural assets and to reduce seasonality. Consequently, both WP outputs can be used as "good practices" and easily transferred to other destinations sharing the same problems, within and outside the eligible area.
C	**How can this transfer be done – in particular the technical/IT characteristics?**	The City of Venice has constructed a Smart Control Room thanks to the National operational Programme "Metropolitan cities 2014/2020". The SCR allows the daily monitoring of tourists flow in Venice. ⟶ **More details at this link: https://www.venis.it/it/node/1048**
D	**Where is possible to find the deliverables/instructions/ more info?**	⟶ **See LIBRARY section of the SLIDES Project: https://www.italy-croatia.eu/web/slides/docs-and-tools https://www.veneziaunica.it/it/node/2310/ - Venice Project Facebook page: https://www.facebook.com/ProgettoSlides See the section regarding Venice: D.4.3.1 Evaluation report D.4.3.2. Destination dashboard – final considerations and D.5.1.3 SLIDES Strategy**
E	**Lessons learned and criticalities**	- Data collection, in particular essential to collect clear/clean - Strike the right balance between quantity and quality in tourism management

Pilot Action / Bari

A	**Issues tackled & scenario (a,b,c, - if relevant)**	The Pilot Action "Turisti per Bari" was dedicated to the discovery and valorisation of the historical centre of Bari and the Murat district through a series of activities, events and exhibitions related to the history of the territory, held on two consecutive weekends, 12-13 and 19-20 November 2021. This initiative, in line with the project objectives, aimed to tackle the following issues (cfr. Scenario C): - the need of a better distribution in time and space of visitor flows to alleviate tourism seasonality and reduce human pressure on the territorial natural and cultural heritage; - the risk that local identity may disappear or become homogenized by mass tourism; - the need to promote local identity as a leverage to revitalize the urban environment – making it more liveable – and diversify local economy The results provided by the S.LI.DES. Destination Dashboard returned significant data in real time in the four days organized specifically in a low season period, which revealed, compared to the previous weekends, an increase in the number of citizens and tourists who took part in the routes, crowding the streets and squares of the historical centre of the city. This, together with the positive feedback received by the dense network of operators involved in the pilot action as well as by participants, proved the success in tackling the above issues.
B	**What can be transferred to other destinations?**	The S.LI.DES. model is characterized by replicability and flexibility and is naturally extendable to other cities as well. In the first place, the contents of the Destination Dashboard can be easily adapted to other local contexts. The prototype developed can be transferred to other destinations, especially those lacking dynamic and specific knowledge on visitor flows with the objective to guide decision makers in designing and implementing innovative strategies for increasing the sustainability and the quality of the tourism offer. Secondly, the pilot actions developed by project partners can inspire other destinations in the creation of sustainable itineraries valorising their own unexploited tangible and intangible cultural heritage, focusing in particular on the 'living heritage', such as craft activities and creative industries.

C	**How can this transfer be done – in particular the technical/IT characteristics?**	Concerning the Destination Dashboard, the prototype can be directly studied on the related platform while the technical know-how can be transferred through direct contacts with the project partners responsible for its creation. As for the pilot actions, several useful materials are available on the project website, on Facebook and on other communication channels. Also in this case, partners can be directly contacted in order to share their experiences and the lessons learned with the S.LI. DES. project. .
D	**Where is possible to find the deliver-ables/instructions/ more info?**	⟶ **Project Facebook page: https://www.facebook.com/ProgettoSlides** ⟶ **Video Reportage "Turisti per Bari": https://www.youtube.com/ watch?v=aUiVvo6V6CE** ⟶ **See LIBRARY section of the SLIDES Project: https://www.italy-croatia.eu/web/slides/docs-and-tools See the section regarding Bari: D.4.3.1 Evaluation report D.4.3.2. Destination dashboard – final considerations and D.5.1.3 SLIDES Strategy**
E	**Lessons learned and criticalities**	Based on the project results and data provided by the Dash-board, the main lesson learned concerns the fact that tourism seasonality can be alleviated through a well-thought experiential itinerary, which promotes both the less known destinations and the local identity. As for the criticalities, for the Municipality of Bari it is important to ensure that the Dashboard can continue its activities once the project is concluded, making it sustainable and above all adapting it to its local context. To make it sustain-able, the partner shall simplify it by slightly modifying its struc-ture to focus on the information of greater importance for the governance of tourism in Puglia, managed by different stake-holders whose interaction is not always immediate and effec-tive. The idea is to guarantee a constantly up-to-date and sustainable information sharing system thanks to the coopera-tion with those institutional subjects able to provide the data of greater relevance and impact in terms of tourist flows.

Pilot Action / Šibenik

A **Issues tackled & scenario (a,b,c, - if relevant)**

Šibenik as a tourist destination belongs under Scenario C with high seasonality and the need to manage tourist flows during the peak months to avoid congestion around key attractions. In addition, the disappearance of certain skills and crafts is a concern which we tried to address with Pilot Action – Sibenik Heritage day, held every Thursday for 8 weeks in July-August 2021. As the result of creation of the Interactive map of arts and crafts (part of the Dashboard) we established that many crafts-men shops have moved out of the old city center making way to apartments, souvenir shops and fast-food bars. This has changed the landscape of the old city and is contributing to the loss of local identity. The revitalization of the square we choose for our Pilot Action, started with the project RECOLOR (also Interreg Italy-Croatia funded project) and their green market returning to its previous historical location. Our pilot action built on their effort by adding the Arts and Crafts Market every Thursday and offering to the craftsmen the opportunity to sell directly to tourists even though they have no shops in the old city center.

Our efforts to promote the heritage (button, hat, a cappella singing) were spread on 3 different locations in the perimeter of 500 m which did not prove so successful as the analysis of camera recordings in terms of counting (Dashboard feature) did not show considerable difference between the day with pro-grams and the usual day so as the result of consultations with our stakeholders, we are continuing with the pilot activity also after the project's end, by concentrating all our efforts to one location and promoting it as an alternative to more crowded routes. All the content of all activities now will be focused on one square.

B **What can be transferred to other destina-tions?**

Šibenik's Pilot Action as well as other actions implemented by project partners can be a source of inspiration for other destina-tions. We could learn from each other during the period of preparation but our Case studies can be disseminated beyond the project duration and area of intervention. Methods used, public relations, filming, interactive workshops – all can be inspirational for other destinations. Use of technology linked with Dashboard options can also serve as guide for other destination to invest in necessary equipment and know-how to direct tourist flows more successfully towards locations of interest and away from crowd and to alleviate the human pressure on natural and cultural heritage. It is of interest to all destinations to facilitate the stay of tourists and prevent frustra-tion which is inevitable in the situation when due to crowd, high temperatures and other pressuring issues, tourists no longer enjoy despite the fact that they are on vacation.

C	**How can this transfer be done – in particular the technical/IT characteristics?**	S.LI.DES Dashboard prototype has to remain available for viewing by other destinations, possibly on request and with passwords as it is necessary to be seen in its full potential. The dummy version without data will not give the exact same impression of its full potential. Thus, it is necessary that at least some of the cities involved keep their version online and available for showing even beyond the project's end. Also, the list of companies which can assist with potential maintenance and update of this system and very good technical manuals are needed in order not to lose the value of this software. Potentially, some other destination could use the Dashboard as basis for new project proposals and continue perfecting it.
D	**Where is possible to find the deliverables/instructions/ more info?**	Each partner involved has received the Manual from ECIPA and could provide answers to any interested party in regards to content of the Dashboard and its performance. During our Open Regional Workshop we have presented the Dashboard as a prototype to considerable number of stakeholders. An additional number of participants of the Final conference was able to hear details about Dashboard creation, potential and ways of use. General info with contacts of each partner can be found on the project website See Pilot Action Report of Venice (LIBRARY section of the SLIDES website ⟶ **See LIBRARY section of the SLIDES Project: https://www.italy-croatia.eu/web/slides/docs-and-tools See the section regarding Šibenik: D.4.3.1 Evaluation report D.4.3.2. Destination dashboard – final considerations and D.5.1.3 SLIDES Strategy**
E	**Lessons learned and criticalities**	Data gathering for populating of the Dashboard has been extremely demanding and unfortunately not resolved for the future, i.e. we have not managed to establish any protocols with stakeholders who own data on how to regularly update the sections of Dashboard. Especially this is critical for Croatia as we had a Census in 2021 and many new data series have been created which would affect the previously provided data considerably, in terms of population, education, economy, effects of Covid 19 etc. Additional problem, for small entities such as Sibenik Tourist Board that have no permanent IT support, is actual transfer and update of the Dashboard.

Pilot Action / Ferrara

A	Issues tackled & scenario (a,b,c, - if relevant)	The aim of the pilot action in Ferrara was to develop a marketing campaign, in order to confirm the image of the city and its territory as a place of artisanal and agri-food excellence, thus attracting new consumers and tourists especially in a period characterized by an unprecedented health and economic emergency for the tourism sector. The tangible and intangible cultural and natural heritage that was promoted included pottery, hemp and agri-food (cfr. Scenarios B and C). The starting point to define the pilot action was to coordinate it with other ongoing initiatives in the territory developed with other European projects – Adrion5Senses (Interreg Adriatic Ionian) and AirBreak (UIA) – as, for example, the realization of 2 virtual tours with the involvement of 13 local artisans in collaboration with the business associations and in particular with CNA Ferrara and the collection and analysis of tourism data from mobile phones. Sipro Ferrara in collaboration with the local stakeholders defined a pilot activity composed by 4 main actions:

- **2 Eductours realized on 30th September and 1st October 2021** During the Eductours participants were "accompanied" through different places in an area with particular historical, artistic and natural value paying attention to the typical productions of the territory, artisan productions and food and wine, which narrate the traditions of this area and its history.
- **4 training sessions - "Lessons of the Territory" realized between November 2021 and January 2022;** The second part of the pilot action was the initiative "Lessons of the Territory", aimed at knowing and understanding the territory to better promote it to tourists. The training events took place on 24th and 30th November 2021, 25th and 31st January 2022.
- **1 temporary showroom of handcrafted products in November and December 2021;** The third part of the pilot action was realized by establishing a temporary showroom located in the centre of Ferrara focused on the best products and artisanal local enterprises. The initiative was called "Artigiani a Palazzo" and involved handcrafters from four sectors - fashion, art crafts, food, and cosmetics. The main aim was to enhance a transit area little used by residents and tourists albeit in the historic centre.
- **1 printed brochure about the shops recognized with the brand "Botteghe Storiche" of Ferrara**.

A specific brochure was printed about the historic shops of Ferrara.

The main aim of the pilot action was to directly involve local stakeholders, authorities, tourist operators and handcrafters in specific actions to better promote our territory through a different point of view.

So, the tangible and intangible heritage in the province of Ferrara area was promoted as an integrated system of cultural and natural sites with artisans and handcrafters which represent the added value in the tourist offer.

The marketing campaign was developed on the basis of the data processed by the dashboard, integrated with data collected from mobile phones and from the six sensors (able to recognize the presence of a mobile device connected to Wi-Fi in a specific area) installed in the city centre from the month of July 2020. In Ferrara, data collection by sensors was extended till the end of the 2021 in order to analyse data after the emergency period due to Covid-19 restrictions.

B	**What can be transferred to other destinations?**	The data provided by the dashboard on tourist flows and mobility helped to attract new visitors through the testing of a new temporary Showroom located in the city centre of Ferrara. Thanks to these results, the Dashboard could be further improved to become an effective tool for supporting tourism policies, in order to define new tourist city routes and facilitate the mobility of visitors in less frequented areas of the historic centre. The S.LI.DES. model is characterized by replicability and is extendable to other cities as well. The content of the Destination Dashboard can be adapted to other locations. The protype developed can be transferred to other destinations, especially those lacking dynamic and specific knowledge on visitor flows with the objective to guide decision makers in designing and implementing innovative strategies for increasing the sustainability and the quality of the tourism offer.
C	**How can this transfer be done – in particular the technical/IT characteristics?**	Concerning the Destination Dashboard, the prototype could be directly studied on the related platform while the technical know-how could be transferred through direct contacts with the project partners responsible for its creation.

D	Where is possible to find the deliverables/instructions/ more info?	→ **See LIBRARY section of the SLIDES Project: https://www.italy-croatia.eu/web/slides/docs-and-tools See the section regarding Ferrara: D.4.3.1 Evaluation report D.4.3.2. Destination dashboard – final considerations and D.5.1.3 SLIDES Strategy Project Facebook page: https://www.facebook.com/ProgettoSlides Pilot action in Ferrara: https://artigianiapalazzo.com https://www.ferraraterraeacqua.it/it/botteghe-storiche-1/ botteghe-storiche-ferrara**
E	Lessons learned and criticalities	The defined and promoted itineraries, implemented during the pilot action activities, helped not only to discover the city centre but also to move the tourist flows towards the least considered parts of the city, also giving the possibility to taste typical dishes and enjoy wine experiences. Besides, the pilot action also encouraged tourists to find out about the historical identities that characterize the city, in view of enhancing the tourist offer. Finally, the phases of the pilot action supported the restart of several activities related to the tourism sector, despite the health and economic crisis due to the pandemic. As a further result achieved, particularly thanks to the "Lessons of the territory", the participating tour operators were able to develop network synergies and, in some cases, planted the seeds for future collaborations

Work Package 5

Strategy and Cooperation agreements

A	**Issues tackled & scenario (a,b,c, - if relevant)**	The S.LI.DES strategy has focused on a smart and dynamic decision support system to guide policy makers in the definition and promotion of innovative tourism policies to valorise tangible and intangible cultural assets in a sustainable way. The relation with local stakeholders can be strengthened through official cooperation agreements to be signed at the end of the activity in order to secure durability and sustainability of the policy implemented
B	**What can be transferred to other destinations?**	HOW TO BUILD AN EFFECTIVE STRATEGY? KNOW YOUR TERRITORY • Map the tangible and intangible heritage and living culture • Map the dynamics of tourism and mobility in the destinations • Overlap them to analyse growth potentials for sustainable local development INVOLVE MAIN LOCAL STAKEHOLDERS • Identify who can affect or who is affected by the strategy • Set up targeted communication channels • Secure future commitment through official cooperation agreements GAIN POLITICAL ENDORSEMENT • Cooperate with local politicians and main institutional actors • Explain the benefits of the S.LI.DES. methodology, tools and strategy LEARN AND ADAPT RESULTS FROM PILOTS • Analyse the results of the pilot actions where the S.LI.DES. methodology and tools have been tested • Promote the transfer of project achievements to different EU contexts
C	**How can this transfer be done – in particular the technical/IT characteristics?**	The issues tackled by the S.LI.DES project are crucial for the sustainable territorial economic development of other EU destinations. The dissemination of the S.LI.DES strategy at local, national and EU level will be therefore promoted through all the available means of communication (final conference, project website and social media, public events etc.) and the S.LI.DES innovative methodology and tools will be made available for replication in any other interested destination.

			The strategy will be elaborated tacking into account different territorial needs in order to develop solutions and policy recommendations that could be adapted to various contexts. The Transferability framework will assess the possibility of integrating the strategy within different contexts and will provide EU destinations with guidelines to identify the S.LI.DES solutions most appropriate to be applied to their situation and integrated in their policy framework. The political commitment needed to achieve long-term sustainability could be guaranteed by the Cooperation Agreements with main local stakeholders signed by destinations.
D	Where is possible to find the deliverables/instructions/ more info?	⟶	**Strategy Deliverables 5.1.3 - See LIBRARY section of the SLIDES Project: https://www.italy-croatia.eu/web/slides/ docs-and-tools**
E	Lessons learned and criticalities		The importance to include the relevant stakeholders in all the steps of the policy development process Ex ante and ex post evaluation of the action/policy Strike the right balance between efficiency&efficacy and the need to have a wide citizen participation

D
Looking into the future:

D.1.
Transferability framework template for the other Cities

The S.LI.DES. strategy and cooperation agreements are meant to represent a first step towards a common vision on innovative Tourism policies in the Programme area and a pathway for the harmonization of EU Strategy for the Adriatic-Ionian Region (EUSAIR). The aim of this activity is to ensure the S.LI.DES. strategy applicability and replicability in other cultural destinations within or outside the Programme area in order to foster the strategy transferability and promote its adoption at EU level. The project pilot actions phase in the destinations represent the starting point to analyse strengths and weaknesses of the application of the S.LI.DES. strategy to different context/scenarios. The results of the analysis, summarised in the S.LI.DES. Transferability framework (D.5.3.3), should guide any EU interested destination in adopting the strategy according to specific territorial needs and features, by applying the framework described below.

Transferability of S.LI.DES. project results is a multidimensional practice that requires collective effort first from the project partners and then from the relevant stakeholders involved during the lifetime of the project.

The transferability of a best practice from one region/city to another is not a simple and straightforward action; it depends on a series of factors that determine its success. Many scientists and professionals have examined the success factors in the general aspect of a knowledge transfer; the best practice is indeed a knowledge in its broader sense.

Prior to the description of the transferability tools for other EU destinations, a strategic framework that will enable a good cooperation between the 'origin' and 'destination' regions that will eventually guarantee the expected results is provided.

Step One

Any know-how transfer and cooperation framework comes to address a specific situation and serve specific needs of the local situation that will apply this framework. The transferability framework should start with some basic elements: a rationale (WHY), a replicable solution (WHAT), a method to replicate your solution (HOW), the city profile (WHO), an assessment of new regions and countries (WHERE), and a strategy for introducing your solution to a new context (and adapting it).

Step Two

Also when setting the objectives of the policy intervention it is important to check them against the SMART criteria (i.e. specific, measurable, achievable, realistic and time-bound)

- Specific – outline in a clear statement precisely what is required.
- Measurable – include a measure to enable organisations to monitor progress and to know when the objective has been achieved.
- Achievable (or agreed) - design objectives to be challenging, but ensure that failure is not built into objectives. Objectives should be agreed by managers and employees to ensure commitment to them.
- Realistic (or relevant)- focus on outcomes rather than the means of achieving them
- Time-bound

Step Three

Fill in the Table 1 based on the policy cycle Figure 8.

Step Four

It is possible to identity the following methods of transfer

1) **Replication,** copy /paste of the design and implementation, evaluation process, legislation and regulatory Framework, Communication materials
2) **Benchmarking and adaptation** of outputs according to the policy, Pilot Actions as benchmark
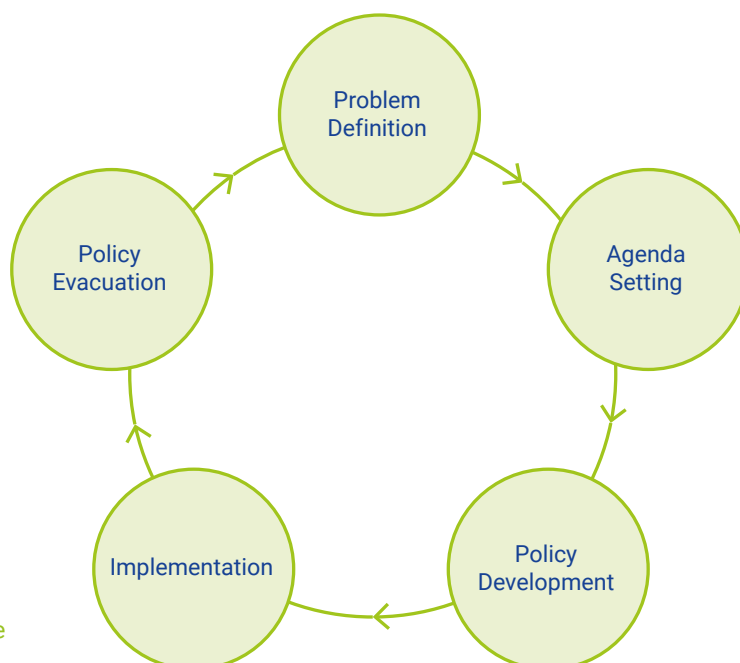3) **Inspiration, new Ideas** – Observation list of Stakeholders Communication materials

Figure 8 – Policy Cycle

	External destination characteristics	SLIDES resources available	Transferability method	What has been transferred?
1	Analysis of the existing situation (quantitative and qualitative assessment) – Problem definition	Scenario A, Scenario B, Scenario C		
2	Identify issues, Analysis of available resources (economic, legislative, tourism industry civil society) – Agenda setting	See outputs of the SLIDES project, in particular Work Package 3		
3	Identification of authorities and stakeholders to be involved at both regions/areas in the transferability - Agenda setting	See contact list SLIDES as example		
4	Formulation of the policy – explore the possibility to implement a Pilot action to test your future policy	See pilot action SLIDES Work Package 4		
5	Adoption and implementation of your policy/action	See pilot action SLIDES Work Package4		
6	Evaluation and fine-tuning of the policy/action	See Strategy recommendations Work Package 5		

Table 1 - D. 5.3.2 Transferring framework for the other cities

Table 1 illustrates the general Framework that can be used by other destinations for transferring, as well as the link between the components of the Framework and the S.LI.DES. main outputs. The Table depicts a hierarchical structure composed by several levels of components, aiming at the smooth transferability of the identified good practices to the target regions. Each component provides the possibility for further and more specific actions. The above components are in sequential order but it can be modified according to the specific needs; each one of them serves a specific objective and consists of a series of actions.

D.2
Transferability framework: Tools for the project consortium – Actions after project termination

1. The dissemination will continue after the end of the project at local, national and EU level. In particular EU cities networks will be contacted in order to disseminate the project results (Eurocities, Urbact, Civitas Network, National operational programme "Metropolitan cities 2014/2020, etc.)
2. A list with potential Transfer destinations has been created
3. Communication in the final stage of the project will be focused on the promotion of outputs and results of the project and on the involvement of external audience in pilot activities
4. The S.LI.DES. outputs will be transferable to other relevant decision-makers via the partner's website and, and during final events on the subject. For this purpose, below there are selected examples of ranges of activities or tools related to the dissemination and use of results:

The Lead Partner will act as main contact point after the end of the project – Ca'Foscari
e-mail: slides@unive.it

Website
still the most common dissemination tool in European projects. It is used to publish results as well as promote the project and partner institutions. It reaches practically an unlimited number of recipients.

Recommendation - It is therefore necessary to ensure that links to the project results are found in places (websites) frequently visited by our target group. Each partner will publish the main results in their dedicated page.

Internet forums and blogs
enable sharing knowledge and experience on a given topic, answering questions and sharing information with others.
Recommendation - partners will use them as a tool for exchanging experiences, disseminating results, a meeting place for various people: experts, trainers, users, and interested parties.

Social media
(Facebook, Twitter, Linkedin, Telegaram etc.) - they enable sharing knowledge and experience, as well as materials, among interested people. By enriching the message with an element of recommendations, they are an effective way to promote and disseminate results.
Recommendation - update before the end of the project.

Newsletter
popular means of informing interested circles about project progress. They allow you to reach specific target groups and keep them interested throughout the duration of the project.
Recommendation - last newsletter to be circulated also to the transferability list.

If possible, project partners should continue to make referece to the S.LI.DES. results in the future in:

Articles and press information - The press (both traditional and electronic) is a medium with a very large range, so it allows reaching a wide audience and gaining the interest of people whom we cannot reach directly. The right choice of content and form of communication is also important. An effective way of disseminating the results may be placing articles in the industry press addressed to a specific group of recipients interested in the subject of our project.

Meetings, direct contacts - During direct contact, the message is much more effective and convincing, and the chance to interest the interlocutor in the result is much higher. This method of communication is particularly recommendable in the case of attempts to reach information with decision-makers, senior people or people from whom we expect a change in the current attitude.

Conferences, seminars - It enables gathering people potentially interested in the results of our activities in one place and time. Conferences, seminars and other such meetings provide a very valuable opportunity to exchange views and experiences between experts and participants.

Fairs, exhibitions - participation in various fairs and exhibitions thematically relevant to our project allows you to provide information about it to a relatively large number of people. Such events are an opportunity mainly to promote the project, but they also create a chance to meet people or representatives of institutions actually interested in our achievements. The possibility of direct contact and conversation about the use of project results is very valuable.

Training, workshops - events such as training or workshops are good opportunity to meet potential users and provide them with knowledge about the results achieved. These meetings are often used to test results, and thus collect feedback on them in order to better match the needs of users.

Video clips - video materials can be a very interesting way to present the results, as well as a way to promote the project. Short video broadcasts can be a form of training provided via the network in a version friendly to personal computers or mobile phones or iPods. However, for such materials to be useful and properly received, they must be of high technical quality and aesthetic value. Their preparation requires specific skills and special equipment, so it is not an easy task, and also involves considerable costs.

Project databases - placing projects and their results in European databases is an effective way to present projects and their results to recipients from other countries.

Leaflets, brochures - leaflets or brochures are still a fairly widely used information tool, mainly due to the relatively low costs of their preparation. They usually serve as a tool for promoting a project or institution, rather than actually disseminating the results. Their effectiveness largely depends on the way they are distributed.

Radio and TV - Preparation of appropriate material also requires specific skills and technical capabilities. Due to the nature of these media, the airtime offered is also very short and allows only to provide very few information about the project. When planning this type of message, you need to think very well about its purposefulness and cost effectiveness.

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COMUNE DI BARI

CITTA' DI VENEZIA

ALMA MATER STUDIORUM UNIVERSITÀ DI BOLOGNA

Šibenik tourist board

DURA — Dubrovačka razvojna agencija Dubrovnik Development Agency

OBRTNIČKO UČILIŠTE OBRAZOVANJE ODRASLIH

institut za turizam