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# Unlocking the potential of IC in Italian cultural ecosystems

IC in Italian  
cultural  
ecosystems

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## Abstract

**Purpose** – The purpose of this paper is to explore the consistence of an ecosystem framework within the cultural sector and investigate the potential role of intellectual capital (IC) in cultural ecosystems.

**Design/methodology/approach** – The paper presents the results of an empirical research carried out within a specific Italian area, the Po Delta. It was based on sound theoretical analysis and group interviews focusing on three main discussion topics.

**Findings** – The research validated the consistence of ecosystem frameworks in relation to the cultural sector and the key role played by IC in their design, creation and implementation. It also highlighted the idea that this perspective is part of a broader rethinking process of the cultural field.

**Research limitations/implications** – The research was carried out within a specific geographical area. The results, however, indicate the need for further research on the potential of IC in cultural ecosystems, in light of both a comparative and international perspective.

**Practical implications** – The research highlights the emergence of new frameworks and highlights the role of IC in new governance models in the cultural sector.

**Social implications** – The analysis underlines the need for new governance systems based on a bottom-up approach, multi-level and multi-stakeholder frameworks, and potentially bringing important societal changes.

**Originality/value** – The concept of IC ecosystems remains a relatively unexplored field within the cultural sector. This paper could make a valuable contribution to the debate on new governance systems in this field.

**Keywords** Cultural networks, Financial sustainability, Governance systems, IC cultural ecosystems

**Paper type** Research paper

## Introduction

The purpose of this paper is to investigate the potential of intellectual capital (IC) in Italian cultural ecosystems and to formulate hypotheses on how IC potential could be unlocked. Its primary focus is a specific area within northern Italy, the Po Delta region. The research is related to the increased interest not only in the creation of cultural networks but also with regard to the competitive advantage potentially brought about by a suitable IC and knowledge flow management inside those networks.

Over the last two decades, there has been increasing interest surrounding IC and research has evolved from an initial stage where scholars focused on raising awareness of why IC was relevant as a means to create, develop and manage competitive advantage (Petty and Guthrie, 2000) to a second stage where specific tools used for measuring, managing and reporting IC were designed and different classifications were created for the defining and grouping of different methods of evaluation (Guthrie *et al.*, 2007; Boedker *et al.*, 2008; Ricceri, 2008). A third stage of research on IC is now emerging and has recently been addressed by specific publications[1] (Chiucchi, 2008, 2013; Dumay, 2009, 2012; Giuliani, 2009; Guthrie *et al.*, 2012), characterised by studies that critically examine IC in specific contexts. Some researchers have highlighted the need for reporting and disclosing IC both to internal and external stakeholders, underlining the link with stakeholder theory and legitimacy theory (Guthrie *et al.*, 2006).



The rise of the knowledge economy and the increasing network dimension of society (Edvinsson, 2013) are having a relevant impact on IC research and on IC perspectives, creating a fourth stream of research often identified as a fourth stage. There is growing interest surrounding the possible ways to forge a bridge between brains inside the organisation, known as human capital, and brains outside the organisation, known as relational capital. This evolution of focus from previous concepts of IC, that is, converging on the dimensions of human capital, relational capital and structural capital, towards new dimensions of IC, especially “social capital” (where the social dimension of IC is also taken into account, incorporating citizenship and “global brain” power), testify to the quest for new IC logics and the growing interest surrounding the dynamic process of value creation, the interdependencies, and knowledge flows between different stakeholders.

Some recent studies have focused on IC ecosystems at a community, regional or national level (Bounfour and Edvinsson, 2005; Dumay and Garanina, 2013), adapting previous models for IC measurement from a micro-organisational level to the macro-national and regional levels or creating new ones (Edvinsson and Lin, 2009), proposing a “longitude perspective” that takes into account sustainability, ecology and meaning-making (Edvinsson, 2002). These studies advocate for a change of approach to understanding drivers of wealth creation, based on a balance of intellectual and financial measures in order to create a more holistic view of the national innovation capacity and societal and policy renewal. Ecosystems have been explored largely on a national level (among the many investigations, see Edvinsson and Lin, 2009; Käpylä *et al.*, 2012; Salenius and Lonnqvist, 2012), but there are studies that also focus on regional IC ecosystems (Edvinsson and Stenfelt, 1999; Bounfour and Edvinsson, 2005). Mainly attention has been paid to private and for-profit sectors and the not-for-profit sector has only recently attracted the attention of researchers, with the cultural sector still rather under-explored[2].

This paper presents the final stage of an extensive process of research investigating IC amongst cultural organisations. During the initial phase, the focus was on IC in cultural institutions and on their ways of managing IC by antennae (Donato, 2008). Later, the investigation was developed and adopted a broader perspective: the aim was to understand the links that cultural institutions had established both with other institutions of the same field and with institutions belonging to other fields (such as tourism companies, transport companies, local authorities, etc., see, Borin *et al.*, 2012). Finally the research is moving a further step forward: the aim is to explore the potential of local IC Ecosystems, focusing on the Italian context and, in particular, on the territory of the Po River Delta. This territory lies at the border between two regions (Emilia Romagna and Veneto) and comprises three Italian provinces (Ferrara, Rovigo and Ravenna). The area of the Po Delta has significant growth potential; it is particularly rich in cultural, naturalistic and tourist attractions (e.g. Ravenna, Ferrara and its Po Delta have been included on the UNESCO World Heritage Site list); it also features many cultural and creative industries. The nurturing of an ecosystem based on knowledge flow and sharing of IC amongst the different stakeholders seems essential not only to promote the development of the territory but also to bring positive societal renewal and innovation.

The research aims at answering the following questions:

- RQ1. How is the IC cultural ecosystem concept perceived by the different stakeholders in the Po Delta area?
- RQ2. Have any IC cultural ecosystems been created and implemented in the area? If not, what have been the difficulties preventing its creation? What are the

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difficulties that need to be overcome in order to implement future cultural ecosystems in this region?

RQ3. Is the potential of these IC cultural ecosystems deployed? And if not, how could it be unlocked?

The research method is qualitative, based on an empirical survey, carried out by using in-depth interviews with the most important stakeholders, brought together during meetings and focus groups.

This paper is divided into six sections. It begins with an introduction to the research aims, followed by an overview of the theoretical background of the investigation, focusing in particular on the rise of the concept of IC ecosystems. The following section provides an insight into state-of-the-art cultural ecosystems and cultural networks in Italy and considers the potential of culture as a “driver” for local economic and social development. The scope and method of the research is explained next, followed by the results. Finally, concluding remarks concerning the potential of IC for Italian cultural ecosystems and calls for further research within this field are outlined.

### Theoretical background

While some scholars argue that the interest in IC has deep historical roots, dating back to the seventeenth century (Pike *et al.*, 2005; Serenko and Bontis, 2013), there is a resounding consensus that modern research on IC started in the 1980s-1990s. Guthrie *et al.* (2012) describe the evolution of IC research as divided into three stages. The first stage meant to raise awareness of the importance of IC to creating and sustaining competitive advantage and to persuade the academic community that IC was “something significant that should be measured and reported” (Petty and Guthrie, 2000, p. 157). This first phase culminated in the ground-breaking search for a more holistic and balanced view of the IC possessed by the company Skandia (Edvinsson and Malone, 1997) and by the studies of Sveiby (1987, 1997), who laid the foundation of accounting practices for the measurement of intangible capital. As underlined by Dumay (2014), issues related to IC were also brought to light by the increased popularity of the balanced scorecard (Kaplan and Norton, 1992). However, this first phase was also characterised by what Dumay calls “grand theories” (Dumay, 2012); IC concepts were considered as grand theories, often having not been previously tested, however, their relevance for companies was accepted without being empirically proven.

The second phase of IC research tried to bridge this gap by shifting the focus of research onto measuring, managing and reporting IC as a means to prove its value and relevance for companies. During this stage different methods were developed to evaluate IC: by the mid-2000s “more than 50 methods were created which either helped to define IC as a whole or define different elements of IC and the list keeps growing” (Dumay and Garanina, 2013, p. 11); some authors claim that there are currently more than 100 methods (Pike and Roos, 2007). The impact of IC was investigated through financial performance statements and IC was measured as a value creation resource, having relevant impact on companies’ profitability and competitiveness. Attention to IC was also paid at governmental level. In the 2000s various initiatives aimed at measuring and reporting IC were promoted in different countries worldwide, among which were the Danish IC reporting guidelines, the InCas (Intellectual Capital Statement) project in Europe, and the Intellectual Capital Management Consultancy Programme in Hong Kong. In general, there was a top-down push for integrated reporting where IC is added to financial, environmental and social reporting (Adams and Simnett, 2011). The second stage of IC

research introduced the so-called dynamic theory of IC (Pike *et al.*, 2005; Marr *et al.*, 2004), that inserts IC into the process of value creation and value chains. Finally, among the scholars belonging to this second phase, Andriessen (2004) suggested that IC research should be also interpreted as a “design science” that could help with problem diagnosis, design and improvement of company strategies.

Dumay argues that this focus on measuring and reporting IC has led many scholars into an “evaluatory trap” resulting in them implementing and improving models and frameworks already in use and therefore preventing them from fully exploring and understanding the potential of IC in practice; he highlights the need to move forward, towards a third stage of IC research. Guthrie *et al.* (2012) argue that this third stage is already emerging, and is characterised by an increasing interest towards performative research vs previous ostensive research. In this phase, researchers aim at studying IC in practice, focusing on how IC is managed inside different organisations. The approach to research is bottom-up: evaluation and disclosure methods are considered as tools for managers and companies who are trying to better understand IC and use IC flows to improve value creation inside their companies. The third stage of IC research is therefore a strongly empirical one, focusing on IC within specific contexts (Chiucci, 2008; Giuliani, 2009).

Dumay and Garanina (2013) underline that the above mentioned third stage, that views IC theory as related to praxis and develops IC management through praxis, could also be associated to a fourth stage, that brings about a broader view on the path of IC, and that focuses on the IC of countries, cities and communities as opposed to specific firms. This approach shifts the focus of IC from studies related to a single company to the ways in which IC is used to navigate the knowledge created about ecosystems at national, regional or local level, switching attention from the managerial perspective of the studies on IC to a focus on ecosystems where knowledge could be created and developed on a wider scale (Edvinsson and Stenfelt, 1999; Edvinsson, 2002; Bounfour and Edvinsson, 2005; Gray, 2006; Edvinsson and Lin, 2008, 2009).

Recently, some researchers have underlined the necessity to focus on and disclose IC of nations, regions and communities, adopting a longitudinal perspective (Edvinsson, 2002); intangibles have been identified as key to understanding national wealth creation and as national economic drivers (Edvinsson and Stenfelt, 1999; Stähle, 2008; Stähle and Bounfour, 2008; Ling, 2012), or as innovation forces (Mercier-Laurent, 2011). The attention to the role of intangibles at a meso or macro level has been significant also in many practical experiments on the development of projects about smart regions, cities or areas[3], and practical models have been developed for IC measurement, for example, the Triple Helix model for regional innovation ecosystems (Etzkowitz, 1997), the National Intellectual Capital Index (Bontis, 2004) or the NIC – National Intellectual Capital (Edvinsson and Lin, 2009). Edvinsson underlines the link between important societal changes, such as the rise of the knowledge economy and the increasing network dimension of society, and the changing perspectives of IC. More specifically, he highlights the value of IC in networks, advocating the need to go beyond the traditional boundaries of relational capital and to study in-depth the knowledge flow between networks, with an interdisciplinary perspective. He argues that the traditional approach based on human, structural and relation capital should be reframed to understand higher forms of capital, such as, what he calls social capital, a holistic ecosystem perspective that takes into account not only the closed, firm-related IC but that incorporates IC within a broader ecosystem encompassing citizens and the increasing brain power of the community (Edvinsson and Lin, 2009, 2012). This leads

towards a growing interest in areas that were previously undervalued, such as not-for-profit and public sector organisations, where issues of legitimation concerning the use of public funds are arising (Malhotra, 2003; Kong, 2010; Dumay and Garanina, 2013). Moreover, understanding the IC of nations seems particularly compelling in troubled times, such as those of the current economic and financial crisis: indeed, examining the financial crisis from the viewpoint of intangible assets provides a perspective that is substantially different from traditional economic approaches; investigating IC can provide relevant insights on the internal and external factors that influenced the relative success or failure of national strategies in weathering the crisis (Edvinsson *et al.*, 2014). This is particularly evident for those fields, such as the cultural sector, that are considerably suffering under the threats of the crisis and that are undergoing the difficult process of rethinking and reshaping their traditional management and governance models.

### IC cultural ecosystems

IC is a key factor for the cultural sector: cultural organisations work in an environment based on IC (Chong, 2002), they value their IC as one of their main resources, and they recognise the importance of managing IC, though often by means of intangible and non-formal tools (Donato, 2008). As a matter of fact, over the last decade research into the cultural sector has paid increasing attention to cultural networks (Taylor, 1995; Jackson and Murphy, 2006; Camarinha-Matos and Macedo, 2010), creating interesting similarities amongst the new trends of IC research. Investigating the potential of IC in cultural networks, therefore, seems consistent with the new phases of IC research that focus on studies of ecosystems of cities, regions and communities.

In recent years, the concept of cultural networks of collaborations has been analysed from many different perspectives. Scheff and Kotler (1996) pointed out that the creation of networks could be an effective means to promote strategic collaboration between arts organisations; other studies focused on networks and collaborations that were established within the cultural sectors and among cultural institutions, both private and public (Bagdadli, 2003; Scrofani and Ruggeto, 2013; Guintcheva and Passebois-Ducros, 2012). The importance of cultural networks has been associated with tourism development (Jackson and Murphy, 2006); the potential creation of links between art organisations and companies belonging to other sectors has been highlighted as essential for the development of the territory (Burrows *et al.*, 2007). The potential of cultural networks in creating links with the territory in order to promote economic development has been analysed both in a territorial framework and in a trans-national framework; according to Littoz-Monet (2013), networks based on culture have been identified as “vectors for integration” by the European Union, and the European Commission has encouraged the cultural sector to work in a more trans-sectorial way, promoting dialogue between cultural networks and subjects belonging to other fields.

Recently, some scholars have highlighted the need to shift the current governance and management models of the cultural sector from a “micro” perspective to a “meso” perspective, more suited to dealing both with the traditional problems of the sector (e.g. self-referential attitude, reliance on public funding, etc.) and with the new challenges faced by the cultural field (Bonet and Donato, 2011). In particular, the potential creation of cultural networks as a means to successfully deal with the impact of the ongoing economic and financial crisis on the cultural sector has been underlined. In order to overcome the decrease in public funding and the related threats to cultural institutions, new governance and management models based on networking culture should be created at the “meso” level, involving also partnerships between public and private subjects.

This approach is particularly consistent with the peculiarities of the cultural sector in Italy, since it mirrors the characteristics of Italian cultural heritage. Indeed, culture could potentially play a pivotal role for stronger social and economic development of the country: Italy is home to the greatest number of UNESCO World Heritage Sites and has often been described as an “open-air museum” (Settis, 2005). Cultural heritage is spread amongst its territory and deeply intertwined within the landscape, cultural traditions and culture in a broader sense; the country is also home to many cultural and creative industries, often deeply linked with local cultural heritage. Creating cultural ecosystems on the basis of these peculiarities means not limiting the systems to a specific administrative region, province or municipality but implementing systems based on the real distribution of cultural heritage and on the characteristics of the territory: this could possibly unlock the potential of the different areas, while also successfully dealing both with some traditional drawbacks contained within the cultural sector and with the challenges brought about by the ongoing economic and financial crisis.

Indeed, in Italy the crisis has had a significant impact on the cultural sector. In the period 2008-2012 there was a significant decrease in public funding of culture, which has considerably threatened Italian cultural institutions that are mainly public funded; this decrease was matched also by a reduction of private sponsorships (average 30 per cent; Federculture, 2013) that further threatened the existence of many cultural organisations. These difficulties have underlined the need for new paradigms of the whole cultural sector within the country, that could transport the cultural sectors from governance and management models based mainly on the “micro” level to models that could combine a management of the core activities at a micro level, while implementing systems of cooperation at the “meso” level, involving multiple partners also within the private sector in this cooperative system (Donato, 2013).

In order to implement a cultural ecosystem, many factors should be taken into account, among which IC management not only at the micro level (i.e. inside the system of the organisation), but also at the meso level (i.e. inside the whole ecosystem), plays a key role. Indeed, IC in its main dimensions could constitute a relevant success factor: under the human capital perspective, it is fundamental that the ecosystem contains human resource personnel who are trained and prepared to work in an meso-system framework; at the structural capital level, the creation of specific know-how and knowledge flow mechanisms inside the ecosystems is crucial in developing its potential; the establishment of good relational capital not only amongst the subjects belonging to the ecosystem but also between the ecosystems and external actors is fundamental for cultivating the best operational framework for its implementation whilst generating important spillover effects in the local economy. Finally, in cultural ecosystems the social capital dimension, encompassing citizens’ involvement and implementing links with the local community, seems particularly relevant for consensus building and public value creation. The debate on the role of these different IC dimensions clearly emerged during the empirical research focusing on the potential IC cultural ecosystem of the Po Delta region.

### **Research method**

The aim of the research is to investigate the possibilities of unlocking the potential of IC in Italian cultural ecosystems. In order to pursue this research aim, the study was carried out from a meso perspective that is considered the ideal dimension for a potential cultural ecosystem to take place.

The first phase of the research aimed at selecting a research area that carried the typical characteristics of the Italian territory (cultural heritage deeply interrelated with

natural landscape, presence of many cultural and creative subjects) and where a potential cultural ecosystem at a meso level could be implemented. The area of the Po River Delta was identified as the most appropriate since it carries a number of characteristics that are typical of many Italian regions: it combines natural landscapes of great relevance with important cultural and tourism attractions, as well as a variety of cultural and creative industries. It is an area where museums, monuments, cultural heritage, landscape heritage, and cultural traditions, arts and crafts are deeply intertwined and embedded in the region's identity. The area is also characterised by the presence of multiple subjects, both public and private, that are profoundly linked to the cultural identity of the territory such as cultural and creative industries, mainly related to tourism, that all contribute towards the enhancement, valorisation and promotion of the natural and cultural heritage of the Po Delta.

The territory comprises three provinces: Rovigo, Ferrara and Ravenna, belonging to two different Regions (Veneto and Emilia Romagna). The area could be considered a potential cultural ecosystem, not only on the basis of its common cultural landscape and traditions (shaped by the proximity to the Po River), but also because of the above mentioned connection between the various cultural and creative actors operating in the territory. Furthermore the region has two sites, Ferrara and its Po Delta and Ravenna that have been included in the UNESCO World Heritage List. There are two formalised museum networks that have so far been developed only on a local level in the province of Rovigo and Ravenna; in the case of Ravenna, there are projects for setting up broader collaborations between the existing museum, archive and library networks. The pivotal role of culture as a driver for the creation of synergies for local development was also emphasised in the project presented by Ravenna as a candidate for the 2019 European Capital of Culture. The application underlined the role of cultural heritage as a starting point for improving cooperation in the cultural sector and promoting dialogue at European and international levels by means of cultural activities and events jointly organised by the different cultural and creative organisations of the territory. Though in the province of Ferrara no formalised museum network is in place, there are various activities (mainly promoted by Ferrara municipality) that are carried out as joint collaborations between the different actors of the area, creating a prototype of an informal cultural network. In fact, creating cultural ecosystems in the area could mean bridging the gap between public and private actors related to culture in a broader sense. Furthermore, private companies related to the field of tourism (in particular, those associated with enhancement of the natural landscape of the Po Delta) operate in the area, and various not-for-profit organisations are active in the promotion of cultural and creative activities.

On the basis of the above mentioned peculiarities of the Po Delta region, a qualitative research method was adopted to explore the potential of IC in this prospective cultural ecosystem. Like other qualitative research, the objective was to shed light on how the research topics were manifested within the area of the research (Denzin *et al.*, 2006). In line with common principles of qualitative research, variety and representativeness determined the choice when considering the research sample (Patton, 2002). The sample of interviewees was chosen based on two criteria:

- (1) variety, that is, viewpoints as diverse as possible on relevant subjects of the potential cultural ecosystem were included in the sample; and
- (2) representativeness, that is, the interviewees were chosen according to their position and role in the area, in order to include representatives of the key actors who could potentially promote and manage a local ecosystem based on culture.



Based on these criteria and on previous research on the management of IC in cultural organisations (Donato, 2008) and on the analysis of existing state-of-the-art cultural networks, three main categories of potential key players were included in the sample. First, politicians, namely municipality or provincial council members who were in charge of cultural policies within the province or province capital city. Second, cultural managers, mainly managers who were in charge of the management in important cultural institutions or, in case cultural networks were already in place, who were in charge of managing a cultural network. Finally, representatives of cultural stakeholders, that is, citizens who were also participating in local volunteer or non-profit associations that were promoting culture-related activities.

In-depth structured interviews were carried out, both on an individual and group basis. In some cases, small focus groups were organised to debate the research topics, in order to better study the degree of availability and openness to cooperation between the diverse subjects; the focus groups resulted in being particularly apt also in investigating whether dialogue and joint projects already existed between the prospective subjects of the cultural ecosystem. The interviews were structured as open discussions amongst the participants on main themes chosen on the basis of their relevance to the creation and management of IC in the prospective ecosystems. The interviewers attempted to stimulate debate among the interviewees by means of significant questions on the following three main subjects: first, what was the potential of the creation of a cultural ecosystem in the area of the Po Delta, and what the role of IC – interpreted in its general connotation – could be in the ecosystem; second, whether cultural ecosystems were in place in the area and, if not, what were the difficulties the interviewees had encountered and the ones that might arise in creating and implementing that type of ecosystem; finally, what were the steps and actions to take to overcome those difficulties and problems and set up the system.

The data emerging from the interviews were analysed following the three main discussion themes; the results are presented on the basis of the most relevant points that emerged during the discussions. For clarity purposes, the analysis of the outcomes of the second discussion topic was divided into two phases: the first, focusing on the presence of cultural ecosystems, presented the results with reference to the three provinces in the area; the second, regarding the difficulties found in real or prospective implementation of the ecosystem framework, presented the outcomes highlighting common points between the different stakeholders of the region, not divided into administrative geographical domains. A scheme with the summary of the results is displayed in the table in Appendix.

### **Results and discussion**

The empirical research investigated three main topics: the perceived potential of cultural ecosystems in the area of the Po Delta; the presence of cultural ecosystems in the area and the difficulties that prevented, or that could potentially prevent, the implementation of a cultural ecosystem; the actions to take to overcome those difficulties. As for the first discussion topic, the results allowed an overall analysis, highlighting common viewpoints on the perceived potentialities of cultural ecosystems in the area of the Po Delta. The majority of the interviewees were aware of the potential impact that the creation of a cultural ecosystem could have; only a cultural manager, while recognising the possibilities of such an ecosystem, expressed doubts surrounding the real chance of making it work, arguing that implementing such

a system would imply “a huge change of mind-set and compromises that many cultural managers are not ready to agree to”. The majority of the sample highlighted the positive spillover effects that a cultural ecosystem with a joint management of knowledge, human resources and relational capital could generate in the local economy. Participants were also aware of the possibility to create synergies otherwise difficult to implement between culture and other sectors (e.g. tourism, IT, etc.). Managing IC as an ecosystem instead of managing it as a single institution was considered key to innovation, better communication within society and as a way of improving citizens’ involvement and community engagement, not only increasing relational capital among the subjects of the ecosystem but also creating social capital in the whole area.

As for the second discussion topic, the analysis focused first on the presence of cultural ecosystems or cultural networks within the specific areas of investigation (i.e. the provinces of Rovigo, Ferrara and Ravenna); therefore the results were presented with reference to the three administrative domains. Then the analysis moved towards an overall examination, aimed at identifying common points related to the difficulties in the implementation of ecosystems, both those encountered in the past or those that might potentially arise in the future.

The investigation concerning the presence of cultural ecosystems highlighted the notion that there are no ecosystems *per se* in place but that in relation to the different provinces there are networks that may have the potential to move towards an ecosystem perspective. In general, the area is not homogeneous; there are both formal and informal cultural networks in place, some sectorial while others trans-sectorial, and there are different levels of openness within those networks towards collaboration with private and public subjects both within the same sector and belonging to other fields.

In the province of Rovigo, the research highlighted a formalised museum network already in place (Museum Network of the Polesine Area). The network, created in 2005 as an initiative of the Cultural Department of the Province of Rovigo, comprises the most important museums of the area (both public and private) and promotes initiatives mainly in the areas of outreach and communication. The system operates at a provincial level, and has specific governance and management bodies, with the province playing the pivotal role. However, the network is limited to the museum sector and does not include structured cooperation with other subjects in the territory: in particular, there are few links with similar networks, such as those of the province libraries, few collaborations with private subjects operating in areas such as tourism and hospitality, and limited links with important not-for-profit associations operating in the cultural field. Overall, notwithstanding the high level of formalisation of this cultural network the implementation of a real cultural ecosystem logic is far from being reached; the framework created by the museum network could, however, work as a starting point for extending the project to a broader group of subjects and local stakeholders.

In the province of Ferrara, policies trying to integrate various social, cultural and economic subjects have been strongly implemented. The municipality (in particular the Department of Culture and Tourism), is already fostering the creation of an ecosystem framework including actors belonging to different sectors, trying to promote dialogue and supporting joint initiatives. However, it is still an informal ecosystem based on ad hoc agreements between the municipality and various subjects belonging to diverse fields; these agreements, though often renewed for many years, are signed mainly on a temporary basis and have still not evolved into institutionalised cooperation.

The Department is currently playing a pivotal role in this informal cultural ecosystem, mainly at a city level, but there are various events that involve subjects outside the municipality, thus hinting at the possibility to extend the network of collaboration at a provincial level. Reforms currently being implemented at a national level would prospectively attribute to the municipality tasks traditionally belonging to the province, resulting in a more incisive role of the municipality as decision maker within the province. It therefore seems particularly likely that the Department would become the pivot of an ecosystem extended to the whole provincial area. A significant push towards the creation of an ecosystem framework has come from the inscription of Ferrara onto the UNESCO World Heritage Site List. The recognition was initially granted in 1995 but limited to the city's historical centre, to act as a representative example of a Renaissance city. Later it was also extended to the province of Ferrara, home to the Po River Delta, considered as an outstanding planned cultural landscape retaining its original form to a remarkable extent. As a result, the name of the inscribed property is "Ferrara, City of the Renaissance and its Po Delta", thus recognising the strong links between the natural landscape of the Po Delta, the city and the other cultural heritage sites in the territory, and encouraging the setting up of an ecosystem approach to the region. Moreover, UNESCO World Heritage Site management plans imply organising the site within an ecosystem framework and through an ecosystem approach, creating inclusive management of the territory that considers the presence of different stakeholders – public and private organisations as well as citizens and local communities – and encourages their active participation notwithstanding the traditional administrative boundaries.

In the province of Ravenna, the degree of development of an ecosystem mind-set is quite high: moreover, there is a clear perception of the potential of cultural ecosystems going beyond administrative boundaries and having as a starting point the integration between different subjects. Ravenna was inscribed too in the UNESCO World Heritage List in 1996, for both its early Christianity and its mosaic art monuments and for the evidence it holds of artistic and religious relationships and contacts during an important period of European cultural history (Roman and Byzantine periods). There are various cultural systems in place that are not limited to the administrative borders of the province of Ravenna but rather reflect the cultural belonging and the cultural identity perceived by its inhabitants. Ravenna has a museum network (Museum Network of the Province of Ravenna) and well-established and formalised archive and library networks that are organised not according to the province but to the Romagna area, that is the cultural territory with which the local community identifies; this accent on cultural identity rather than on administrative domains seems an essential characteristic of a cultural ecosystem. Moreover, the museum, library and archive networks already operating in the Ravenna area are trying to implement a project of integration involving these three systems called MAB[4]; this project, one of the first being implemented in Italy, puts Ravenna at the forefront in the implementation of cultural ecosystems. However, it must be noted that these ecosystems are limited to the museum, archive and library thematic areas and do not include other important fields, such as those of the non-traditional and more innovative visual and performing arts. In particular, as often happens within the performing arts sector (Bagdadli, 2003), there are significant informal theatre networks already in place, though the majority of collaborations are established on the basis of personal contacts and informal agreements creating an unstable and continuously changing system.

From the second part of this discussion topic – concerning both the difficulties encountered during current implementation of networks from an ecosystem perspective, and the potential troubles that might arise when creating a cultural ecosystem in its strict connotation – common perspectives emerged among the participants. The discussions highlighted many problems in the setting up of cultural ecosystems derived from implementing collaborations between subjects belonging to diverse administrative domains, such as different municipalities or provinces, or to different sectors (e.g. public and private), and therefore following diverse interests as well as bureaucratic procedures. Declining funding was another frequently mentioned problem; some interviewees argued that “creating an ecosystem would mean investing funds that could unlikely be available for cultural institutions”. Nevertheless, the scarcity of funds could be considered as another symptom of the need for sustainable governance models within the cultural sector; to some extent, the ecosystem perspective could provide a solution to the decrease in funding, since the sharing of resources (not only physical ones but also intangible ones, such as capabilities and skills) could decrease the expenses, as well as stimulate knowledge and competence sharing in order to increase revenues (e.g. the ecosystem could pool resources for implementing joint fundraising or crowdfunding campaigns, instead of developing a single campaign for each institution). Overall, the main perceived problems in the prospective cultural ecosystem were related to intangibles. The interviewees mentioned the lack of human resources suitable for the ecosystems both in the public and in the private sector; existing cultural professionals are trained to work from a micro-perspective (i.e. in a single cultural institution), and they are often not prepared to operate from an ecosystem perspective, where strategies and actions are taken within a meso framework. There is also a shortage of professional profiles functioning as connecting links amongst the different members of the ecosystem; their education is often too sectorial, whereas the combination of cultural and scientific skills with managerial ones are needed. The lack of an entrepreneurial mind-set and managerial tools in the public sector was quoted as a setback in the implementation of collaboration between private and public entities. There also seems to be a long way to go in improving the relational capital amongst the potential members of the ecosystem: there is still significant mistrust between public cultural organisations and private companies, with a high risk of undermining the relations between the participants in the ecosystem, generating misunderstanding and preventing effective dialogue and interaction. Private companies often blame public institutions for lacking efficiency, while cultural public organisations consider private companies as too interested in the economic aspects of cultural services, to the detriment of cultural value. This mistrust could be overcome by means of effective education concerning human resources involved in the ecosystem combined with continuous training and knowledge flow between the many actors involved.

The third discussion topic considered the possible steps and actions needed to overcome these difficulties and to unlock the potential of cultural ecosystems. The majority of interviewees highlighted five common issues.

The first issue relates to the delimitation of the potential ecosystem. The interviewees argued the need to define criteria for the establishment of the ecosystems based not on the administrative boundaries (i.e. of the province, municipality or region), but on common cultural identity and shared goals. “We need to identify common goals between the public and the private subjects belonging to the ecosystem and creating a sense of belonging to a shared cultural identity; current networks are mainly developed

on the basis of the administrative boundaries, usually in the provincial framework”, argued one of the interviewees. Many actors pointed out how underlining collective roots and highlighting common cultural characteristics could work as the ideal bases in the design of joint projects, enhancing the sense of belonging to a shared background and fostering the feeling of working towards collective objectives.

The second topic refers to the need to change the current mind-set. The participants called for new educational policies, designed on principles of peer-to-peer confrontation, mutual learning that would aim at enhancing capacity building at the meso level. Moreover, they underlined the need to act on a double perspective: a short-term one, targeting education of the current professionals working in the ecosystem, and a long-term one, aimed at overcoming the self-referential attitude that often characterises the cultural sector, and at increasing awareness of the benefits of networking in the framework of a structured ecosystem.

The third point regards the role of public funding. From the interviews it emerged that public funds are currently used merely as financing sources for operational activities. On the contrary, they should be interpreted as leverage for developing other revenue streams and as a stimulus for promoting economic initiatives. With reference to this point, many interviewees underlined the importance of enabling the development of public-private partnerships and the need to promote entrepreneurship in the cultural sector and in related fields, thus generating positive spillover effects for the local economy.

The fourth issue emphasises the role of digitisation and new technologies. The interviewees emphasised the importance of digitisation and of the use of new technologies, especially those that have arisen within the framework of the sharing economy. Social media, crowdsourcing, crowdfunding or donate-per-view tools could help to reinforce the ecosystem perspective, helping members to overcome the self-referential logics that are traditional in the cultural sector, creating initiatives addressed at, and involving, multiple subjects. However, digitalisation was mainly referred to as a means for external communication and outreach purposes and not as a managerial or governance tool; no mention of digital governance was made. This shows that the participants still underestimate the real potential of new technologies (e.g. those resources could be useful for managing IC in its different connotations inside the ecosystem). On-line resources could enable more effective internal communication between the different members of the ecosystem; digital tools could make the documents, artworks, initiatives, and cultural databases of the system available to all members as well as to the general audience; social media and digital mechanisms for public consultation could encourage citizens to actively engage in the management of cultural properties.

The last issue raises the need for stronger engagement from the community. The problem of a more incisive involvement of citizens, private subjects and other stakeholders in the governance of the ecosystem was frequently referred to during the discussions. The majority of the interviewees argued that the current governance systems should be rethought and new perspectives should be implemented, including an increased partnership between the public and private sectors and adopting a bottom-up approach based on participatory governance mechanisms involving citizens and communities; the interviewees also highlighted that this framework implies a profound change of mind-set in relation to the different subjects of the ecosystem. The impact of the crisis on the cultural sector and the subsequent reduction of public cultural budgets have undoubtedly influenced developments of this type,

however, a rethinking of cultural sector models was already going on and should be considered a symptom of this mentality change, due to the fact that previous governance systems and management models had proved unapt for dealing with the ongoing challenges. Moreover, evolved frameworks of governance – multi-level, multi-stakeholder, based on cooperation among the different social and economic subjects of a territory, on peer-to-peer processes centred on mutual learning, competence sharing and inter-institutional cohesion – have often been advocated at a European level and are progressively being adopted by European countries, Italy included.

The data emerging from the interviews are summarised in the table on Appendix, which classifies the most relevant points that emerged during the discussions according to their belonging to specific categories of IC (human capital, structural capital, relational capital, social capital). For each point the percentage of interviewees that mentioned it is shown.

In summary, the region of the Po Delta is an area where a cultural ecosystem could be implemented despite its lack of homogeneity in terms of existing cultural networks: indeed there are currently various cultural systems, both formalised and informal, that present different degrees of openness to collaboration with external subjects. The key players in the prospective cultural ecosystem of the Po Delta perceive the possibilities that such an ecosystem could create for local growth, but are also aware of the many changes required in the governance and in the mind-set of the many subjects of the area. From a practical point of view, the data emerging from the research provide useful guidelines on the actions to take for implementing cultural ecosystems in the Po Delta region: more specifically, they show that the IC conceptual framework could represent a solid basis for designing the ecosystem's structure. Unlocking the potential of IC seems therefore essential for unraveling the cultural ecosystems' potentialities and for creating important spillover effects for the territory, not only from an economic perspective but also in terms of rediscovering a common identity, promoting cultural values and creating social capital.

## Conclusions

The aim of this paper was to explore the consistency of ecosystem perspectives in the cultural sector and to analyse the potential of IC in Italian cultural ecosystems, by means of an empirical investigation on a particular region in Northern Italy, the Po River Delta. The theoretical framework highlighted how the recent developments of the research on IC are increasingly focused on broader perspectives exploring IC of nations, regions and communities. The theoretical background also highlighted the high importance of IC for the cultural field, a sector based mainly on intangibles and on the values created for the community. Furthermore, the analysis underlined the growing attention paid to cultural networks, especially at the meso level, often envisaged as a means to foster the competitive advantage of the territory, and overcome the broad challenges that the cultural sector is currently facing. Working on a meso level means implementing a logic of cooperation between different public institutions, private subjects and various stakeholders of the area that progressively evolves into the creation of cultural ecosystems. The current financial problems of the cultural sector seem to have increased the pace of the implementation of this approach and, as has emerged from the empirical analysis, the key actors of the cultural sector are increasingly feeling the need for ecosystem perspectives.

From the empirical analysis it emerged that the key players in the potential cultural ecosystem also have a high perception of the crucial role of IC as a basis for creating and implementing the above mentioned perspective; this mirrors the prominence of intangibles contained in cultural organisations and in the cultural sector in general and underlines the importance of investigating how IC could be unlocked in cultural ecosystems. As argued by the interviewees, some of the key drivers for the success of cultural ecosystems are indeed intangible assets, such as the skills and competence of its human resources, process knowledge and know-how developed inside the ecosystem, and most of all, the network of relations and the social and cultural values created for the local communities. However, there is a general awareness that the creation of this type of framework would presuppose a relevant change of the current mind-set and a higher level of cooperation amongst communities, cultural managers and politicians. Such a scenario could only be created against a long-term timeline and with commitments that would exceed political mandates. Structural changes like these imply long term development processes; there is indeed a high risk that short-term measures based on myopic perspectives would prove ineffective and lead to a misinterpretation of the potential of cultural ecosystems for promoting inclusive and sustainable growth.

It emerged that this long-term perspective should be applied to all the different aspects related to the ecosystem creation. First of all, implementing a cultural ecosystem would mean changing the current governance towards systems based on multiple-subject participation, participatory processes and peer-to-peer learning for competence building, following paths advocated also at European Union level. Second, the cultural ecosystem should be based not on traditional administrative borders but rather on the real cultural peculiarities of the area and therefore designed on the basis of the common cultural identity and background of its members, as well as the cultural characteristics of the territory. Third, implementing a cultural ecosystem framework would mean interpreting public funding not merely as financing tools for operational activities but rather as leverage for creating revenue streams through the development of public-private partnerships and entrepreneurial initiatives. Finally, cultural ecosystems should be based on a new understanding of the role of digitisation and new technologies, moving away from using them mainly for communication and outreach purposes and towards implementing them as management and governance tools of the ecosystem.

In summary, from a theoretical point of view the research contributes to reinforcing the current theories on the need to adopt new governance and management models for the cultural sector based on ecosystem perspectives, validating the consistency of cultural ecosystem frameworks and the crucial potential of IC in cultural ecosystems. The analysis also highlighted that this increasing interest into ecosystem frameworks should be inscribed in a broader rethinking process within governance systems of the cultural field that had already been undertaken but had taken place more rapidly due to the impact of the financial and economic crisis. This process could evolve into significant societal changes based on participatory approaches and multi-level, multi-stakeholder perspectives.

The research also supports the recent trends of research on IC. The understanding of the potential of ecosystem perspectives in the cultural sector shown by the interviewees further testifies to the recent shift towards holistic approaches to comprehending societal and economic changes at the basis of the fourth stage of IC research.

However, the restricted geographical area of the research represents a limitation: indeed the region has characteristics that are consistent with Italian territories and hence their prospective application to other contexts should be carefully investigated. Future research perspectives should therefore explore the subject of IC in cultural ecosystems within wider geographical areas, using comparative examination within an international framework.

## Notes

1. In 2013 the *Journal of Intellectual Capital* devoted a special issue to the topic “The third stage of IC research” (Volume 14, Issue 1).
2. Although the cultural sector is still a rather under-studied field, some interesting practical research has been carried out at different levels. For example, the research performed by Julien Anfruns on the interpretation of intangible values as cultural asset with reference to museum branding, or the laboratories on the potential of arts in terms of creation of social capital (with specific reference to city participation, the creation of forward-thinking visions and projects for city life) carried out by innovative experimental projects such as the BMW Guggenheim Lab.
3. Many projects have been developed on this subject, among which the EU-funded SMART Region projects in Germany ([www.smartregion.eu](http://www.smartregion.eu)), the many projects on smart development in the framework of the Med Maritime initiatives in Southern France ([www.medmaritimeprojects.eu](http://www.medmaritimeprojects.eu)), the experimental implementation of the Knowledge Triangle by Aalto University and Espoo city in Finland (Laitala and Miikki, 2013; Markkula, 2013). The role of intangibles in innovation have been frequently investigated also with reference to the case of the Silicon Valley ecosystem (Allee, 2000; Kenney, 2000).
4. “MAB – Musei Archivi Biblioteche” project, is a project promoted by the three main national association of Libraries (AIB – Associazione Italiana Biblioteche), ANAI (Associazione Nazionale Archivistica Italiana) and the Italian Section of ICOM International. Further information are available at the web site: [www.mab-italia.org/](http://www.mab-italia.org/)

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	% of the total number of interviewees	Human capital	Structural capital	Relational capital	Social capital
<i>Perceived potential of cultural ecosystem</i>					
Unleashing the creativity and problem solving orientation of human resources	44	X			
More effective knowledge management between the members (joint knowledge management in the area)	44	X			
More efficient knowledge flow mechanisms in the area (jointly managed by the members of the ecosystems)	67		X		
Development of better relations among the different subjects of the region	44			X	
More fluent communication between the subjects of the region	44			X	
Enhancing the innovation capacity of the region through networking	67				X
Reinforcing the orientation towards trans-sectorial perspectives and synergies	44				X
Improvement of citizens' participation	100				X
Positive spillover effects on local socio-economic development	100				X
<i>Difficulties in the implementation of cultural ecosystems</i>					
Lack of human resources apt to work at a meso level	89	X			
Lack of professional profiles working as facilitators between the subjects of the ecosystem	89	X			
Lack of managerial tools conceived for working at a meso level	44		X		
Technical and administrative problems related to knowledge flow between different institutions	89		X		
Mistrust between potential members of the ecosystem	100			X	
Incomplete presence of advanced communication infrastructures such as broadband, optical fiber, FTTH, etc., preventing effective communication	89			X	
Lack of diffused entrepreneurial mind-set	89				X
Diverse administrative domains perceived as obstacles to the development of networking and collaborations	89				X
Subjects are not used to identify common goals through community involvement and citizens' participation	33				X
<i>Actions to take for the implementation of cultural ecosystems</i>					
Development of plans for staff education in the long-term, innovative educational policies	56	X			

(continued)

**Table AI.**  
The creation of a cultural ecosystem in the Po Delta area: its perceived potential, its difficulties of implementation and the actions to take for setting it up, classified according to the main key intangible dimensions of human, structural, relational and social capital

	% of the total number of interviewees	Human capital	Structural capital	Relational capital	Social capital
Development of staff training programmes to increase orientation to networking (peer-to-peer confrontation, mutual learning)	67	X			
Implementation of an agenda for the use of digitisation and new technologies tools for communication	56		X		
Promoting an agenda for the use of sharing economy tools (social media, crowdfunding, crowdsourcing, etc.) to facilitate interaction with citizens	56			X	
Implementing action plans for initiatives aiming at enhancing mutual understanding and better relations among the members	89			X	
Incentives to stimulate the development of entrepreneurial mindset, rethinking the role of public funding (leverage for public-private partnerships and entrepreneurial initiatives)	67				X
Identifying common cultural identity and common goals as basis and criteria for the establishment of the network and of collaborations	100				X
Creating a governance structure based on participatory processes for all the stakeholders of the territory	67				X
Implementing periodic focus groups and consultation plans for enhancing networking approaches to increase the impact on the local economy	100				X

Table AI.

**Note:** X, indicates to which category each answer belongs

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