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THE BUSINESS ECOSYSTEM APPROACH APPLIED TO THE INDUSTRIAL HERITAGE MANAGEMENT

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ABSTRACT
The purpose of our work is to deepen the knowledge about the Business Ecosystem approach and apply it to the management of Industrial Heritage (IH). Our approach comprises new organizational forms that do not easily fit with the traditional business models.

The IH capitalization consists in the ability to tie the meaning and destiny of IH to contemporary processes of local development, in which the policies of reuse are contextualized in wider processes of socio-economic and territorial transformation. The processes of IH reuse and capitalization involve the activation of initiatives able to reinvent through creativeness and innovativeness those repositories of knowledge looking for new and sustainable purposes of utilization. This revitalization process involves economic, social and cultural transformations that require sophisticated management strategies.

After a review of the literature, a case study is presented and analyzed to reflect on the stakeholders that compose the Industrial Heritage Business Ecosystem (IHBE) and their interrelated interactions. The analysis of the case reveals that an efficient project of IHBE relies on a system capable to link the creative idea, the organization and the business ecosystem in order to reach the market satisfaction; the IHBE success is related to the ability to co-evolve and valorize the actors involved in the project, generating a series of trust relationships primarily focused on the co-production. Conclusions, theoretical and practical implications conclude the paper.

KEYWORDS
Business Ecosystem, Cultural Heritage, Case Study, Industrial Heritage Management, Italy

ECONLIT KEYS
Z1; Z3; Z32
1. INTRODUCTION

In many countries, the increasing stock of areas and buildings that have lost their original function and that are gradually abandoned and accumulated in the suburbs and, often, in the historic centers, poses an urgent question: how to recover, reuse and valorize in a sustainable way the considerable heritage bequeathed by the industrialization process?

Bergeron and Dorel-Ferré (1996) recognize the Industrial Heritage (IH) as cultural heritage to safeguard and protect. They also underline the urgent need for such action to not lose the memory of cultural substance related to Industrial Heritage. Starting from these points, various authors (e.g.: Edwards and Llurdés, 1996; Wanhill, 2000; Dansero, Emanuel and Govena, 2003; Dambron, 2004; Alfrey and Clark, 2005; Murphy and Boyle, 2006; Landorf, 2009; Cole et al., 2010; Cho and Shin, 2014) have highlighted the importance to search for new ways to transform the remains of industrial civilization into resources of value for a more sustainable local development.

As stated by Putnam (1992) the processes of industrialization are complex phenomena that combine physical and environmental, technical and economic, cultural and institutional factors so that the range of potential resources is very broad – potentially the whole life and works of industrial civilization. It follows that the elements characterizing the IH are multiple and of a different nature (Edwards and Llurdés, 1996).

The large number and the variety of the elements just mentioned claim that processes of IH capitalization involve the activation of initiatives able to reinvent through creativeness and innovativeness those repositories of knowledge looking for new and sustainable purposes of utilization (Jones and Mean, 2010; Rautenberg, 2012).

This revitalization process involves economic, social and cultural transformations that require sophisticated management strategies (Lashua, 2013). Projects of Industrial Heritage retraining and subsequent management involve complex forms of connection between the plethora of involved stakeholders. It requires an approach in
which stakeholders do not create value in isolation (Hakansson and Snehota, 1989), but are involved in processes of value creation and cooperation (Prahalad and Ramaswamy, 2004). It follows that the value is not simply exchanged within a transaction, but it is created by everyone who takes part, in an interactive view, to a process that involves all stakeholders, each with his own perspective and his aim.

Previous studies have been focused on the effects that projects of IH recovery, valorization and fruition have generated: several authors studied regeneration projects of old buildings/spaces and the resulting effects on improving the environmental quality of the territory and its image; further research interests have focused on the study of the effects that these policies have generated on the local community in terms of economic and social development (e.g.: Ballesteros and Ramírez, 2007; Cole, 2004; Josen-Verbeke, 1999; Murphy and Boyle, 2006; Reiser and Crispin, 2009; Rautenberg, 2012).

A major criticism of industrial heritage studies is that they tend to be descriptive (Marion and Blockley, 1999), rather than investigating the complex network and processes that are at the base of all success projects of IH regeneration. This deficiency can be resolved by focusing on a comprehensive methodology that considers the Industrial Heritage Management (IHM) using the lenses of the Business Ecosystem (BE) approach. That said, the paper aims to examine whether and how the synergic sharing of strategies and methodologies among the stakeholders can contribute to start and implement projects of IHM. The basic hypothesis is that the ability to generate a project and, of consequence, a continuous process of IHM depends on the possibility to activate a collective intelligence based on a network of connections.

2. AROUND THE CONCEPT OF INDUSTRIAL HERITAGE

Taking note that the process of industrialization is a complex phenomenon that combines physical and environmental, technical and economic, cultural and institutional factors, it follows that the elements characterizing the industrial heritage are multiple and especially of a different nature (e.g.: tangible and intangible assets). In fact, factories and infrastructures closely related, and brownfield sites -
typologically varied in relation to sectors and temporal, spatial and organizational characters of the production - are part of a simpler identification. Behind this most visible part there is another that, although not easily identifiable of great importance, is defined by the following elements: technical-productive knowledge (tacit and encoded); drawings, models, documents and archives; machinery, plant and equipment; communication and energy networks; residential, training, welfare, cultural and recreational infrastructure; territories and landscapes shaped by industrialization (Vargas, 2014).

Most historic industrial sites continue to be administered by museums, enthusiast groups, or private industrial companies themselves rather than large institutions. This nevertheless has had profound consequences for industrial heritage management, which usually receives secondary status to more established thematic research (Rautenberg, 2012).

The success of a cultural project of Industrial Heritage is intrinsically linked to the ability to generate a dense network of relationships. As stated by Iansiti and Levien (2004), each element should establish bilateral relationships with other elements. These relations represent the grade of cooperation and contribution of each element to a mutual development. Manage relations can be considered as a strategic lens with which read the competitive environment in order to better co-create value. (Pellicano, Perano and Casali, 2016).

The large number and variety of the elements ask for a process of capitalization of the industrial heritage that translates in a set of practices the allocation of new meanings and cultural and economic values to the different components (Presenza and Perfetto, 2015). In other words, it would be to revive the industrial landscape (often ignored or little known sites, disused and hidden), starting mechanisms aimed to the revival of resilient places through creative and innovative uses that, preserving the memory of the places, lead to the creation and maintenance of spaces aimed at the realization of exhibitions and other tourist and cultural events (Mansfeld, 1992; Jones and Mean, 2010). This process of capitalization strongly binds to economic, social and cultural transformations of a territory and possible reuse decisions of goods derived from industrialization imply interpretations and, above all, strategies that involve both abandoned areas and the industrial tradition (Lashua, 2013).
3. THE INDUSTRIAL HERITAGE BUSINESS ECOSYSTEM

3.1 THE NEW WORLD OF BUSINESS ECOSYSTEMS

In today’s increasingly competitive world, organizations compete and interact among each other through innovative and unexpected ways and they need each other to survive.

In innovative economy, organizations do not act in isolation, but mature as a result of interacting with each other within a network (Davenport et al., 2006). This definition is known as the new world of business ecosystems, which indicate interactions among various actors (Chesbrough, 2007).

Business ecosystem is a relatively new concept in the field of business research. Even if several academics have already commented on this concept, there is still a lot of work to be done to establish it, starting for example from the definition that is still vague (Shang and Shi, 2013).

The term “Business Ecosystem” was first used by Moore in 1993 and was subsequently developed by various scholars who studied it from different perspectives (i.e.: den Hartigh et al., 2006; Anggraeni et al., 2007; Wan et al., 2011). The origins of the concept can be traced in the theory of ecology. In fact Moore (1993) analyzed and defined the concept based on the analogy with biological ecosystem. As biological ecosystems, business networks are characterized by a large number of loosely interconnected participants who depend on each other for their mutual effectiveness and survival (Lewin, 1999).

Therefore, biological analogy is the starting point in defining business ecosystems and in the scientific literature a variety of business ecosystems' models have been developed, from which the most important are the ones of Moore (1993, 1996) and Iansiti and Levien’s (2002, 2004a, 2004b).

According to Moore (1993) the business ecosystem is an economic community supported by a foundation of interacting organizations and individuals – the organisms of the business world. Organizations, similar to biological organisms, operate within a rich network of interactions, forming the local economy on a local scale and the global economy on the global scale. Consequently, a business
ecosystem is composed by different types of species (market players, government, customers, etc.) that develop strong relationships in a friendly environment based on specific activities and business networks (Moore, 1993). It can be considered as small business initiatives or vast collections of enterprises, where the boundaries can be fuzzy and include huge, inter-connected networks that interact with each other. As a result, organizations are simultaneously influenced by their internal capabilities as well as complicated interactions inside the ecosystem (Karhiniemi, 2009).

In the business ecosystem context, Moore (1993) described also the co-evolution as the complex interplay between competitive and cooperative business strategies. Moore (1996) emphasizes the evolutionary stages of the ecosystem and its evolvement, and describes the challenges in each stage. It follows that business ecosystem has its own life cycle. The analogy with biological ecosystem provides the most important findings for business ecosystem life cycle development. It evolves from “random collection of elements to a more structured community” (Moore, 1993). From this point of view, four distinct stages of development have been identified: birth, expansion, leadership and self-renewal of business ecosystem.

a) Birth is the stage where the future value delivered by the product or service is defined and where the channels for value delivering are declared. New members are recruited into business ecosystem through cooperation (Moore, 1993). Also it is the evolution level where new opportunities are identified in order to satisfy and create value for customers (Peltoniemi, 2004; Rong, Liu and Shi, 2011).

b) In expansion stage the innovation and creative thinking are the most important features for value creation for new customers (Peltoniemi and Vuori, 2004). The importance of scaling the potential opportunities and creative value creation was emphasized as two main conditions for this stage (Moore, 1993).

c) Leadership requires high profitability and growth of the companies from business ecosystem. The key aspect of this stage is stability of business ecosystem. This is the stage where control function is enabled, as result companies try to dominate most of the value’ elements.

d) Self – Renewal or Death is characterized by high threats from new business ecosystem arising (Peltoniemi and Vuori, 2004) and new innovation development. Moore (1993) compared this stage to an earthquake and concluded that it is defined
by the major changes, such as new governmental settlements, “customer buying patterns”. In this case the future success of business ecosystem consists in its ability to gain long-term progress and to renew itself.

The same approach of Moore was adopted by Iansiti and Levien in 2004 who also tried to compare the business ecosystem with biological one. As they suggest, the biological ecosystem can provide a powerful metaphor for understanding the business networks: a business ecosystem is a non-homogeneous community of entities, made up of a large number of interconnected participants with different interests, who depend on each other for their mutual effectiveness and survival, and so are bound together in a collective whole.

While Moore (1996) thinks that a business ecosystem consist of different levels of organizations and business environment, Iansiti and Levien specifically divide those organizations into four types, all of them with specific functions and strategies (Iansiti and Levien, 2002, 2004a, 2004b), that are: keystone player, niche player, dominator and hub landlord. The keystone players set up a platform in order to involve contributions from other players (Iansiti and Levien, 2004b; Quaadgras, 2005). A keystone “acts to improve the overall health of the ecosystem and, in doing so, benefits the sustained performance of the firms. It does this by creating and sharing value with its network by leveraging its central hub position in that network while generally occupying only a small part of that network” (Iansiti and Levien 2004b). Niche players develop specialized capabilities to add value to a business ecosystem. Niche strategies can be pursued by the much larger number of firms that make up the bulk of the ecosystem, focusing on unique capabilities and leveraging key assets provided by others. The keystone players and niche players contribute to ecosystem health and sustainability (Iansiti and Levien, 2004b). The dominator “acts to integrate vertically or horizontally to directly control and own a large proportion of a network” (Iansiti and Levien, 2004b) capturing most of the value created by the network and leaving little opportunity for the emergence of a meaningful ecosystem. The hub landlord extracts as much value as possible from its network without directly controlling it. A hub landlord, the most anti-social species of dominator, “eschews control of the network and instead pursues control of value extraction alone,”
providing little new value to its network, leaving a "starved and unstable" ecosystem around it (Iansiti and Levien, 2004b).

Another difference between Moore and Iansiti and Levien is that the second ones went further and have paid special attention to ecosystem’s health: if an ecosystem is healthy, then its community will flourish. Three are key-elements in an ecosystem’s health: productivity, robustness and niche creation (Iansiti and Levien, 2002; Davenport, 2006; Den Hartigh et al., 2006). Productivity is understood as the efficiency with which an ecosystem converts inputs into outputs (Iansiti and Levien, 2002). It reflects the ability of actors to transform existing resources into significant result and to create value for business. Robustness is the capability of an ecosystem to face and survive disruptions (Iansiti and Levien, 2002). It has the meaning of achieving sustainability: healthy ecosystem should adapt easily to environmental changes so that it could meet the conditions of sustainable development (Iansiti and Levien, 2004a). The final determinant of the health measurement is niche creation that is the capacity to create meaningful diversity and thereby novel capabilities through two factors: the variety, related to the number of new options, technological building blocks, categories, products, and/or businesses being created within the ecosystem in a given period of time; and the value creation, related to the overall value of new options created (Iansiti and Levien, 2002).

Business ecosystem has also various characteristics: inter-dependence of its components, cooperative evolution, simultaneous existence of competition and cooperation, the existence of numerous role players, dynamism and flexibility, shared fate, contribution to making innovations and achieving business successes (Hearn, et al., 2006; Peltoniemi, 2005). There are also several organizing principles, explained as follows.

- Interconnectedness, that involves the type of relationships established between ecosystem’s actors and aims to reveal the bilateral relationships between actors, through cooperation between different organizations (Iansiti and Levien, 2004a; 2004b).

- Diversity, that represents the involvement of technological processes in organizational activity to indicate the stability of a system (Shaw and Allen, 2011) and another opinion about this term is about the existence of business ecosystem
through different type of species (SMEs, governmental organizations, etc.), cooperation and data.

- Complexity, that is important to understand how complex a business ecosystem could be, this principle emerged as result of a complex and systemic analysis based on interactions between business ecosystems elements (Peltoniemi, 2005).

As suggested by Iansiti and Levien (2004), a business ecosystem can be understood as a non-homogeneous community of entities, made up of a large number of interconnected participants with different interests; they depend on each other for their mutual effectiveness and survival, and so they are bound together in a collective whole.

### 3.2 BUSINESS ECOSYSTEM AND THE NEED TO MANAGE IH

The recovery of Industrial Heritage involves choices that have a profound effect on the environment (regenerate without spoiling), the society (regenerate without distorting) and the economy (regenerate to create welfare). In this complex system of factors, it becomes necessary to better understand the characteristics and modus operandi of organizations devoted to the regeneration and management of IH. Therefore, before to deepen the discussion about the IHBE it would be suitable consider that as a vision, a strategic intent, a mission and a strategy, and as a consequence a series of actions supporting the strategic intent have to be developed and shared with all the stakeholders.

All these elements together define the shape and behavior pattern: how the ecosystem “lives”. Also the time variable is important: the relationships amongst the constituent elements may change the ecosystem structure. So, understanding the ecosystem means not only drawing the shape and relationships amongst the constituent elements in a certain moment in time, but also understanding how it evolves by monitoring evolutionary trends (Battistella et al., 2013). It is thus important that organizations establish monitoring processes for their ecosystem, both from a static and dynamic point of view, and analyze IHBEs by investigating how the relationships and the dynamics can potentially positively and/or negatively impact
their businesses. Clearly, these analyses need to be supported by appropriate tools and methodologies to work on.

To define IHBE structure and, consequently, to analyze and evaluate the relevant behavior, it is necessary to identify the perimeter and constituent parts of the ecosystem; develop a representative model of the ecosystem; analyze the behavior of the ecosystem in the past and in the present; and study the possible evolutionary scenarios.

In the IHBE there are 3 levels: local level (core element), intermediate level (related elements inside business ecosystem), and global level (external influence elements of ecosystem). It is, therefore, important to acknowledge the emergence of power relationships and hierarchies as a direct consequence of the mediation of social interactions; and to devise a governance process that can maintain the dynamics of the community. It is important to assign or to establish the roles that each element performs: keystone, niche players or dominators.

At the basis of successful projects of Industrial Heritage management there is an activator (Ratclif, 2014) (that can be a person or a small group of people). It is the driving force of the entire process. It means that all the other elements have to be related to the core organization and share the same mission, vision. Thus, the presence of an activator and a cohesive group are the base for the creation of cultural projects. In turn, a cultural project should be sustainable in environmental, social and economic terms.

The activator is usually a “cultural industry”. Throsby (2001) says that this is a subject that produces or distributes goods and services that include creativity in the production and incorporate a certain degree of intellectual property and transmit a symbolic meaning. The activator displays various institutional, organizational and entrepreneurial forms.

The industrial heritage has the potential to attract the interest of different players. The concept of IHBE model starts to address this issue on a regional scale by integrating private, local, regional and national stakeholders into a coalition to define their own preservation goals, themes, and practices. Incorporating value systems into landscape preservation provides a platform for preservation to truly serve the changing nature of historic industrial resources, their users, and ultimately, the public.
trust. The stakeholders in industrial heritage, from government bodies and historic preservation professionals to amateur archaeologists and local communities concerned about the history and quality of place, can interact each other through sophisticated models of both collaboration and competition. It means that IHBE comes in a broad array of shapes, sizes, and varieties—and also captures three core characteristics that are generally present. First, IHBE enables and encourages the participation of a diverse range of (large and small) organizations, and often individuals, who together can create, scale, and serve markets beyond the capabilities of any single organization. Second, participating actors interact and co-create in increasingly sophisticated ways that would historically have been hard to formally coordinate in a “top-down” manner. Third, participants—often including customers—are bonded by some combination of shared interests, purposes and values which incent them to collectively nurture, sustain, and protect the ecosystem as a shared “commons”.

Interventions for the protection and regeneration of the industrial heritage should take account of many factors simultaneously: on the one hand, the historical and technical value, the social content, the recovery mode, the architectural and artistic value of an industrial good; and, on the other hand, the economic and financial management, the organization of the resources involved, the enhancement of competencies and skills, and finally, the appropriate promotion (Presenza and Perfetto, 2015). Making connections and celebrating the texture of the entire social, cultural, and natural network in this way permits the industrial landscape to incorporate multiple value systems, and recognize the dynamic blend of the old and the new. For this reason the value aspects that will be looked in IHBE are economic value, functional value, and cultural and historical value; social value showed much overlap with both cultural and historical and functional value aspects. These aspects were found to be the most relevant for revitalizing and management of industrial heritage values play out in different ways at different levels of industrial heritage management. Thus, the IHBE becomes especially important to local communities who, despite their best efforts, may not be able to sustain an industrial heritage management project on a large scale. It may be easy to preserve a component of an
historic system, but it is difficult and costly to manage an entire system (Quivik, 2007).

Finally, the studies on industrial heritage management have analyzed also the subject of Destination Governance (Alberti and Giusti, 2012; Duarte-Alonso et al., 2010; Landorf, 2009; Otgaar, 2012; Smith and Couper, 2003; Xie, 2006; Wilkey, 2000). Moore (1996) mentions that the most used ways of governing business ecosystem relationships are community governance systems and quasi-democratic mechanisms. He mentions that the ecosystem internalizes the systems of firms and the markets that connect them under the guiding hands of community leaders (2006). Iansiti and Levien (2004b) remark that business ecosystems are governed by shared fate, but they do not intensely discuss this guiding mechanism. In IHBE governance emerges the interest for the analysis on who are the most active stakeholders involved in the management processes and on the main methods of involvement and participation of stakeholders in decision-making processes. In particular, the collaboration between public and private sectors is the dominant theme in the analysis of the stakeholders. In this sense, there are several forms of governance and the constitution and management of ad-hoc organizations. As argued also by Vos (2006) describing business ecosystem governance, the IHBE governance provides to network members with an incentive and vision to strive for a common goal, giving them the freedom to reach that goal on own initiatives so that their motivation is not hampered by obstruction, while using steering mechanisms to ensure that their activities will reach this common goal, in an effort of improving the business ecosystem’s capability of coping with exogenous changes and the internal pace of innovation.

4. THE METHOD OF RESEARCH

4.1 DATA COLLECTION

The need to collect useful information to achieve the aims of this work motivated the choice to use the exploratory single case study methodology (Eisenhardt, 1989; Yin 1994), because it was considered more appropriate in the methods potentially applicable in the field of social sciences (Yin, 1994). In particular, the case studies
selected here lends itself useful to the understanding of the phenomenon investigated for some important reasons: it is one of the first successful projects within IH, that obtained a significant notoriety in the national and international context; it is a complex project, in which are involved and operate different territorial entities, public and private, that defined and implemented various activities and initiatives; and, finally, it has different modes of relationship between organization-stakeholders in the management of industrial heritage.

In this qualitative research design, the data collection is based on two different but integrated phases of analysis and the use of primary and secondary sources.

The first phase is focused on the documental analysis (Corbetta, 1999) through the following sources: internal documents (eg. presentations, reports, dossier, etc.); external documents involving the proposed project (eg. newspaper articles, official documents, etc.); and, finally, the institutional website (www.dolomiticcontemporane.net).

The second phase is focused on two in-depth semi-structured interviews due to the need to collect primary data. This allowed deepening the knowledge of the economic, social and cultural context of the area considered, collecting important information directly by the promoter of Dolomiti Contemporane project - arch. Gianluca D’Inca Levis - considered the key informant for the present research.

Interviews were conducted in the period between the months of January to March 2015. Each interview lasted about ninety minutes.

More specifically, the interviews tried to uncover the following aspects: key characteristics and motivations behind the project; specificities of the organization; activities management; relationships between organization and stakeholders; role and creativity contribution in the definition of the project and related activities; benefits and problems related to the activity of co-creation of value; results obtained.

Data set were transcribed, analyzed and interpreted based on the indications followed in scientific contributions of qualitative research (Bryman, 2008).

4.2 ABOUT THE CASE STUDY “DOLOMITI CONTEMPORANEE”

Dolomiti Contemporane (DC) is a project started in August 2011 and active in the area of the Dolomites, the site included in 2009 in the World Heritage list of
UNESCO. At the center of this project there is the will “to be seen as the motor of economic and cultural development through contemporary art” (D’Inca Levis, 2015).

DC is a network of professionals motivated and organized around the promoter - arch. D’Inca Levis – profound person with a charismatic character to which, not by chance, has been awarded the City Enterprise 2012 award, as a producer of ideas and especially for its contribution to the economic, social and cultural environment of the North East of Italy thanks to the project concerned. D’Inca Levis and his teamwork are the activator of the successful project, a cohesive group seen as the base of the core organization.

The mission, highlighted in a recent interview published in the Italian newspaper “Il Fatto Quotidiano” (online edition of 18 March 2015), is “[...] identify, in the region of the Dolomites-UNESCO, the most interesting abandoned industrial sites, places where man, for long periods of history, has been working, building important productive industries, which have fed those regions. In these abandoned industrial sites we activate our regenerative project in progress. The forgotten industries are equipped with an international residence: artists from around the world are welcomed. In the labs, the artists create works that reflect not so obvious on territory, environment, mountain, or on specific topics. Industrial spaces - hangars, pavilions, warehouses, ex-manufacturing plants - become, for a specified period, exhibition spaces, creative factories, visited by thousands of people, where productivity becomes cultural and artistic [...] . When, after a few months of activity, DC leaves the sites so reused, they come back to life: the intervention that regarded them allowed them to regain the trust of local communities, who had abandoned them, and now they will come back to generate new commercial and productive activities”¹. The two key points of the entire project are the territorial factor, linked firstly to Dolomites become Unesco heritage site in 2009, and the culture of the communities that inhabit the territory. At the name of the area has been added the attribute “Contemporary” with a double meaning: the first refers to the medium through which the project

¹ DC is not just a series of exhibitions. They activate also educational itineraries for children, teens and adults, and organized workshops, meetings with artists and guided tours that facilitate the approach to contemporary art. Into the website www.dolomiticontemporane.net it is possible to see several reports about the projects realized by DC.
operates, in other words the contemporary art; the second on the current size of the speech on the landscape and on contemporary debate.

During the years, DC has developed several projects, all of them showing how DC “revisits, through the art, places abandonment, such as industries and others complexes of industrial architecture, in order to generate projective situations that know how to propose concrete incentive to the valorization of the areas in question” (D’Inca Levis, 2015). These “new places” were raised to “stations of exchange of cultural ideas”, and curatorial choices proposed in the exhibitions organized by DC are focused on research of topics that may bring the participants to local communities and their culture, with the aim to build a link that can go beyond the time dictated by the exhibitions.

5. FINDINGS

5.1 Project development and management

At the origin of each new project implemented by DC there is the identification of sites that, lost their original productive function, have been inactive. These places are selected on the basis of spatial, distributive, volumetric and contextual characteristics in order to set up a contemporary art exhibition. The process of recovery and enhancement of each new project consists of four phases: a) financial construction; b) local area network; c) work on exhibitions d) work with artists. It follows the business ecosystem life cycle development, as argued by Moore (1993). It starts from a random collection of elements to a more structured community. The financial construction is the birth: this stage ensures the start of the project and the activation of the successive phases. In fact, only after the construction of this “scaffolding” it is possible to proceed to the second phase, the expansion stage, “necessary for the creation of the local network on which to place the maintenance of the factory and the construction of the artworks” (D’Inca Levis, 2015). This stage is characterized by the scouting of the better offers of the several suppliers and as well as stakeholders interested to become partners. The third phase, leadership stage, concerns the work on exhibitions and provides a compelling vision for the future that encourages suppliers and customers to work together to continue improving the complete offer
(Moore, 1993). In DC it is possible to trace both the artistic-cultural aspect and the creative character. The first is the traditional procedure of an exhibition in a space, or rather of contemporary art exhibitions; the second is represented by creative aspect and it is the innovation factor of the project policy that “works with the seemingly marginality of a territory and of determined structures, with the conflict against the stereotypes images and the creation of a network of contacts. While the cultural-artistic aspect is linked to the quality and curating exhibitions, as in any exhibition, the creative aspect is the one that generates the value of the event that makes it a potential engine of development for the territory through culture. The cultural-artistic aspect, in this case contemporary art, proposes a new integrated model of cultural policy” (D’Inca Levis, 2015).

Finally, in the last phase that represents the self-renewal stage, the artists, that arrive at the place to regenerate, live there and make, for a time, their creative laboratory therefore “it becomes a creative citadel that receive from partners support concerning materials, manpower and board. For a couple of months this active and pulsating core becomes a place of creation and exhibition space for art exhibitions and events” (D’Inca Levis, 2015). The artists’ residencies become a heart operation that produces, other than as a wealthy artistic-cultural content, also an interest on an abandoned building. The artists are the innovators to bring new ideas to the existing ecosystem. In this way, they have the opportunity to stay on site attending the places and communities near the reactivated sites; this generates an inevitable dependence from the landscape in which they were inserted.

5.2 THE BUSINESS ECOSYSTEM OF DOLOMITI CONTEMPORANEE

The actions that DC implements are based on a network of more than one hundred public and private actors. D’Inca Levis defines the format of DC as “a logistical and territorial platform” where a network of relationships between many heterogeneous actors aims to provide an integrated place of action into a destination, that can operate within an extended and ramified map\(^2\). In this regard, on the 2011 Report of DC, presented to the Veneto Region (Italy) to summarize the results of the

\(^2\) [www.dolomiticontemporanee.net/DCi/progetto/](http://www.dolomiticontemporanee.net/DCi/progetto/)
project “Sass Muss”, it is possible to track down some peculiar aspects: “further to become an action gym for the invited artists, the project was, from the beginning, an important site for many excellent local energies. The entire project, in fact, has been self-managed by an organizational structure directly defined by us, and that acquired, at every stage, the work of qualified volunteers. The entire project, in every aspect, has taken advantages from the professional competence of young people of the city of Belluno, almost all graduates on first work experience, who have joined in the working group, operating since the beginning within a complex, dynamic, new organization, to contribute, with their commitment, at the initial success of this initiative [...]” (Veneto Region, 2011).

Thus, DC is configurable as a business ecosystem, where there is a high interaction and integration among actors that have common aims. Some of these people “are independent curators, others are private galleries that, rediscovering their side purely cultural, not performing commercial activity within the project, but simply propose a theme that is harmonized with the project. Other actors have, instead, very strong ties with the project and enter into communication with it spontaneously” (D’Inca Levis, 2015). D’Inca Levis claims: “networks are the architecture, the skeleton of the project. The territory represents them and every part contributes to the revitalization process by sharing it”.

Within DC business ecosystem, stakeholders are of different type and as said before it is important to assign the roles that each element performs. At the local level there is the activator -D’Inca Levis and his teamwork- that is the core element of DC business ecosystem. Administrations and public entities, private companies, productive system, social and local communities are elements inside the DC business ecosystem and represent the intermediate level. There are also stakeholders external to the territory. They can be national or international artistic and cultural partners, galleries and museums, and of course the artists. It is the global level characterized by external influence elements of DC business ecosystem. “The latter are those who create the spark of cultural difference in the sites and contexts in which they operate, creating new relationships with local community” (D’Inca Levis, 2015). Within the DC business ecosystem the players are described. The attention to stakeholders is clearly evident reading the DC website, where there
is a section specifically devoted to them and grouped in three main categories: a) promoters; b) sponsorships; c) cultural partners; d) media partners; e) with the contribution of.

The financial promoters are those that are at the basis of the realization of the project, normally the region and municipalities in which are located the spaces. The contribution of these stakeholders is not always economic. Participation can also take place through the free concession of the management sites. Municipalities participate with financial contributions and/or through the provision of workforce, mostly through municipal workers who make the daily maintenance of the facilities, such as cutting the grass and public order control outside.

In the sponsorship there are several stakeholders. It is the case, for example, the electricity provider that recognizes the facilitate supply of electricity. Or the Italian Association representing manufacturing and service companies (Confindustria) that dispenses a financial contribution or the sponsorship supporting the communication with the local and national industrial system. About that, D’Inca Levis stated: “to dialogue with Confindustria represents the will to integrate the business system and the cultural system that, otherwise, would remain two different and irreconcilable worlds”. The Ministry of Environment, the UNESCO Dolomites Foundation, the two biggest natural parks of Veneto and Friuli Venezia Giulia Italian regions guarantee their participation through sponsorship.

The adherence of DC projects to the territory and the local community is well shown in the words of D’Inca Levis: “the presence of the National Park of the Belluno Dolomites and the Natural Park of the Friulian Dolomites, as also the involvement of the Montana Agordina Community regarding the Taibon site, emphasizes the importance that the residents have in our projects”. Among the partners, there are cultural actors (eg. The Bevilacqua La Masa Foundation, Museum of the Rules of Cortina d’Ampezzo) that collaborate to provide exhibition sites of DC. Schools are also involved. In fact, students can attend brief internships to obtain school credits performing the tasks of guardians and reception. There is also a network of actors that sponsor and finance with their contributions.
In the category “media partners” are included actors able to promote the project (eg. specialized magazines of contemporary art; local and national press, websites able to achieve the general or strictly cultural public).

In the category “With the support of” is possible to trace a heterogeneous multitude of stakeholders. The relations in this category refer to the supply of services, materials, and logistics. This is how D’Inca Levis describes these stakeholders: “Some partners participate to the structural aspects, for example with minor adjustments as the installation of the pavement, the placement of equipment, the painting of some walls, in conclusion, actions to ensure the opening of the space, but also a support to ensure food and free accommodation for the artists”. Other actors participate providing for the material (mostly, waste materials of local industries) or the most varied services (cars with the logo of DC for transfers; supplies for the furniture of the spaces; cleaning free for the entire period of the event, bed linen and towels for artists in residence, the texts for the bookshop and bicycles for short trips, supply of technical and computer materials as well as connection to Internet).

It is interesting as affirmed by D’Inca Levis to describe the importance of this network: “To build good exhibitions is important, but to produce, through art, concrete ideas and impulses for the territory, is equally important. The integration of functions generates a pervasive network that takes forms and roots and expands itself on the territory, with relapses and feedback on the socio-cultural, productive, economic level”. Following the Iansiti and Levien (2004) suggestion, the DC business ecosystem is thus a non-homogeneous community of entities of interconnected participants with different interests that are bound together in a collective whole.

During the years, the DC regularly implements the network of relations even if not always all actors are involved in all projects. In this regard, D’Inca Levis affirms that “the actors join a project in its entirety; if there was not collaboration in an edition, probably there will be a future, but meanwhile the network increases and enters in the economic and social sector of the territory”.

The importance of the network in DC is also found in the 2011 report of activities presented to the Government of the Veneto Region, in which is argued the “integrated model”: “We also believe […] of the need to build a ‘network
architectures’, of various types, that allows the cultural initiatives not only live within its specific space, thus resorting to a niche of specialists, but to be open totally to the social, human, economic fabric of the territory, to get out from it, exporting the products made there (local and global coexistence)” (D’Inca Levis, Report 2011).

It is interesting to reflect on the role of the public sector. For this purpose, D’Inca Levis claims: “to have the public partnership is essential because it means that it recognize the importance of our project, and more in general the importance of the social and cultural value of our mission”. The presence of private actors compensates the insufficiency of public funds but also operates to overcome the dichotomy between public and private. D’Inca Levis says that “one does not exclude the other, the presence of one justifies and reinforces the presence of the other”.

6. DISCUSSIONS AND CONCLUSION

Starting from the desire to contribute to the deepening of the studies on cultural management, this work is part of the debate focusing the attention on the Industrial Heritage Management.

As emerged from the reading of the case, the Industrial Heritage capitalization consists in the ability to tie the meaning and destiny of Industrial Heritage to contemporary processes of local development, in which the policies of reuse are contextualized in wider processes of socio-economic and territorial transformation.

The analysis of the case reveals that an efficient project of IH relies on a system capable to link the creative idea, the organization, the business ecosystem in order to reach the market satisfaction, and the general capability to effectively manage the several relations that spread in the business ecosystem.

In other words, the IHBE’s success is related to the ability to co-evolve, to valorize the “value constellations” composed by various parties involved in the project, generating a series of trust relationships primarily focused on the co-production (Normann and Ramirez, 1994; Prahalad and Ramaswamy, 2004). Therefore, there are two foundational components in an IHBE creation. Firstly, it is a necessity to create value within the ecosystem in order to attract and retain members. If this foundational criterion is not met, the ecosystem will wither. Secondly, there is a need
to find a way to share the value within the ecosystem (Iansiti and Levien, 2004a).

This way has been effectively highlighted by D’Inca Levis: “the strength of network is the ability to establish a relationship based on respect and gratitude”. Consequently “the culture (not the products and even the territory) is the central idea for virtuous circuits, where the accumulation of social capital and the creation of value become the rule”.

Several implications arise from this study. Theoretical ones are related to the concept of Business Ecosystem. Results have revealed the adequacy of this approach to the analysis of IHM. In particulars, it gives useful lens to observe and understand the complex mix of actors and activities that compose a project of IHM. It follows that this new concept can support theories of business management and territorial governance to deepen the knowledge about the transformative processes of human communication and relations in the social interactions and organization of social systems.

Practical implications are related both to managerial and political issues. About managerial implications, our results seem to suggest a new approach to the management of IH resources that comprises first of all new organizational forms (in terms of innovative forms of organization, production methodologies and working practices based on refined forms of self-disciplinary managerial power, control and surveillance) that do not easily fit with the traditional business models. The main important political implications are related to implementation of IHM projects. The analysis of the case has shown how the management of cultural heritage requires a new approach that involves factors such as creativity, flexibility, networking, dynamism, promotion, etc., that are difficult to reconcile with a traditional approach made by high bureaucratization, static conservation, unilaterally management. All of that requires a farsighted policy that is able to support, organize, coordinate the cultural resources each other and link them with the other resources of the territory.

Finally, it is considered that to have a complete and, therefore, more exhaustive framework is useful to have several points of view and so more stakeholders to be interviewed, the limit that can be ascribed to this contribution. It follows that future research will have to contemplate the involvement of various stakeholders to enrich the results of this study.
Further investigation may also cover both longitudinal analyzes and benchmark analysis among experiences that have similar characteristics to our study. Regarding the first aspect, it is interesting to continue to investigate this project, for example what are the evolutionary pathways that Dolomiti Contemporanea will take, especially as regards the planning of the organization (new organization/juridical form, new roles, new skills, etc.). Regarding the second aspect, the comparison between cases can help to better understand the dynamics related the development of similar projects, for example in relation to the binomial of private or public actor, to bottom-up or top-down processes or mediated by actor-facilitators.

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