

Unlocking the potential of IC in Italian cultural ecosystems

1. Introduction

The purpose of this paper is to investigate the potential of 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 intellectual capital, and IC-research has evolved from an initial stage where scholars focused on raising awareness of why intellectual capital 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-intellectual capital 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 intellectual capital is now emerging and has recently been addressed by specific publications¹ (Chiucchi, 2008; Dumay, 2009; Giuliani, 2009; Guthrie *et al.*, 2012; Dumay, 2012, Chiucchi, 2013) which is characterized by studies which 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 ~~the a~~ fourth stage of ~~ICR~~. There is growing interest surrounding the possible ways to forge a bridge between brains inside the organization, known as human capital, and brains outside the organization, known as relational capital. This evolution of focus from previous concepts of IC - i.e. 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 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 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-organizational 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), developing models such as the NIC - National Intellectual Capital one (Edvinsson, 2011). These studies, advocate for a change of approach to understanding drivers of wealth creation, based on a balance of intellectual and financial and on their measures in order to create a more holistic view of -capacity of bringing the national innovation capacity and societal and policy renewal. However, IC ecosystems could also be created on a smaller scale, within a community or between the different stakeholders of a territory or region.

Ecosystems have been explored largely on a national level (among the many investigations, see Edvinsson and Lin, 2009; Kapyla *et al.*, 2012; Saloni and Lonnqvist, 2012), but there are studies which also focus on regional IC ecosystems (Edvinsson and Stenfelt, 1999; Bounfour and

¹ In 2013 the Journal of Intellectual Capital has devoted a special issue to the topic "The third stage of IC research" (Volume 14, Issue 1).

1 Edvinsson, 2005). Main attention has been paid to private and for-profit sectors; the not-for-profit
2 sector has only recently attracted the attention of the researchers, and the cultural sector is still
3 rather under-explored².

4 This paper presents the final stage of an extensive process of research investigating IC amongst
5 cultural organizations. During the initial phase, the focus was on IC in cultural institutions and on
6 their ways of managing IC by antennae (Donato, 2008). Later, the investigation was developed and
7 adopted a broader perspective: the aim was to understand the links that cultural institutions had
8 established both with other institutions of the same field and with institutions belonging to other
9 fields (such as tourism companies, transport companies, local authorities, etc...) (Borin *et al.*,
10 2012). Finally the research is moving a further step forward: the aim is to explore the potential of
11 local IC Ecosystems, focusing on the Italian context and in particular on the territory of the Po River
12 Delta. This territory is an area surrounding the Delta of the River Po, Italy's most important river; it
13 lies at the border between two regions (Emilia Romagna and Veneto) and comprises three Italian
14 provinces (Ferrara, Rovigo and Ravenna). The area of the Po Delta has significant growth
15 potential: it is particularly rich in cultural, naturalistic and tourist attractions (e.g. Ravenna, Ferrara
16 and its Po Delta have been included in the UNESCO World Heritage Site list) it also features many
17 cultural and creative industries. The nurturing of an ecosystem based on knowledge flow and
18 sharing of intellectual capital amongst the different stakeholders seems essential not only to
19 promote the development of the territory but also to bring positive societal renewal and innovation.

20 The research aims at answering the following questions:

- 21 1. How is the IC Cultural Ecosystem concept perceived by the different stakeholders in the Po
22 Delta area?
- 23 2. Have any IC Cultural Ecosystems been created and implemented in the area? If not, what
24 have been the difficulties preventing its creation? What are the difficulties that need to be
25 overcome in order to implement future cultural ecosystems in this region?
- 26 3. Is the potential of these IC Cultural Ecosystems deployed? And if not, how could it be
27 unlocked?

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

31 This paper is divided into six sections. It begins with an introduction to the research aims (first
32 section), followed by the second section which provides an overview of the theoretical background
33 of the investigation, focusing in particular on the rise of the concept of IC ecosystems. The
34 following section provides an insight into state-of-the-art cultural ecosystems and cultural networks
35 in Italy and considers the potential of culture as a 'driver' for local economic and social
36 development. The scope and method of the research is explained in the fourth section while the
37 results are discussed and summarized in the fifth section. The sixth section draws some
38 concluding remarks concerning the potential of IC for Italian cultural ecosystems and calls for
39 further research within this field.

40 41 **2. Theoretical background**

42 While some scholars argue that ~~IC-research~~the interest in intellectual capital has deep historical
43 roots, dating back to the seventeenth century (Pike *et al.*, 2007; Serenko and Bontis, 2013), there

²Although the cultural sector is still a rather under-studied field, some interesting practical researches have been carried out at different levels, e.g. 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.

1 is a resounding consensus that modern ~~IC~~-research on IC started in the 1980s – 1990s. Guthrie *et*
2 *al.* (2012) describe the evolution of IC research as divided into three stages. The first stage ~~of IC~~
3 ~~research~~ meant to raise awareness on the importance of intellectual capital to create and sustain
4 competitive advantage and to persuade the academic community that IC was “something
5 significant that should be measured and reported” (Petty and Guthrie, 2000, p.157). This first
6 phase culminated in the ground-breaking search for a more holistic and balanced view of the IC
7 possessed by the company Skandia (Edvinsson and Malone, 1997) and by the studies of Sveiby
8 (1987; 1997), who laid the foundation of accounting practices for the measurement of intangible
9 capital. As underlined by Dumay (2014) issues related to IC were also brought to light by the
10 increased popularity of the balanced scorecard (Kaplan and Norton, 1992). However, this first
11 phase was also characterized by what Dumay calls “grand theories” (Dumay, 2012); IC concepts
12 were considered as grand theories, often having not been previously tested however their
13 relevance for companies was accepted without being empirically proven.

14 The second phase of IC research tried to bridge this gap by shifting the focus of research onto
15 measuring, managing and reporting IC as a means to prove its value and relevance for companies.
16 During this stage different methods were developed to evaluate IC: by the mid-2000s “more than
17 50 methods were created which either helped to define IC as a whole or define different elements
18 of IC and the list keeps growing” (Dumay and Garanina, 2013, p. 11); some authors claim that the
19 methods are currently more than 100 (Pike and Roos, 2007). The impact of IC was investigated
20 through financial performance statements and IC was measured as a value creation resource,
21 having relevant impact on companies’ profitability and competitiveness. Attention to IC was also
22 paid at governmental level. In the 2000s various initiatives aimed at measuring and reporting IC
23 were promoted in different countries worldwide, among which the Danish IC reporting guidelines,
24 the InCas (Intellectual Capital Statement) project in Europe, and the Intellectual Capital
25 Management Consultancy Programme in Hong Kong. In general, there was a top-down push for
26 integrated reporting where IC is added to financial, environmental and social reporting (Adam and
27 Simnett, 2011). The second stage of ~~ICR intellectual capital introduced~~research introduced the so-
28 called dynamic theory of IC (Roos *et al.*, 2005; Marr *et al.*, 2004), that insert IC is the process of
29 value creation and value chains. Finally, among the scholars belonging to this second phase,
30 Andriessen (2004) suggests that IC research should be also interpreted as a “design science” that
31 could help with problem diagnosis, design and improvement of company strategies.

32 Dumay argues that this focus on measuring and reporting IC has led many scholars into an
33 “evaluatory trap” resulting in them implementing and improving models and frameworks already in
34 use, therefore preventing them from fully exploring and understanding the potential of IC in
35 practice; he highlights the need to move forward, towards a third stage of IC research. Guthrie *et*
36 *al.* (2012) argue that this third stage is already emerging, and is characterized by an increasing
37 interest towards performative research versus previous ostensive research. In this phase, ~~ICR~~
38 researchers aims at studying IC in practice, focusing on how IC is managed inside different
39 organizations. The approach to research is bottom-up: evaluation and disclosure methods are
40 considered as tools for managers and companies who are trying to better understand IC and use
41 IC flows to improve value creation inside their companies. The third stage of IC research is
42 therefore a strongly empirical one, focusing on IC within specific contexts (Chiucchi, 2008; Giuliani,
43 2009).

44 Dumay and Garanina (2013) underline that the above mentioned third stage, that views IC theory
45 as related to praxis and develops IC management through praxis, could also be associated to a
46 fourth stage, that brings about a broader view on the path of IC, and that focuses on the IC of
47 countries, cities and communities as opposed to specific firms. This approach shifts the focus of IC
48 from studies related to a single company to the ways in which IC is used to navigate the knowledge
49 created about ecosystems at national, regional or local level (~~Bounfour and Edvinsson, 2005; Gray,~~
50 ~~2006; Lin and Edvinsson, 2009~~), switching ~~.-This switches direct~~ attention from the managerial
51 perspective of the studies on IC to a focus on ecosystems where knowledge could be created and
52 developed on a wider scale (Edvinsson and Stenfelt, 1999; Edvinsson, 2002; Bounfour and
53 Edvinsson, 2005; Gray, 2006; Edvinsson, 2008; Edvinsson and Lin, 2009~~Edvinsson, 2008~~).

1 ~~Recently, some researchers have underlined The need the necessity~~ to focus on and disclose IC
2 ~~of nations, regions and communities, adopting a longitude perspective (Edvinsson, 2002);~~
3 ~~intangibles have been identified as key to understand national wealth creation and as national~~
4 ~~economic drivers (Edvinsson and Stenfelt, 1999; Stähle, 2008; Stähle and Bounfour, 2008; Ling,~~
5 ~~2012), or as innovation forces (Mercier-Laurent, 2011). The attention to the role of intangibles at a~~
6 ~~meso or macro level has been significant also in many practical experiments on the development~~
7 ~~of projects about smart regions, cities or areas³, and practical models have been developed for IC~~
8 ~~measurement, e.g. the Triple Helix model for regional innovation ecosystems (Etzkowitz, 1997),~~
9 ~~the National Intellectual Capital Index (Bontis, 2004) or the NIC – National Intellectual Capital~~
10 ~~(Edvinsson and Lin, 2009) seems particularly impellent as a response to the current economic and~~
11 ~~financial crisis, – Edvinsson underlines the link between important societal changes, such as the~~
12 ~~rise of the knowledge economy and the increasing network dimension of – and society, and the~~
13 ~~changing perspectives of IC. especially in relation to the public sector, where issues of legitimation~~
14 ~~concerning the use of public funds are arising.~~ More specifically, he highlights the value of IC in
15 networks, advocating the need to go beyond the traditional boundaries of relational capital and to
16 study in-depth the knowledge flow between networks, with an interdisciplinary perspective. He
17 argues that the traditional approach based on human, structural and relation capital should be
18 reframed to understand higher forms of capital, such as, what he calls social capital, a holistic
19 ecosystem perspective that takes into account not only the closed, firm-related IC but that
20 incorporates IC within a broader ecosystem encompassing citizens and the increasing brain power
21 of the community (Edvinsson and Lin, 2009; 2012). This leads towards a growing interest in areas
22 that were previously undervalued, such as not-for-profit and public sector organizations, where
23 issues of legitimation concerning the use of public funds are arising (Malhotra, 2003; Kong, 2010;
24 Dumay and Garanina, 2013). Moreover, understanding the IC of nations seems particularly
25 impellent in troubled times, such as those of the current economic and financial crisis: indeed,
26 examining the financial crisis from the viewpoint of intangible assets provides a perspective that is
27 substantially different from traditional economic approaches; investigating IC can provide relevant
28 insights on the internal and external factors that influenced the relative success or failure of
29 national strategies in weathering the crisis (Edvinsson et al., 2014). This is particularly evident for
30 those fields, such as the cultural sector, that are considerably suffering under the threats of the
31 crisis and that are undergoing the difficult process of rethinking and reshaping their traditional
32 management and governance models.

34 3. IC cultural ecosystems

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

44 In recent years, the concept of cultural networks of collaborations has been analyzed from many
45 different perspectives. Scheff and Kotler (1996) pointed out that the creation of networks could be
46 an effective means to promote strategic collaboration between arts organizations; other studies

³ Many projects have been developed on this subject, among which the EU-funded SMART Region projects in Germany (www.smartregion.eu), the many projects on smart development in the framework of the Med Maritime initiatives in Southern France (http://www.medmaritimeprojects.eu), the experimental implementation of the Knowledge Triangle by Aalto University and Espoo city in Finland (Laitala and Miikki, 2013; Makkula, 2013). The role of intangibles in innovation have been frequently investigated also with reference to the case of the Silicon Valley ecosystem (Allee, 2002; Kenney, 2002)

1 focused on networks and collaborations that were established within the cultural sectors and
2 among cultural institutions, both private and public (Bagdadli, 2003; Scrofani and Ruggeto, 2012;
3 Guintcheva and Passebois-Ducros, 2012). The importance of cultural networks has been
4 associated with tourism development (Jackson and Murphy, 2006); the potential creation of links
5 between art organizations and companies belonging to other sectors has been highlighted as
6 essential for the development of the territory (Burrows et al., 2007). The potential of cultural
7 networks in creating links with the territory in order to promote economic development has been
8 analyzed both in a territorial framework and in a trans-national framework; according to Littoz-
9 Monet (2013), networks based on culture have been identified as “vectors for integration” by the
10 European Union, and the European Commission has encouraged the cultural sector to work in a
11 more trans-sectorial way, promoting dialogue between cultural networks and subjects belonging to
12 other fields.

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

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

36 Indeed, in Italy the crisis has had a significant impact on the cultural sector. In the period 2008-
37 2012 there was a significant decrease of public funding in culture, that has considerably threatened
38 Italian cultural institutions, that are mainly public funded; this decrease was matched also by a
39 reduction of private sponsorships (average -30%; Federculture2013) that further menaced the life
40 of many cultural organizations. These difficulties have underlined the need for new paradigms of
41 the whole cultural sector within the country, that could transport the cultural sectors from
42 governance and management models based mainly on the “micro” level to models that could
43 combine a management of the core activities at a micro level, while implementing systems of
44 cooperation at the “meso” level, involving multiple partners also within the private sector in this
45 cooperative system (Donato, 2013).

46 In order to implement a cultural ecosystem, many factors should be taken into account, among
47 which IC management not only at the *micro* level, i.e. inside the system of the organization, but
48 also at the *meso* level, i.e. inside the whole ecosystem, plays a key role. Indeed, IC in its main
49 dimensions could constitute a relevant success factor: under the human capital perspective, it is
50 fundamental that the ecosystem contains human resource personnel who are trained and prepared
51 to work in an *meso*-system framework; at the structural capital level, the creation of specific know-
52 how and knowledge flow mechanisms inside the ecosystems is crucial in developing its potential;

1 the establishment of good relational capital not only amongst the subjects belonging to the
2 ecosystem but also between the ecosystems and external actors is fundamental for cultivating the
3 best operational framework for its implementation whilst generating important spillover effects in
4 the local economy. Finally, in cultural ecosystems the social capital dimension, encompassing
5 citizens' involvement and implementing links with the local community, seems particularly relevant
6 for consensus building and public value creation. The debate on the role of these different IC
7 dimensions clearly emerged during the empirical research focusing on the potential IC cultural
8 ecosystem of the Po Delta region.

9

10 4. Research method

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

14 The first phase of the research aimed at selecting a research area that carried the typical
15 characteristics of the Italian territory (cultural heritage deeply interrelated with natural landscape,
16 presence of many cultural and creative subjects) and where a potential cultural ecosystem at a
17 *meso* level could be implemented. The area of the Po River Delta was identified as the most
18 appropriate since it carries a number of characteristics that are typical of many Italian regions: it
19 combines natural landscapes of great relevance with important cultural and tourism attractions, as
20 well as a variety of cultural and creative industries. It is an area where museums, monuments,
21 cultural heritage, landscape heritage, and cultural traditions, arts and crafts are deeply intertwined
22 and embedded in the region's identity. The area is also characterized by the presence of multiple
23 subjects, both public and private, that are profoundly linked to the cultural identity of the territory
24 such as cultural and creative industries, mainly related to tourism, that all contribute towards the
25 enhancement, valorization and promotion of the natural and cultural heritage of the Po Delta.

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

48 On the basis of the above mentioned peculiarities of the Po Delta region, a qualitative research
49 method was adopted to explore the potential of IC in this prospective cultural ecosystem. Like
50 other qualitative research, the objective was to shed light on how the research topics were

1 manifested within the area of the research (Denzin and Lincoln, 2006). In line with common
2 principles of qualitative research, variety and representativeness determined the choice when
3 considering the research sample (Patton, 2002). The sample of interviewees was chosen based on
4 two criteria:

- 5 • As for the criteria of variety, viewpoints as diverse as possible on relevant subjects of the
6 potential cultural ecosystem were included in the sample;
- 7 • As for representativeness, the interviewees were chosen according to their position and
8 role in the area, in order to include representatives of the key actors who could potentially
9 promote and manage a local ecosystem based on culture.

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

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

33 The data emerging from the interviews were analyzed following the three main discussion themes;
34 the results are presented on the basis of the most relevant points that emerged during the
35 discussions. For clarity purposes, the analysis of the outcomes of the second discussion topic was
36 divided into two phases: the first, focusing on the presence of cultural ecosystems, presented the
37 results with reference to the three provinces in the area; the second, regarding the difficulties found
38 in real or prospective implementation of the ecosystem framework, presented the outcomes
39 highlighting common points between the different stakeholders of the region, not divided into
40 administrative geographical domains. [A scheme with the summary of the results is displayed in the
41 table in Appendix 1.](#)

42
43 **5. Results and discussion**

44 The empirical research investigated three main topics: the perceived potential of cultural
45 ecosystems in the area of the Po Delta; the presence of cultural ecosystems in the area and the
46 difficulties that prevented or that could potentially prevent the implementation of a cultural
47 ecosystem; the actions to take to overcome those difficulties.

48 As for the first discussion topic, the results allowed an overall analysis, highlighting common
49 viewpoints on the perceived potentialities of cultural ecosystems in the area of the Po Delta. The

1 majority of the interviewees were aware of the potential impact that the creation of a cultural
2 ecosystem could have; only a cultural manager, while recognizing the possibilities of such an
3 ecosystem, expressed doubts surrounding the real chance of making it work, arguing that -due to
4 the huge change of mind-set that implementing such a system would imply "a huge change of
5 mind-set and compromises that many cultural managers are not ready to agree to". The majority of
6 the sample highlighted the positive spillover effects that a cultural ecosystem with a joint
7 management of knowledge, human resources and relational capital could generate in the local
8 economy. Participants were also aware of the possibility to create synergies otherwise difficult to
9 implement between culture and other sectors (e.g. tourism, IT, etc...). Managing IC as an
10 ecosystem instead of managing it as a single institution was considered key to innovation, better
11 communication within society and as a way of improving citizens' involvement and community
12 engagement, not only increasing relational capital among the subjects of the ecosystem but also
13 creating social capital in the whole area.

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

20 The investigation concerning the presence of cultural ecosystems highlighted the notion that there
21 are no ecosystems with a strict connotation in place but that in relation to the different provinces
22 there are networks that may have the potential to move towards an ecosystem perspective. In
23 general, the area is quite inhomogeneous; there are both formal and informal cultural networks in
24 place, some sectorial while others trans-sectorial, and there are different levels of openness within
25 those networks towards collaboration with private and public subjects both within the same sector
26 and belonging to other fields.

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

41 In the province of Ferrara, policies trying to integrate various social, cultural and economic subjects
42 have been strongly implemented. The municipality (in particular the Department of Culture and
43 Tourism), is already fostering the creation of an ecosystem framework including actors belonging
44 to different sectors, trying to promote dialogue and supporting joint initiatives. However, it is still an
45 informal ecosystem based on ad hoc agreements between the municipality and various subjects
46 belonging to diverse fields; these agreements, though often renewed for many years, are signed
47 mainly on a temporary basis and has still not evolved into institutionalized cooperation. The
48 Department is currently playing a pivotal role in this informal cultural ecosystem, mainly at a city
49 level, but there are various events that involve subjects outside the municipality, thus hinting at the
50 possibility to extend the network of collaboration at a provincial level. Reforms currently being
51 implemented at national level would prospectively attribute to the municipality tasks traditionally
52 belonging to the province, resulting in a more incisive role of the municipality as decision maker

1 within the province. It therefore seems particularly likely that the Department would become the
2 pivot of an ecosystem extended to the whole provincial area. A significant push towards the
3 creation of an ecosystem framework has come from the inscription of Ferrara onto the UNESCO
4 World Heritage Site List. The recognition was initially granted in 1995 but limited to the city's
5 historical center, to act as a representative example of a Renaissance city. Later it was also
6 extended to the province of Ferrara, home to the Po river Delta, considered as an outstanding
7 planned cultural landscape retaining its original form to a remarkable extent. As a result, the name
8 of the inscribed property is "Ferrara, City of the Renaissance and its Po Delta", thus recognizing
9 the strong links between the natural landscape of the Po Delta, the city and the other cultural
10 heritage sites in the territory, and encouraging the setup of an ecosystem approach to the region.
11 Moreover, UNESCO World Heritage Site management plans imply organizing the site within an
12 ecosystem framework and through an ecosystem approach, creating inclusive management of the
13 territory that considers the presence of different stakeholders - public and private organizations as
14 well as citizens and local communities - and encourages their active participation notwithstanding
15 the traditional administrative boundaries.

16 In the province of Ravenna, the degree of development of an ecosystem mind-set is quite high:
17 moreover, there is a clear perception of the potential of cultural ecosystems going beyond
18 administrative boundaries and having as a starting point the integration between different subjects.
19 Ravenna was inscribed too in the UNESCO World Heritage List in 1996, for both its early
20 Christianity and its mosaic art monuments and for the evidence it holds on artistic and religious
21 relationships and contacts during an important period of European cultural history (Roman and
22 Byzantine period). There are various cultural systems in place, that are not limited to the
23 administrative borders of the province of Ravenna but rather reflect the cultural belonging and the
24 cultural identity perceived by its inhabitants. Ravenna has a museum network (Museum Network of
25 the Province of Ravenna) and well-established and formalized archive and library networks that
26 are organized not according to the province but to the Romagna area, that is the cultural territory
27 with which the local community identifies; this accent on cultural identity rather than on
28 administrative domains seems an essential characteristic of a cultural ecosystem. Moreover, the
29 museum, library and archive networks already operating in the Ravenna area are trying to
30 implement a project of integration involving these three systems called MAB⁴; this project, one of
31 the first being implemented in Italy, puts Ravenna at the forefront in the implementation of cultural
32 ecosystems. However, it must be noted that these ecosystems are limited to the museum, archive
33 and library thematic areas and do not include other important fields such as those of the non-
34 traditional and more innovative visual and performing arts. In particular, as often happening within
35 the performing arts sector (Bagdadli, 2003), there are significant informal theatre networks already
36 in place, though the majority of collaborations are established on the basis of personal contacts
37 and informal agreements creating an unstable and continuously changing system.

38 From the second part of this discussion topic - concerning both the difficulties encountered during
39 current implementation of networks from an ecosystem perspective, and the potential troubles that
40 might arise when creating a cultural ecosystem in its strict connotation - common perspectives
41 emerged among the participants. The discussions highlighted many problems in the setting up of
42 cultural ecosystems derived from implementing collaborations between subjects belonging to
43 diverse administrative domains, such as different municipalities or provinces, or to different
44 sectors, e.g. public and private, and therefore following diverse interests as well as bureaucratic
45 procedures. The decrease of funding was another frequently mentioned problem; some
46 interviewees argued that "creating an ecosystem would mean investing funds that could unlikely be
47 available for cultural institutions". Nevertheless, the scarcity of funds could be considered as
48 another symptom of the need for sustainable governance models within the cultural sector; to
49 some extent, the ecosystem perspective could provide a solution to the decrease in funding, since
50 the sharing of resources (not only physical ones but also intangible ones, such as capabilities and

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 website: <http://www.mab-italia.org/>

1 skills) could decrease the expenses, as well as stimulate knowledge and competence sharing in
2 order to increase revenues (e.g. the ecosystem could pool resources for implementing joint
3 fundraising or crowdfunding campaigns, instead of developing a single campaign for each
4 institution). Overall, the main perceived problems in the prospective cultural ecosystem were
5 related to intangibles. The interviewees mentioned the lack of human resources apt for the
6 ecosystems both in the public and in the private sector; existing cultural professionals are trained
7 to work from a micro-perspective, i.e. in a single cultural institution, and they are often not prepared
8 to operate from an ecosystem perspective, where strategies and actions are taken within a *meso*
9 framework. There is also a shortage of professional profiles functioning as connecting links
10 amongst the different members of the ecosystem; their education is often too sectorial, while
11 figures combining cultural and scientific skills with managerial ones are needed. The lack of an
12 entrepreneurial mind-set and managerial tools in the public sector was quoted as a setback in the
13 implementation of collaboration between private and public entities. There also seems to be a long
14 way to go in improving the relational capital amongst the potential members of the ecosystem:
15 there is still significant mistrust between public cultural organizations and private companies, with a
16 high risk of undermining the relations between the participants in the ecosystem, generating
17 misunderstanding and preventing effective dialogue and interaction. Private companies often
18 blame public institutions for lacking efficiency, while cultural public organizations consider private
19 companies as too interested in the economic aspects of cultural services, to the detriment of
20 cultural value. This mistrust could be overcome by means of effective education concerning human
21 resources involved in the ecosystem combined with continuous training and knowledge flow
22 between the many actors involved.

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

26 The first issue relates to the delimitation of the potential ecosystem. The interviewees argued the
27 need to define criteria for the establishment of the ecosystems based not on the administrative
28 boundaries (i.e. of the province, municipality or region), but on common cultural identity and shared
29 goals. "We need to identify common goals between the public and the private subjects belonging to
30 the ecosystem and creating a sense of belonging to a shared cultural identity; current networks are
31 mainly developed on the basis of the administrative boundaries, usually in the provincial
32 framework". argued one of the interviewees. Many actors pointed out how underlining collective
33 roots and highlighting common cultural characteristics which could work as the ideal bases in the
34 design of joint projects, enhancing the sense of belonging to a shared background and fostering
35 the feeling of working towards collective objectives.

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

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

50 The fourth issue emphasizes the role of digitization and new technologies. The interviewees
51 emphasized the importance of digitization and of the use of new technologies, especially those that

1 have arisen within the framework of the sharing economy. Social media, crowdsourcing,
2 crowdfunding or donate-per-view tools could help to reinforce the ecosystem perspective, helping
3 members to overcome the self-referential logics that are traditional of the cultural sector, creating
4 initiatives addressed at and involving multiple subjects. However, digitalization was mainly referred
5 to as a means for external communication and outreach purposes and not as a managerial or
6 governance tool; no mention to digital governance was made. This shows that they still
7 underestimate the real potential of new technologies; e.g. those resources could be useful for
8 managing intellectual capital in its different connotations inside the ecosystem. On-line resources
9 could enable more effective internal communication between the different members of the
10 ecosystem; digital tools could make the documents, artworks, initiatives, and cultural databases of
11 the system available to all members as well as to the general audience; social media and digital
12 mechanisms for public consultation could encourage citizens to actively engage in the
13 management of cultural properties.

14 The last issue raises the need for stronger engagement from the community. The problem of a
15 more incisive involvement of citizens, private subjects and other stakeholders in the governance of
16 the ecosystem was frequently referred to during the discussions. The majority of the interviewees
17 argued that the current governance systems should be rethought and new perspectives should be
18 implemented, including an increased partnership between the public and the private sector and
19 adopting a bottom-up approach based on participatory governance mechanisms involving citizens
20 and communities; the interviewees also highlighted that this framework implies a profound change
21 of mind-set in relation to the different subjects of the ecosystem. The impact of the crisis on the
22 cultural sector and the subsequent reduction of public cultural budgets have undoubtedly
23 influenced developments of this type; however, a rethinking of cultural sector models was already
24 going on and should be considered a symptom of this mentality change, due to the fact that
25 previous governance systems and management models had proved unapt for dealing with the
26 ongoing challenges. Moreover, evolved frameworks of governance - multi-level, multi-stakeholder,
27 based on cooperation among the different social and economic subjects of a territory, on peer-to-
28 peer processes centered on mutual learning, competence sharing and inter-institutional cohesion -
29 have often been advocated at a European level and are progressively being adopted by European
30 countries, Italy included.

31 The data emerging from the interviews are summarized in the table on Appendix 1, that classifies
32 the most relevant points that emerged during the discussions according to their belonging to
33 specific categories of intellectual capital (human capital, structural capital, relational capital, social
34 capital). For each point the percentage of interviewees that mentioned it is displayed.

35

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

49

50 **6. Conclusions**

1

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

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

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

47 In summary, from a theoretical point of view the research contributes to reinforcing the current
48 theories on the need to adopt new governance and management models for the cultural sector
49 based on ecosystem perspectives, validating our research validated the consistency of a cultural
50 ecosystem frameworks ~~for the cultural sector~~ and the crucial potential of IC in cultural ecosystems.
51 The analysis also highlighted that this increasing interest into ecosystem frameworks ~~in the~~
52 ~~cultural sector~~ should be inscribed in a broader rethinking process within governance systems of

1 the cultural field, thiats had already been undertaken but had been speeded up due to the impact
2 of the financial and economic crisis. This process could evolve into significant societal changes
3 based on participatory approaches and multi-level, multi-stakeholder perspectives.

4 The research also supports the recent trends of research on intellectual capital. The understanding
5 of the potential of ecosystem perspectives in the cultural sector shown by the interviewees further
6 testify the crescent shift towards holistic approaches to comprehend societal and economic
7 changes, that is at the basis of the fourth stage of intellectual capital research.

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

16 References

17 Adams, S. and Simnett, R. (2011), "Integrated reporting: an opportunity for Australia's not-for-profit
18 sector", *Australian Accounting Review*, Vol. 21 No. 3, pp. 292–301.

19 Allee, V. (2000) "The value evolution: Addressing larger implications of an intellectual capital and
20 intangibles perspective". *Journal of Intellectual Capital*, Vol. 1 No. 1, pp.17–32.

21 Andriessen, D. (2004), *Making Sense of Intellectual Capital: Designing a Method for the Valuation*
22 *of Intangibles*, Elsevier Butterworth – Heinemann, Waltham, MA.

23 Bagdali, S., (2003), "Museum and Theatre Networks in Italy: Determinants and Typology",
24 *International Journal of Arts Management*, Vol.6 No. 1, pp. 19–29.

25 Boedker, C., Mouritsen, J. and Guthrie, J. (2008), "Enhanced business reporting: international
26 trends and possible policy directions", *Journal of Human Resource Costing and Accounting*, Vol.
27 12 No. 1, pp. 14-25.

28 Bonet, L. and Donato, F. (2011), "The financial crisis and its impact on the current models of
29 governance and management of the cultural sector in Europe", *Journal of Cultural Management*
30 *and Policy*, Vol. 1 No.1, pp. 4–11.

31 Bontis, N. (2004), "National intellectual capital index: a United Nations initiative for the Arab
32 region", *Journal of Intellectual Capital*, Vol. 5 No. 1, pp. 13–39.

33 Borin, E., Donato, F. and Gilli, E. (2012), "Governance e management dei distretti culturali per il
34 territorio di Ferrara", *Annali dell'Università di Ferrara - Museologia Scientifica e Naturalistica*, Vol. 8
35 No. 1, pp. 135–149.

36 Bounfour, A. and Edvinsson, L. (eds.) (2005), *Intellectual Capital for Communities: Nations,*
37 *Regions, and Cities*, Elsevier, Oxford.

38 Burrows, R., Fennell, A., Redlin, M. and Verschoor, L., (2007), "Agri-cultural tourism: Linking the
39 arts and humanities with agricultural direct marketers and specialty producers", *Journal of*

- 1 Extension, Vol. 45 No. 6, 6IAW3, available at: <http://www.joe.org/joe/2007december/iw3p.shtml>
2 (accessed 17 November 2014).
- 3 Camarinha-Matos, L.M., Macedo, P. (2010) "A conceptual model of value systems in collaborative
4 networks", *Journal of Intelligent Manufacturing*, Vol. 21 No. 3, pp. 287–299.
- 5 [Chiucchi, M.S. \(2008\) " Exploring the benefits of measuring intellectual capital. the aimag case
6 study" *Human Systems Management*, Vol. 27, No. 3, pp. 217-230](#)
- 7 [Chiucchi, M.S. \(2013\) "Intellectual capital accounting in action: enhancing learning through
8 interventionist research", *Journal of Intellectual Capital*, Vol. 14, No. 1, pp.48-68](#)
- 9
- 10 Chong, D. (2002), *Arts Management*, Routledge, London.
- 11 Denzin, N. K., Lincoln Y. and Giardina M. D. (2006), "Disciplining qualitative research",
12 *International Journal of Qualitative Studies in Education*, Vol. 19 No. 6, pp. 769–782.
- 13 Donato, F. (2008) "Managing IC by antennae: evidence from cultural organizations", *Journal of
14 Intellectual Capital*, Vol. 9 No. 3, pp.380–394.
- 15 Donato, F. (2013), *La crisi sprecata. Per una riforma dei modelli di governance e di management
16 del patrimonio culturale italiano*, Aracne Editrice, Roma.
- 17 [Dumay, J. \(2009\) "Intellectual capital measurement: a critical approach", *Journal of Intellectual
18 Capital*, Vol. 10, No. 2, pp.190–210](#)
- 19 Dumay, J. (2012), "Grand theories as barriers to using IC concepts", *Journal of Intellectual Capital*,
20 Vol. 13 No. 1, pp. 4–15.
- 21 Dumay, J. (2014), "15 years of the Journal of Intellectual Capital and counting: a manifesto for
22 transformational IC research", *Journal of Intellectual Capital*, Vol. 15 No. 1, pp. 2–37.
- 23 [Edvinsson, L. \(2002\), *Corporate longitude*, FT Prentice Hall, Englewood Cliffs, NJ.](#)
- 24 Edvinsson, L. (2013), "IC 21: reflections from 21 years of IC practice and theory", *Journal of
25 Intellectual Capital*, Vol. 14 No. 1, pp. 163–172.
- 26 Edvinsson, L. and Malone, M. (1997), *Intellectual Capital: Realising Your Company's True Value
27 by Finding its Hidden Brainpower*, Harper Collins, New York.
- 28 [Edvinsson, L. and Stenfelt, C. \(1999\), "Intellectual capital of nations—for future wealth creation",
29 *Journal of Human Resource Costing & Accounting*, Vol. 4 No. 1, pp. 21–33.](#)
- 30 [Edvinsson, L., Beding, T., Chen, J., Lin, C.Y.Y \(2014\), *Navigating Intellectual Capital After the
31 Financial Crisis*, Springer](#)
- 32 [Edvinsson, L. and Lin, C.Y.-Y. \(2009\), *National Intellectual Capital: A Comparison of 40 Countries*,
33 Springer, New York, NY.](#)
- 34 [Edvinsson, L. and Lin C.Y.Y. \(2012\) National intellectual capital model and measurement.
35 *International Journal of Knowledge-Based Development*, Vol.3, No.1, pp. 58–82.](#)
- 36 [Etzkowitz, H. \(1997\), *The Triple Helix: academy-industry-government relations and the growth of
37 neo-corporatist industrial policy in the U.S.*, in Campo dall'Orto, S \(ed.\), *Managing Technological*](#)

- 1 [Knowledge Transfer, EC Social Sciences COST A3, Vol. 4, EC Directorate General, Science,](#)
2 [Research and Development, Brussels.](#)
- 3 [Giuliani, M. \(2009\) "Intellectual capital under the temporal lens", Journal of Intellectual Capital, Vol.](#)
4 [10, No. 2, pp.246–259](#)
- 5 Gray, R. (2006), "Social, environmental and sustainability reporting and organisational value
6 creation? Whose value? Whose creation?", *Accounting, Auditing and Accountability Journal*, Vol.
7 19 No. 6, pp. 793–819.
- 8 Guintcheva, G., and Passebois-Ducros, J. (2012), "Lille Metropolitan Art Programme: Museum
9 Networking in Northern France", *International Journal of Arts Management*, Vol. 15 No. 1, pp. 54–
10 64.
- 11 Guthrie, J., Petty, R., Ricceri, F. (2006), "The voluntary reporting of intellectual capital", *Journal of*
12 *Intellectual Capital*, Vol. 7 No. 2, pp. 254–271.
- 13 Guthrie, J., Petty, R. and Ricceri, F. (2007), *Intellectual Capital Reporting: Investigations into*
14 *Australia and Hong Kong*, Research monograph, The Institute of Chartered Accountants of
15 Scotland (ICAS), Edinburgh.
- 16 Guthrie, J., Ricceri, F. and Dumay, J. (2012), "Reflections and projections: a decade of intellectual
17 capital accounting research", *British Accounting Review*, Vol. 44 No. 2, pp. 68–92.
- 18 Jackson, J., and Murphy, P. (2006), "Clusters in regional tourism. An Australian case", *Annals of*
19 *Tourism Research*, Vol. 33 No. 4, pp. 1018–1035.
- 20 Kaplan, R.S. and Norton, D.P. (1992), "The balanced scorecard – measures that drive
21 performance", *Harvard Business Review*, Vol. 70 No. 1, pp. 71–9.
- 22 [Kenney, M. \(2000\), Understanding Silicon Valley: The Anatomy of an Entrepreneurial Region,](#)
23 [Stanford University Press, Stanford \(USA\).](#)
- 24 Kong, E. (2010) "Intellectual capital and non-profit organizations in the knowledge economy:
25 Editorial and introduction to special issue", *Journal of Intellectual Capital*, Vol. 11 No. 2, pp.97–106.
- 26 [Laitala, P., Miiikki, L. \(2013\), "Experiences in Implementing Knowledge Triangle – Case 2", in](#)
27 [Lappalainen, P. & Markkula, M. \(eds.\), The Knowledge Triangle. Re-Inventing the Future.](#)
28 [European Society for Engineering Education SEFI. Aalto University. Universitat Politècnica de](#)
29 [València, Multiprint, Helsinki. pp. 178-181](#)
- 30
- 31 [Ling, Y.-H. \(2012\), "The influence of intellectual capital on global initiatives", Vine, Vol. 42, No. 1,](#)
32 [pp. 129–144.](#)
- 33 Littoz-Monet, A. (2013), "Cultural Networks as Vectors of European Networks", McMahon, R. (ed.),
34 *Post-identity: culture and European integration*, Routledge, London, pp. 161–175.
- 35 [Markkula, M. \(2013\), "The Knowledge Triangle Renewing the University Culture" in Lappalainen, P.](#)
36 [and Markkula, M. \(eds.\), The Knowledge Triangle. Re-Inventing the Future. European Society The](#)
37 [Knowledge Triangle. Re-Inventing the Future. European Society for Engineering Education SEFI.](#)
38 [Aalto University. Universitat Politècnica de València, Multiprint, Helsinki, pp. 11-31](#)
- 39
- 40 [Malhotra, Y. \(2003\), Managing and measuring knowledge assets in the public sector, Working](#)
41 [Paper, Syracuse University.](#)

- 1 Marr, B., Schiuma, G. and Neely, A. (2004), "The dynamics of value creation: mapping your
2 intellectual performance drivers", *Journal of Intellectual Capital*, Vol. 5 No. 2, pp. 312–25.
- 3 [Mercier-Laurent, E. \(2011\), *Innovation Ecosystems*, ISTE Ltd, UK.](#)
- 4 Patton, M.Q. (2002), *Qualitative Research and Evaluation Methods*, Sage Publications, Thousand
5 Oaks, CA.
- 6 Petty, R. and Guthrie, J. (2000), "Intellectual capital literature review: measurement, reporting and
7 management", *Journal of Intellectual Capital*, Vol. 1 No. 2, pp. 155–76.
- 8 Pike, S. and Roos, G. (2007), "Recent advances in the measurement of intellectual capital: a
9 critical survey", paper presented at the 8th European Conference on Knowledge Management,
10 Barcelona, 6-7 September.
- 11 Ricceri, F. (2008), *Intellectual Capital and Knowledge Management: Strategic Management of
12 Knowledge Resources*, Routledge, Milton Park.
- 13 Roos, G., Pike, S. and Fernstrom, L. (2005), *Managing Intellectual Capital in Practice*, Elsevier,
14 London.
- 15 Saloniis, H. and Lönnqvist, A. (2012), "Exploring the policy relevance of national intellectual capital
16 information", *Journal of Intellectual Capital*, Vol. 13 No. 3 pp. 331–342.
- 17 Scrofani, ~~L.~~ and Ruggiero, L. (2013), "Museum networks in the Mediterranean area: Real and
18 virtual opportunities". *Journal of Cultural Heritage*, Vol. 14 No. 3, pp. S75–S79.
- 19 Settis, S. (2005), *Battaglie senza eroi. I beni culturali tra istituzioni e profitto*, Electa, Milano
- 20 [Stähle, P. \(2008\), "National Intellectual Capital as an Economic Driver – Perspectives on
21 Identification and Measurement", in Ahonen, G. \(Eds\), *Inspired by Knowledge in Organizations*,
22 *Swedish School of Economics and Business Administration*, Helsinki, pp. 94–121.](#)
- 23 [Stähle, P. and Bounfour, A. \(2008\), "Understanding dynamics of intellectual capital of nations",
24 *Journal of Intellectual Capital*, Vol. 9 No. 2, pp. 164-177.](#)
- 25 Sveiby, K.E. (1987), *The Invisible Balance Sheet: Key Indicators for Accounting, Control and
26 Valuation of Know-How Companies*, Konrad Group, Stockholm.
- 27 Sveiby, K.E. (1997), *The New Organizational Wealth: Managing and Measuring Knowledge Based
28 Assets*, Berrett Koehler Publisher, San Francisco, CA.
- 29 Taylor, G. (1995), "The Community Approach: Does it Really Work?", *Tourism Management*, Vol.
30 16, pp. 487–489.
- 31

Formattato: Tipo di carattere: (Predefinito) Arial, Inglese (Stati Uniti)

Appendix 1 – The role of key intangible dimensions in the development of cultural ecosystems in the Po Delta area

	% of the total number of interviewees	Human capital	Structural capital	Relational Capital	Social Capital
Perceived Potential of Cultural Ecosystem					
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
Difficulties in the Implementation of Cultural Ecosystems					
Lack of human resources apt to work at a <i>meso</i> 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 <i>meso</i> 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
Actions to take for the Implementation of Cultural Ecosystems					
Development of plans for staff education in the long term, innovative educational policies	56%	X			
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 digitization 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