

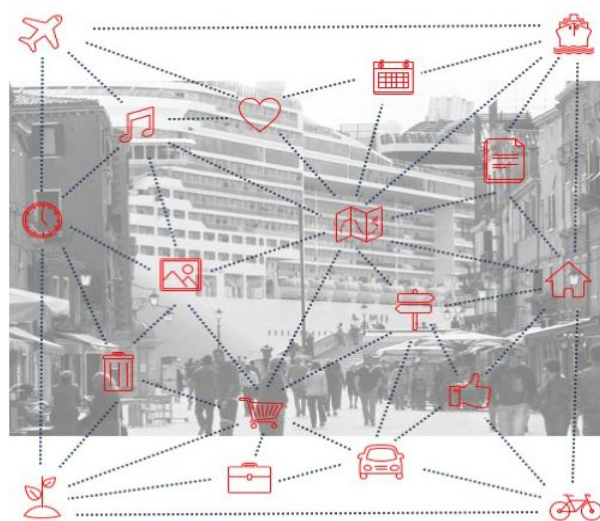
## ABSTRACT

In a period of economic, environmental and resource crisis, the flow management in the port city region allows the passage from an uncontrolled growth to a circular and sustainable development.

The port-city relations have historically been a complex system and this became even more evident with the introduction of information and communication technologies (ICTs). This paper expands on the current debate by focusing on an innovative soft category of intervention, aimed at rebalancing the port-city relation connected to the boom of cruise tourism.

In this context, the paper firstly focuses on the need to change perspective due to the globalisation and technological development in the port-city relations. Secondly, a set of good practices to rebalance the relations between cities and cruise ports are collected. Finally, a Smart Cruise Destination concept is proposed, based on the evolution of the smart tourism destination, with the aim of emphasizing the residents' wellbeing and tourist vacation enjoyment.

The main contribution of this paper is the introduction in this context of a Decision Support Systems (DSS) devoted to the above-mentioned issues. The proposed framework consists of a combination of distributed knowledge and data that can give stakeholders the opportunity to base all decisions concerning policies, infrastructure development and managing system on sound and rational basis.



## Smart Cruise Destination: an innovative network governance framework

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## KEYWORDS

Tourism governance; Sustainable tourism; Cruise tourism; ICTs

# Smart Cruise Destination: an innovative network governance framework

## Introduction

Ports and cities are historically strongly tied and have developed in close relationship. The port cities have had a key role in the socio-economic and cultural development of many regions since the port constitutes a node of arrival and departure of people, money and goods' flows (Hein & Hillmann, 2013). However, during the second half of the twentieth century, the link between ports and cities was affected considerably by different factors (Levinson, 2006). The technological changes, the internalisation of the port and shipping industry and other globalizing forces had important impacts on the port-city relationship. It cannot be denied that nowadays the ports have become increasingly disconnected from the cities, not only in economical but also in institutional and spatial terms (Hall & Jacobs, 2012). According to the Organization for Economic Cooperation and Development (OED), even if the disconnection between ports and cities has positive economic effects throughout the whole region, it could provoke negative externalities concerning urban ports such as pollution, congestion, safety, security, and people dissatisfaction.

In the past years, many experts have examined city-port relations from different perspective, such as e.g. economic, environmental, sociological, geographical and planning ones. Literature review pointed out two categories of intervention in rebalancing the relation between port and cities, namely soft and hard categories (Pagés Sanchez, 2015). This paper expands on the current debate by focusing on an innovative soft category of intervention in rebalancing the port-city relation connected to the boom of cruise tourism. In the last period this tourism has been widely criticized for its impacts at economic, social and environmental level. Moreover, in the near future these impacts are expected to grow if not properly managed due to the specific characteristics of this sector, such as increase in vessels size, rise of passengers' number as well as the enlargement of destinations offered by cruise itineraries. Furthermore, all these new features of the cruise sector not only have posed concerns about the risk of overcrowding destination facilities, but have also stressed pollution-related issues by including in the debate an increasing number of stakeholders.

In this context, the research raises the issue whether passengers' flows are an opportunity for development or an intrusive activity for cities (identified as a tourist destination). Besides investigation on how to mitigate or offset the negative aspects, this paper focuses on the evolution analysis of the port-city tourism governance thanks to the use of Information and Communication Technologies (ICTs) and proposes a conceptual framework in order to successfully manage stakeholders involved in the cruise network system. Therefore, a smart and sustainable management of the port city region would allow improving the well-being of the resident in the destination area, increase satisfaction by the tourist experience, respect the territory in a sustainable perspective, use the network to create new opportunities and increase the economic value of the destination.

This paper takes a holistic approach and helps identifying a tourism destination governance from a multi-disciplinary perspective. Moreover, it reports the partial results of the research that is moving to an operational phase. A redefinition of the reference framework (conceptual and methodological as well as data to be considered) was needed to fulfil the research aims. The paper is structured as follows: first a literature survey on port city relations where the evolution of structure and governance is analysed in relation to the evolution of the ICTs. Then a cruise tourism overview focused on people volumes growth and a set of good practices to rebalance the relations between cities and cruise ports are collected. In conclusion, the Smart Cruise Concept is introduced by a new and innovative conceptualisation of the cruise governance in the tourist destination.

## Literature survey on tourism

The relation between cities and ports has evolved over time, from an originally straight interconnection to a completely different growth and development. Although the ports have started fast development changes to remain competitive on the fast market needs, cities have not changed at the same speed. Such an assertion demonstrates why in the last three decades the regeneration of urban waterfront has been the main problem to solve. Huge industrial areas needed a new strategy to mend the interface with the city. The existing migration-related infrastructure needed a change. In the context of passenger migration ports, the traditional role of ports as a work-related migration pattern in part switched to leisure-related migration pattern (Hein & Hillmann, 2013). Port areas have freed up by port facilities, thus beginning a new stage in the relation between port and city by promoting new strategies of connections.

As mention before, literature review pointed out there are two main categories of intervention in rebalancing the relation between port and cities, namely hard and soft strategies (Pagés Sanchez, 2015). The two strategies can be used both one by one or together, depending on the structure and objectives to be achieved. The first category represents hard strategies that regard projects with changes in the port infrastructure or territories, such us the regeneration of urban waterfront or the creation of facilities with mixed-use for both city and port. On the other hand, the soft strategies are more related with management and communication decisions, without the need of a physical change. Nowadays, most of the times, the hard categories of intervention need a long period of programming and realisation with a high money investment, thus thereby becoming unsustainable in the short period.

In response to this, this paper finds in the soft strategies the way to manage the port-city dynamic in a sustainable way, especially for the cities identified as tourists' destinations. A win-win synergic prospective is possible by adopting new approaches and new tools of managing and planning conflicts, thus transforming differences in complementarities (Ravetz, 2013). Indeed, a service-oriented governance development through an immaterial infrastructure is able to generate comparable results of hard infrastructure.

### *Changing perspective: globalisation and technological development*

Over the last five decades, the literature on port cities regions has been continuously and rapidly growing due to its fast changes. In the port areas the process of economic globalisation started already in the early history (Fusco Girard, 2013). This phenomenon corresponds to the 6th phase of the model developed by Hoyle (Hoyle, 1989). The globalisation is identified by Hoyle as the key factor for the split between the city and port systems. This split, attributable to the advances in ship and logistic technologies and the ever-increasing size of ships, have had an impact on the port areas and consequently also on the port-city relationship (Pigna, 2014).

Moreover, the logistic revolution, with ICTs innovation, automation, and new technologies, has multiplied the quantity of goods and people in transit (Fusco Girard, 2013).

Even the growing number of people movement has started with the constant progress in the development of the Information and Communication technologies - ICTs around the 1990s (Femenia-Serra, et al., 2018). This phenomenon must not be overlooked because in the second half of last century tourism became one of the fastest growing sectors in the world. According to the World Tourism Organisation (WTO) and the World Travel and Tourism Council (WTTC), tourism industry generates about 10.4% of the World Gross Domestic Product (GDP).

Nevertheless, even if nowadays the digital technology covers a vast part of the tourism industry, a lot of tourism destinations are not able to adapt to the fast changes of technology. Consequently, the governance system crashes and a common dissatisfaction spreads out into both residents and tourists. Most of the time, the urban inhabitants do not benefit directly by the flows produced by tourists' movements, but often the flows are interconnected with the economic and social system

in a negative way (Fusco Girard, 2013). Consequently, the governance system crashes, the benefits are not distributed equally among the various stakeholders and this provokes a common dissatisfaction that spreads out into both residents and tourists.

The literature review pointed out the importance of adaptation by tourist destination to the fast technology changes together with a sustainable governance, especially in the city-port territory where the number of people movement is increasing.

The traditional frame for tourism development needs a change and the smartness approach has to be introduced into the system. The introduction of the smartness approach is needed to adapt to the technological, economic and social development with the aim of developing new policies and strategies to target sustainable and economic growth (Gretzel, et al., 2016).

Therefore, the change in thinking is particularly interesting for the governance concept due to the fundamental role played by the digital technology in the improvement of the competitiveness and innovation of tourism destinations (Baidal, et al., 2017).

Changes can be achieved only by being aware of the tourism and services evolution caused by the digital technology introduction. Nowadays the ICTs are no longer a distinctive characteristic by itself, but an effective and efficient usage is needed to obtain a competitive advantage (Baggio & Caporarello, 2005).

Figure 1 schematizes the connection between the evolution of digital technology and tourism industry. The relationship between tourism evolution and digital technology is clear. There is no doubt that innovation in the tourism sector is closely related to the increasing use of Information and Communication Technologies (ICTs) (Neuhofer, et al., 2015) (Iunius, et al., 2015) (Ivars-Baidal et al., 2017). Revolutionizing the tourism structure from Tourism to Smart Tourism had a massive impact on transforming the nature of travel and tourist experiences.

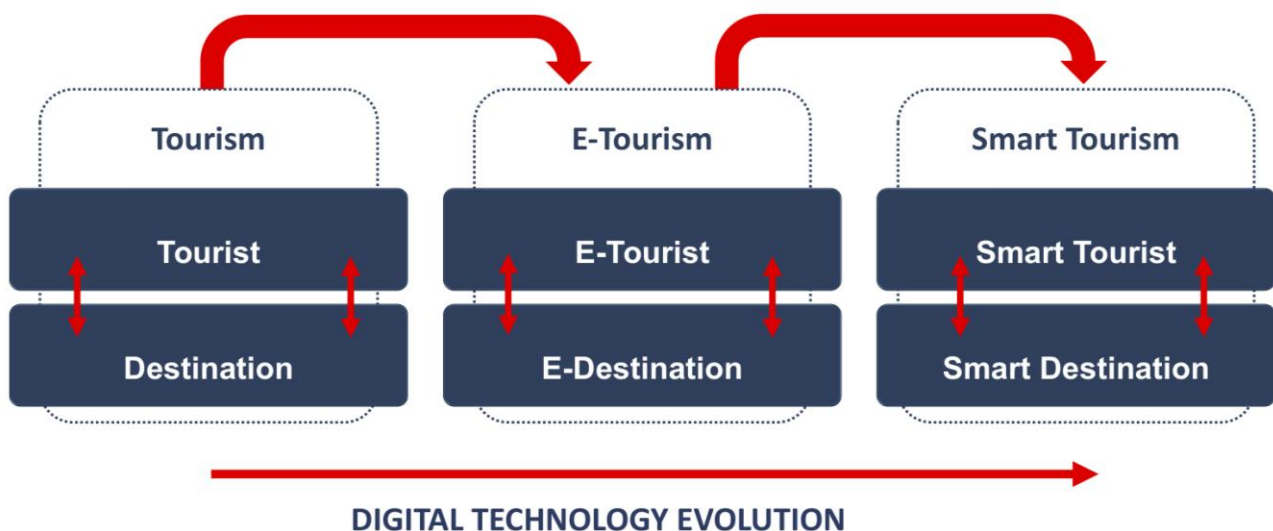


Figure 1. Tourism evolution in relation to the digital technology evolution.

With tourism evolution evolved also the tourists' needs. Nowadays, it is necessary to manage a completely different tourist profile that requires smart and increasingly personalized services. Diversely from the past, in the recent period, a dematerialisation process of the product has started (Mehmetoglu & Engen, 2011). Moreover, tourists do not buy anymore a tangible product as in the past but they have shifted their interests from material goods and services towards memorable moments, better defined as "experience".

Consequently, the experience concept has to become the core product in tourism industry with direct impact on tourist's satisfaction. Interestingly, some recent papers (Nolich, et al., 2019; Spoladore, et al., 2018) are focused on the space personalization which fits the users' activities and their characteristics, both in the city environment and on cruise ships. However, an integrated

city-port-ship system still does not exist. In addition, the concept of tourism experience has to take into consideration not only space personalization but also welfare of residents, natural resources in a sustainable vision, as well as increasingly attract visitors by offering them memorable experiences (Croes & Kubickova, 2013).

### *Governance evolution from tourists' point of view*

In recent years, the governance evolution has represented an important direction in city port region development. Generally speaking, there are many studies on city port region governance and relatively few references regarding inclusion of tourism evolution in the governance.

This paper organizes the literature review relying on three key elements of the port-city governance. Firstly, the port city region relationship as a local-global physical commodity and service exchange, secondly, the port city relation defined by spatial function dimension, and thirdly, the port city relation governance as a network of stakeholders. The last point is particularly relevant in a perspective of an integrated governance system between tourism and port city region.

Recently some scientific exponents have begun to change their perspectives from management to destination governance, looking for topics such as definition and dimension of destination governance and the connection between governance structure and destination effectiveness (Zhang & Zhu, 2014). Furthermore, in various papers (Svensson & Nordin, 2007; Beritelli, et al., 2007; Eric, et al., 2011) stakeholders start to be recognized as an important part of a destination that have great influence on local socio-economic development.

The destination governance is usually classified in the literature as community-based, corporate-based, and network-based. Further, the governance of a Smart Tourism Destination is based on the connection between multiple stakeholders and interaction between each other. In addition, stakeholders become active co-creators throughout the entire innovation process.

According to these authors (Svensson, et al., 2005; March & Wilkinson, 2009), the paper considers the governance as a self-organizing inter-organization network. In this network, the interaction of stakeholders can be understood by conceptualizing tourism system as a complex, dynamic, nonlinear system, which is influenced by external shocks. With the purpose of conceptualizing tourism according to the theory of complexity, a systemic thinking has to be shaped by considering (Ndou, 2011):

- Multidisciplinary view: different characteristics from various disciplines need to be considered, e.g. economic, geographic, maritime, geologic, and ecologic components of the tourism system;
- Interactive and co-evolutionary view: all stakeholders interact with each other and with the environment where they are. Furthermore, each part is a fully participating agent which influences others and at the same time is influenced by others;
- Non linear innovation view: the interaction and interrelationships of the stakeholders introduce a non-linear pattern of innovation.

Moreover, in the case of mass tourism as e.g. cruise ships or airplanes, the interdisciplinary methods and long-term perspectives can significantly improve the security and safety, not only for the passengers but also for all the people involved in the system.

### **Cruise tourism overview**

The cruise tourism is a dynamic, growing segment of tourism that grows faster than any other sector of the industry. Since 1980, the cruise industry has recorded a continuous growth equal to 7% average growth per annum. The cruise industry is a complex system, composed by large global



cruises, small cruise ships of local and regional importance, various specialized ports and destinations adapted to cruisers of all sizes (Luković & Božić, 2011).

In order to create an innovative governance framework, this paper analyses the people movement network configuration and the set of good practices in the port city connection.

### *Cruise passengers' growth: a new network*

In recent years, the cruise tourism has shown a strong growth in passenger numbers (CLIA, 2018; Lee & Lee, 2017). This growth can be attributed both to the development of cruise tourism product (including technological advances in ship design and onboard services and experiences) and to the expansion of port facilities and on-shore tourism opportunities (Lopes & Dredge, 2017).

The Cruise Lines International Association - CLIA in its 2018 annual state of the cruise industry report projected an increasing growth for the cruise industry in 2019. In 2018, 28.2 million people, 1.4 million more than in 2017, enjoyed a cruise vacation (CLIA 2019). Ten years before the number of cruise people movement were just 11.8 million.

Furthermore, for the first time in cruise history, in 2020 global passengers are expected to exceed 30 million people moving. This future projection confirms the remarkable dynamics of the industry and its resilience in front of the economic, social, political, or any other crises that regularly challenge the tourism sector (Pallis, 2015).

The increased number of passengers is a consequence of the Cruise operations and structures' evolution. Cruise lines have become highly sophisticated, efficient, profitable organizations, attractive and accessible to a wider range of target markets. According to the authors (Pallis, et al., 2019) the globalisation of cruising has been accompanied by the increasement of the innovative and feature-rich ships, the variety of onboard services, as well as planning and development of new cruise ports, convenient departures from nearby embarkation cities, organisation of land-based excursions and increasingly interest of various destinations to host cruise passengers and vessels.

In this context, the European Union stresses the importance of reconciling economic development, environmental sustainability and quality of life within city-port. The Communication "An integrated Maritime Policy for the European Union" (COM (2007) 575 final) and the Action Plan accompanying the Communication (SEC (2007) 1278) focus on the importance to invest in infrastructures and facilities for receiving tourists, in particular through cruise tourism.

In the European area the cruise itinerary is composed by various ports often collocated in different countries. Due to its coastlines, stretching nearly around 89,000 kilometres, European territory is an ideal cruise destination. The diversity of the continent makes Europe an ideal holiday destination since it offers a wide range of cultural and leisure activities and natural heritage.

The research takes as a sample the Mediterranean area. As shown in Figure 2 below, the Mediterranean area is characterised by a patchwork of ports with six leading ports, headed by Barcelona. It should be noted that Barcelona has become the first Euro Mediterranean cruise destination (CLIA, 2018), after the renovation of its Strategic Tourism Plan (Barcelona, 2018).

Barcelona is a good case study of smart tourism destination (Marine-Roig & Clavé, 2015), as a new point of view about the city-tourist relationship.

However, the fast growth of cruise tourists in Barcellona, besides adding a significant economic value to the city, creating positive promotion of port-city region, generating significant number of jobs, has led to both an increase of pressure on the urban limited resources and a different physical and functional balance between residents and tourists. Nowadays, the breaking point caused by tourist pressure has been reached in Barcelona (Bourliataux-Lajoinie et al., 2019).

Moreover, the city is undergoing a strong crisis in the public acceptance of tourism, due to its impacts on citizens life conditions and on public spaces (Fava & Palou Rubbio, 2016).

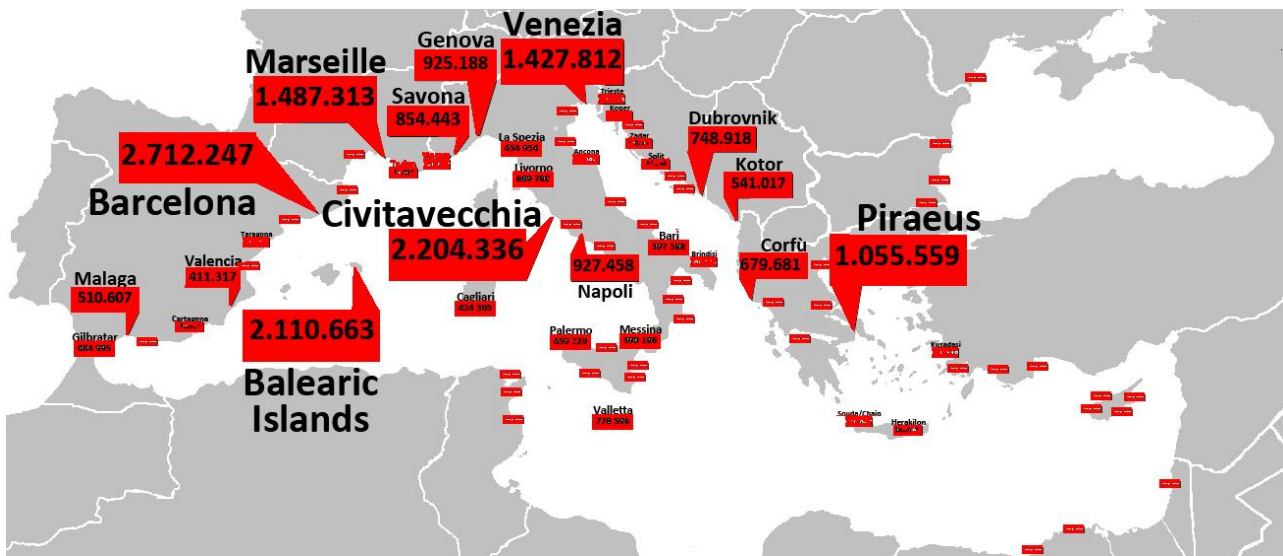


Figure 2. Mediterranean Cruise traffic overview. (Source: Cruise Activities in MedCruise Ports, 2017 statistics)

More broadly, the missing balance is not a problem of port dimensions but of carry capacity of the destination. Albeit the port-city regions have different dimensions, such as e.g. Venice and Dubrovnik, they all have the same issues to solve.

Consequently, in the last years, a lot of Mediterranean ports have adopted strategies to increase the infrastructure capability in order to fulfil the demand which is increasingly rising thanks to the favourable characteristics of the Mediterranean countries, such as the historical, climatic, cultural, and economical features.

### Cruise networks characteristics

In front of an apparently unstoppable phenomenon such as the growing numbers of cruise passengers, it is imperative to find how to manage this volume of people and how to integrate it in the governance policies. Nevertheless, a literature gap persists on topics such as the carrying capacity, the integration of the cruise tourism and the management of the cruise flows in the destination, whereas a lot of studies have focused on cruises spending (Douglas, 2004), on the economic impact of cruise tourism (Waver, 2005) and on the supply of cruises in specific regions (Wilkinson, 2006).

It cannot be denied that, the literature review pointed out also a set of good practices developed in the past ten years in order to create a synergy between ports and cities. The selected projects, collected in Table 1 below, are often the results of European projects programmes where different stakeholders related to the cruise sector interact with the Local Authorities and Universities to rebalance the port-city-region relationship.

Table 1. Selected European Projects with topics related to the connection between cruise port and city.

TITLE	TYPE	DURATION	DESCRIPTION
SUDEST - Sustainable development of Sea Towns	URBACT	2005-2007	The project identifies a set of good practices for the sustainable development of sea cities. The project final product is an inquiry on maritime traffic, particularly on tourist flows, in the harbours of the interested towns. Moreover, the maritime traffic impact is analysed in terms of physical transformations and of interconnection with town's infrastructural system and on its relevant consequences in terms of economic development.

Waterfront Communities Project	Interreg IIB North Sea	2007-2010	The project works on the waterfront development in nine gateway cities around the North Sea. Based on sustainability and social inclusion, the project proposes to develop a learning network, to meet a strategic objective, to foster organisational innovation and to set standards for urban and social design quality.
CTUR - Cruise Traffic and Urban Regeneration	URBACT	2009-2011	The project refers to cruise tourism development as an opportunity for urban and architectural harbour heritage recovery and for economic and social opportunities for the port-cities, coherently within a genuine "urban regeneration" framework (physical environment, economic and social improvements).
European Adriatic Sea-Way	Adriatic IPA	2013-2016	The project aims to improve the accessibility and the mobility of passengers across the Adriatic area and its hinterland, through the development of new cross border, sustainable and integrated transport services and the improvement of physical infrastructures related to those new services.
Green Cruise Port - Sustainable Development of Cruise Port Locations	Interreg Baltic Sea Region	2016-2019	The project proposes a multidimensional strategic approach in order to accommodate the growth in cruise passengers and to allow a sustainable and qualitative future development of cruise shipping in port areas. It also aims at encouraging investments and procedures for an environmental-friendly cruise port infra- and superstructure.
Location - Low-carbon Transport in Cruise Destination Cities	Interreg Mediterranean	2018-2019	The project contributes to decongest cruise destinations traffic and to decrease greenhouse gases emissions in targeted territories through a larger use of innovative sustainable transport solutions, thus improving the overall quality of life of both citizens and passengers and increasing port attractiveness for cruise ships and cruise liners.
MOSES - Maritime and multimodal transport Services based on Ea Sea-way projects	Interreg Italy - Croatia	2018-2019	The general objective of the project is to enhance the accessibility and mobility of passengers in the Adriatic area through the development of new cross-border sustainable and integrated transport services and the improvement of related infrastructures. Moreover, the project also focuses on the activation of new services for the sustainable mobility of cruise passengers.
Civitas Portis	H2020	2016-2020	The project identifies the Port Cities as multidimensional laboratories where challenges connected with urban mobility are more complex due to the disconnection between city, port, and their shared hinterland. The dual system of gravity centre port-city is considered as an opportunity for new scope for planning, researching and implementing integrated mobility solutions in distinctively complex urban contexts.

## Smart Cruise Destination Concept

The governance for a Cruise Destination is an emerging research topic due to the increasing number of passengers entering in port-city destinations as well as to relevant consequences that this volume of flows provokes on the territory's resources. In addition, the evolution of ICTs is contributing to the shaping of different approaches leading to a new scenario for tourism destination governance. Together with these changes, the vision on tourism has shifted from an area intended for contemplation to a destination wherein a complex interaction between actors occurs (Jovicic, 2016). Complementing this idea, in line with these authors (Buhalis, 2000; Framke, 2002; Ritchie & Crouch, 2003), this paper considers that the governance of a Destination can achieve the benefits generated by tourism only by adopting a shared vision between urban policies and tourism management.



The key to tackling this change lies in the flow volume management and in the quality of the stakeholders' interaction. The creation of a network infrastructure in the city-port area could become a plus value for the destination itself. However, the use of network science techniques in the tourism system is relatively new due to its management complexity. A network is a complex and dynamic problem and it needs a collaborative environment between different stakeholders. Furthermore, the network design requires synchronization over long periods of urban planning and architecture, infrastructure and economics and involves the redesign of the conditions in which culture, society and environment evolve.

As a solution, the research introduces the concept of a Smart Cruise Destination. Such concept is based on the evolution of the well-known smart tourism destination concept with the aim of emphasizing the residents' wellbeing and tourist vacation enjoyment and satisfaction. The Smart Cruise Destination wants to be a model formed by a smart network, innovative space, accessible for all, established on a technology infrastructure. Its structure guarantees a sustainable development of the land and has benefits both for the whole system and each individual. Furthermore, the Smart Cruise Destination is inspired by the concept of collaborative city-making, where the new technologies are used to open up the urban institutions and infrastructures to the public interest (De Waal, et al., 2018). The Smart Cruise Destination concept is based on a city vision as a complex social, political, economic and cultural system as well as open networks for experimentations and innovation.

In the light of these assertions, this chapter's main objective is to introduce a new conceptualization of the cruise governance in the tourist destination. It is not meant as an explanatory model, but rather as a model to think with, and as such open to further interpretation and additions.

### *Governance network framework*

One of the most characterizing features of the cruise tourism is the difficult cultural interaction between hosts and guests due to the large quantities of tourists entering in a small port area for a short period of time (Klein, 2011; Fisheries, 2009). To fully exploit such short period of time, a structured network of information is needed. This would allow improving the well-being of the resident in the destination area, increasing satisfaction by the tourist experience, respecting the territory in a sustainable perspective, using the network to create new opportunities and increasing the economic value of the destination, not to mention the positive effects on the stakeholders' activities.

With the purpose of achieving the creation of a stakeholders' network, this paper in line with (Buhalis & Amaranggana, 2014), identifies the need for an innovative technological platform. The platform system could dynamically interconnect different stakeholders and allow the real-time information exchange. However, this is a very ambitious and long process, hence this paper sets out the framework that will enable the platform to be developed in the future.

The Cruise Destination is characterized by various components and their internal interrelations on local scale and external interrelations on global scale. The governance of all these interrelations is based on the theory of complexity. The complexity theory offers indeed a unique opportunity for a new scenario based on a more dynamic and systemic view. The Smart Cruise Destination adopts the network paradigm which considers useful the whole destination network rather than the individual stakeholder. The network is characterized by specific properties due to stakeholders' interactions.

Therefore, these properties appear useful in understanding destination governance and how it can be improved. The benefit of every singular stakeholder can be improved only by the effectiveness of their joint interaction through cooperative planning and organisational activities.

We have to take into account that the way the connections take place in a destination could generate several types of data (economic, social, demographic, etc.). The immaterial flows can be obtained by two main sources: data from and about the physical world (e.g. obtained from sensors, scientific observations, etc.) and data from and about human society (e.g. obtained from social networks, internet, platforms, etc.) (Jin., et al., 2015).

Moreover, it is noticed that the generation of data creates an "environment" in which this same data could be found (Femenia-Serra, et al., 2016). For instance, stakeholders contribute with their skills, insights, resources and in return by the system they can learn new skills, gain access to collective resources, gain social recognition, or receive financial rewards for their contributions (De Waal, et al., 2018).

Following the general evaluation of the studies in the tourism topic, this paper proposes four categories of stakeholders to create a sustainable way of governance in cruise cities, i.e. Civil Society, Institution, Natural Environment and Smart Cruise Destination (Figure 3).

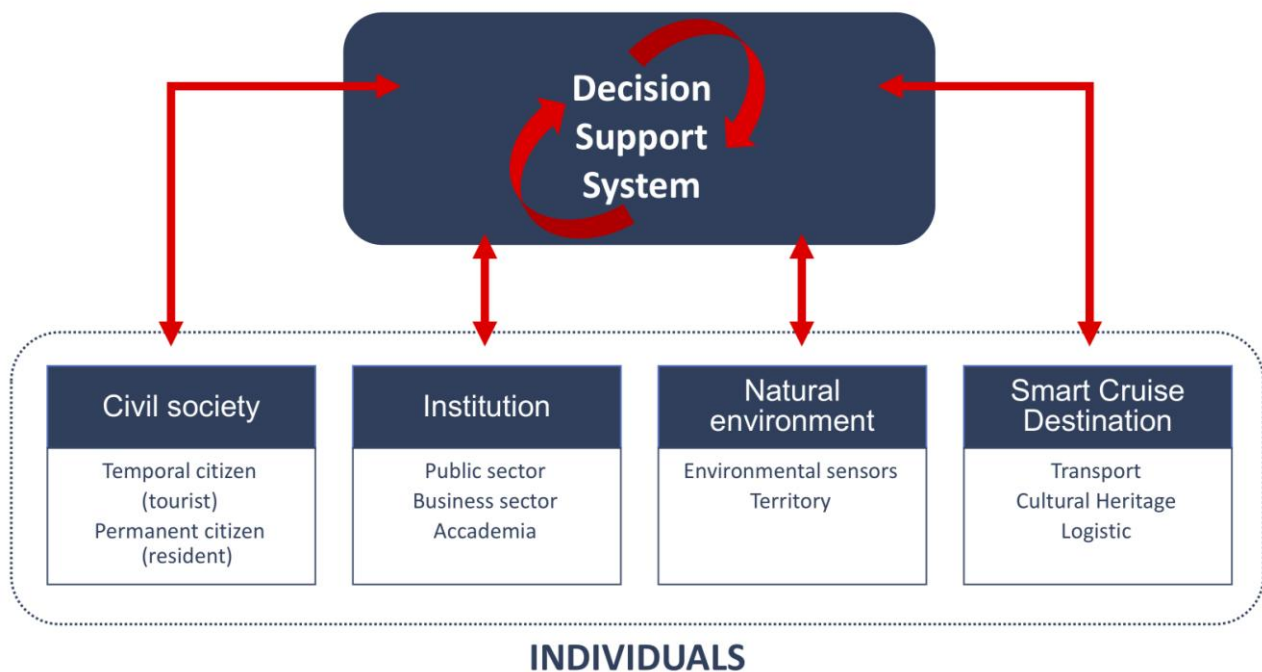


Figure 3. Smart Cruise Destination playing actors.

The framework taken into account give stakeholders the opportunity to base all decisions concerning policies, infrastructure development and managing system on sound and rational basis. Moreover, a Decision Support System (DSS) could be a fundamental tool for the combination of distributed knowledge and data between the stakeholders. Indeed, the DSS are designed to facilitate decision processes, support the decision process, and respond quickly to the changing needs of decision makers (Alter, 1980). There are different techniques and tools for decision making based on decision support system such as communications driven DSS, data driven DSS, document driven DSS, knowledge driven DSS and model driven DSS (Dous et al., 2018). The method of application in decision-making processes is described in Figure 3, whereas the DSS structure purposely is not described in this paper.

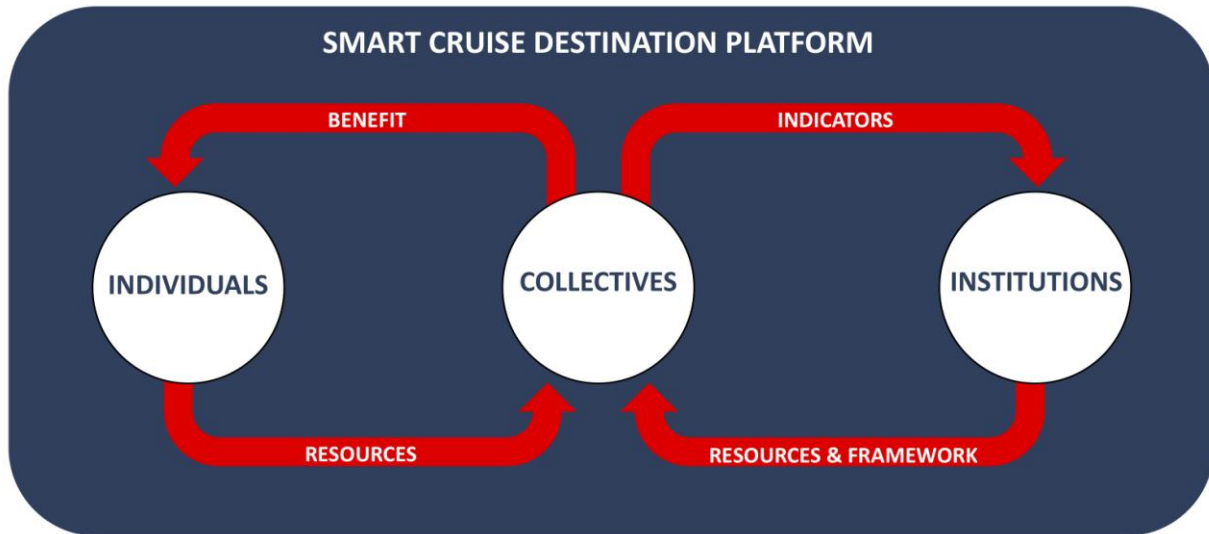


Figure 4. Smart Cruise Destination stakeholder network framework.

Figure 4 outlines the innovative thinking and the main contribution of the research to the scientific audience. The framework considers the categories of stakeholders as Individual actors which are consequently organized into Collectives and therefore in Institutions. Generally, the innovation is considered as a new product, service or production process applied in a market to create economic value. However, innovation can be taken into consideration not only for developing new products and technologies through ideas, but also about shifting existing assumptions and ways of thinking (Boes, et al., 2016). The author (Fuglsang, 2008) argues that innovation needs both diversity and collectivity at the same time. A good balance between the two components is fundamental for the innovation activities. Moreover, for the innovation process four organizational and social mechanism of diversity and collectivity are particularly important, i.e.: involvement, importance, positioning and sensemaking.

## Conclusion

The paper stresses the importance of a new scenario of governance in the port city regions, both due to the increasing number of people involved in the cruise market (tourists, crew members, organizations, institutions etc.) and the increasing environmental, social and economic impacts on port destinations. The governance innovation in a port city region, including the tourism sector, is a complex process. The adopted approach does not consider complexity as a problem, but directs instead attention to the soft category of intervention, in order to improve the well-being of the resident in the destination, increase satisfaction by the tourist experience, respect the territory in a sustainable perspective, use the network to create new opportunities and increase the economic value of the destination, not to mention the positive effects on the stakeholder activities.

This is however a very ambitious approach, as it addresses a highly complex issue such as the evolution of the port-city governance from a multi-disciplinary perspective. The network design requires synchronization over long periods of urban planning and architecture, infrastructure and economics and involves the redesign of the conditions in which culture, society and environment evolve. Thus, the proposed governance stakeholders' network is not meant as an explanatory model, but rather as a model to think with, and as such it is open to further interpretation and additions. Further, these are valuable insights that provide a basis for further research. First, it is worthwhile expanding the knowledge coverage of this study, as this would provide a better understanding of the new scenario for governance, as well as a better identification of exchange data which would allow better interoperability between different stakeholders. Then, by having

identified the need for a platform, an analysis of the tools for management is needed without overlooking the issues of data standardization, security and privacy.

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