

Territorial innovation, tourism and sustainability

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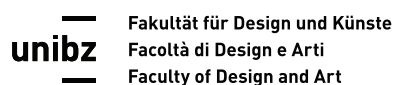
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Conference proceedings

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Introduction to the Conference

MARIO BISSON : Scientific Director

“Transdisciplinarity is the -intellectual space- where the nature of the manifold links among isolated issues can be explored and unveiled, the space where issues are rethought, alternatives reconsidered, and interrelations revealed.”

(UNESCO – Division of Philosophy and Ethics, 1998)

According to UNESCO’s definition, transdisciplinarity is the intellectual space where the connection among isolated topics can be explored and unveiled.

Thus, transdisciplinarity represents the ability to create synergies between different knowledge areas on common objectives. If this happens, the addressed complexity is superior to any discipline that operates in an autonomous manner; it connects people, it builds a new way of approaching criticalities, and increases personal competencies.

Fragmentation between disciplines, the concept of specialized expertise, is today less and less actionable, it must be considered outdated.

In order to address modern complexity, the high number of information and the criticalities to which we are continually exposed to, creating integration processes that go beyond the simple monodisciplinarity is fundamental.

Today, we find in the transdisciplinary approach the tool with which we can address new challenges, the way in which different disciplines cooperate in order to reach an ultimate goal, overcoming the multidisciplinary and interdisciplinary approaches adopted until now.

In interdisciplinarity, disciplines change in their concepts or tools by means of others. In this approach, disciplines that cooperate and change are disciplines close to each other; these are disciplines that have meeting and joining points by nature.

The term transdisciplinarity¹ was, instead, born in 1970 thanks to Jean Piaget, a Swiss psychologist, philosopher and biologist. The given definition outlines an approach that overcomes and interweaves different disciplines; it comes from rejecting fragmentation of knowledge in order to reach an integrated and unified understanding of the world.

Have you noticed how new disciplines, so-called frontier disciplines, are ever-developing?

Mechatronics, biotechnologies, etc. all come from engaging two sciences, from the genius of individuals that were capable of merging them and getting them to talk to each other; individuals that were able to seize and manage to the best the complexity of certain phenomena and the diversity of several disciplines, creating a synergy among them, giving life to something new. Analyzing elements and solving problems left in the dark so far was possible only by merging different points of view. This very synergy distinguishes the transdisciplinary approach from the previous ones; the multidisciplinary and interdisciplinary ones.

In the transdisciplinary approach you don’t have a simple sum of disciplines, but a reciprocal cooperation and modification.

The transdisciplinarity of environmental design is the strategic key to make the integration into a system of the environmental, social and economic aspects possible, in that it satisfies the need to involve and coordinate, in every phase of the configuration of the future, the researchers of different knowledge areas in order to configure a whole where everyone gets and gives knowledge, as a means of innovation.

But what does innovation mean? The dictionary suggests: «mutating a system implementing something new: ideas, points of view».

This definition does not exhort, nor imposes, a change in technology, like industrial tradition got used to; if anything, it illustrates the inclusion of a new vision in a system, a new way of approaching reality. Thus, innovation does not lie in continuous technologic upgrades, but instead in the change of perspective from which issues are observed. Innovation does not involve studying or perfecting a technologic aspect, but in constant research through design culture. It is therefore necessary to change approach on issues and start from the assumption of getting to talk, dialogue, compare different scopes: design, industry, politics, environment, society, economics, etc.

None of these scopes are autonomous, they all are in strict correlation and interdependence, forming a system, a whole that is «constituted of several interdependent elements, joined together organically» by definition.

In this moment in history, we are in contact with machines filled with data: data of various kinds, about different subjects and topics, but always interconnected. Maybe this is one of the reasons why among future skills the necessity to develop the so-called transdisciplinarity is growing. Knowledge is not unified anymore: we stand before a huge number of sources that give back a complex reality for which the simple juxtaposition of disciplines does no longer suffice. A different, more articulated, more integrated and interconnected approach in “problem solving” of complex situations is needed, precisely a transdisciplinary one.

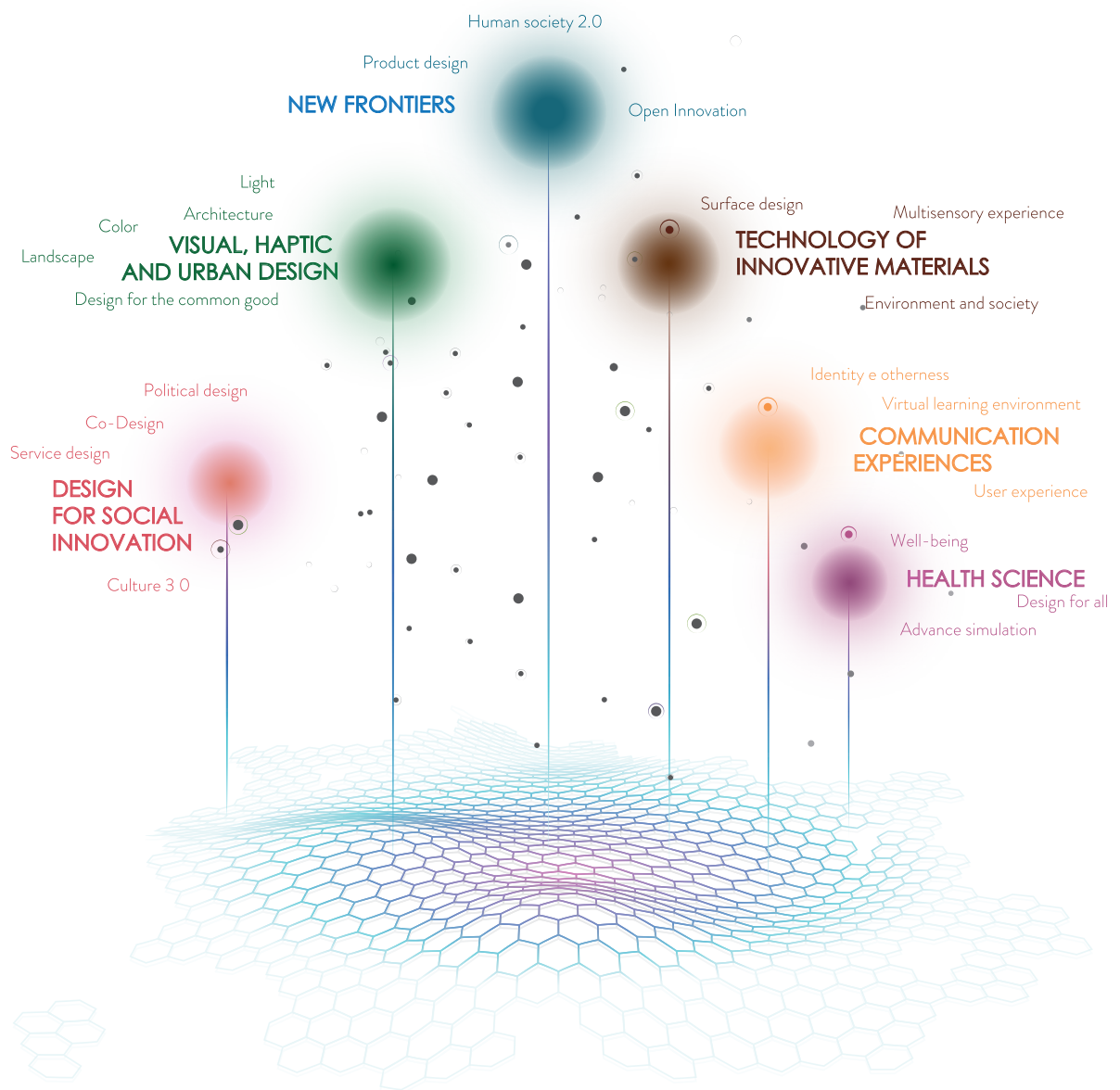
This approach is also the cornerstone of MDA’s (Mediterranean Design Association) activity, an association born in Agrigento in 2013, that poses as its objective the development of research activity through a new scientific and cultural approach, based, obviously, on transdisciplinarity, conferred by the reciprocal and continuous influence of different extant sciences.

Progress demands research, studying the existing with an eye to the future that can lead to the birth of new scenarios; we constantly talk about environment, pollution, traffic, consumption: we complain, discuss it with friends, but don’t always really participate. The conference on environmental design is only a way to start divulging how much research does in several fields, on different levels: from the scientific from the public one, from the business to the social one. Discussing, analyzing, suggesting is the only way to deal with the future in a constructive and integrated way. The scientific excellencies that were invited, coming from different parts of the world and from illustrious research centers, are called to discuss, listen and suggest new thoughts; the same possibility is given to new researchers, giving a moment to expose, on an international plane, the advancements of their own research.

All this becomes a chance of participation and confrontation that is useful to the vision that MDA has set itself since the start: improving the quality of life...

Notes

1. J. PIAGET, *L'èpistémologie des relations interdisciplinaires*, in AA.VV., *L'interdisciplinarité*, pp. 141-144 (trad. it. in J. Piaget, J.S. Bruner et AL., *Pedagogia strutturalista*, Torino, Paravia 1982, cap. IV da p. 131). Unlike interdisciplinary ones, multidisciplinary relationships establish themselves when “the solution to a problem requires information from two or more sciences [...] without, however, having the disciplines modified or enriched by the ones used”; transdisciplinarity makes “links in a system that’s totally devoid of stable boundaries between disciplines” possible. About interdisciplinarity, it’s good to keep in mind the following quote, extrapolated from *Le scienze dell’uomo*: “the acquired techniques in a natural science ‘can be’ able to directly clarify what was necessary to build to solve a complex problem, fundamental for the sciences of man” (J. PIAGET, *Le scienze dell’uomo*, Universale Laterza, Bari 1983, p. 81).



Visual, Haptic and Urban Design

| COLOR
| LIGHT
| ARCHITECTURE
| LANDSCAPE
| DESIGN FOR THE COMMON GOOD

Territorial innovation, tourism and sustainability

ANDREA ARCORACI ^A | ANDREA DI SALVO ^B | PAOLO TAMBORRINI ^C

Abstract

There are several reasons why it is important and necessary to concern about Travel & Tourism today, one of those is evident, it is one of the world's largest economic sectors (WTTC, 2019) and generates prosperity across the world. Despite this sector favors regional development, on the other hand, it has led to a range of sustainable issues in destinations and systems (Saarinen, 2008). By 2030, UNWTO forecasts international tourist arrivals to reach 1.8 billion, to tackle this considerable flow and maintain the sustainability of complex tourism system will necessary for policymakers to take fast and integrated decisions (Jakulin, 2017). Technology will play an essential role in the organization of the tourism systems, for example it already contributed to the flourishing of sharing economy, offering to travelers to access a wide range of products and services with more competitive price (Shaheen, S.A. Mallery, & Kingsley, 2012), enabling more contact between tourists and locals (Molz, 2013; Tussyadiah & Pesonen, 2015) and contributing to employment and local economy (Fang, Ye, & Law, 2015). According to the many possibilities to generate a positive impact through technology in Travel and Tourism sector, our research aims to explore the capabilities of design to use technology as a political tool, to mitigate impacts and diversify the tourism experiences more sustainably. Our strategy tries to use technological and analogical tools to relate things, people, stories, cultures and much more in order to generate design-results that open scenarios and opportunities so far unexplored by more traditional tourism. The project discussed in this paper focuses on tourism in short distance, principally as a means to strengthen the connection of people with their territory and reduce the impact of Travel & Tourism in long distance, in a scenario where travelers and tourists increase exponentially every year.

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KEYWORDS:

| Tourism
| Sustainability
| Systemic Design
| Territorial innovation

Introduction

The high capability of tourism to generate prosperity across the world, in the last decades, caught the attention of many institutions and researcher that started to address both the positive and negative impacts of this mega-industry. Travel and Tourism is one of the world's largest economic sectors (WTTC, 2019) and it has significantly contributed to the growth of many destination areas. In the other hand, tourism is linked to many negative impacts related to potential problems under the environmental, social, cultural, economic and political aspects, in destinations and systems. (Saarinen, 2006). Many scholars in the field of tourism investigated the topic of the negative impacts of this industry, some of those, for example, underline the over-emphasis on growth or gross domestic product (GDP) as a possible critical point and encourages more attention to quality development (Hall, 2009). In order to have a clearer vision about sustainability in tourism, it is important to clarify that the idea of sustainability was transferred from the ideology of sustainable development, following the publication of the Brundtland Commission's report *Our Common Future* in 1987 (WCED 1987). The concept of sustainability thus remains strongly connected to the three integrated elements: the ecological, sociocultural, and economic ones. In addition, other significant principles are futurity, equity, and holism (Redcliffe & Woodgate, 1997). This sudden and growing interest about sustainability can be

linked also with revolutionary studies in the 60s and 70s, discussing the impacts of economic and population development and the limits to growth (Meadows, Meadows, Randers & Behrens III, 1972). The revolutionary debate on the limits to grow has strong relations with tourism industry, the dramatic growth in international tourism from the 25 million trips of 1950 (WTO, 1993) to 1.8 billion international tourist arrivals forecast by UNWTO raises a crucial question about both the future and the sustainability of this industry. This considerable growing flow, as discussed above, causes not only a great contribution to our modern economical system but also has a significant impact on environment and ecosystem. For instance, tourism significantly contributes to the increasing greenhouse gas (GHG) emissions in the atmosphere at the global scale, these emissions can be attributed to travel, transport, accommodation, and their related activities (Pan et al., 2018). It is noted that the major emissions in transport (related to the transport of tourists) are attributed to aviation, accounting for 40% of tourism's contribution to CO₂ (i.e., direct energy use), followed by cars (32%) (Scott et al., 2008). Peeters and Dubois (Peeters & Dubois, 2010) found that to target CO₂ emission reduction for sustainability, improvements in technology alone are not enough. In order to achieve considerable goals, we need not only to revolution transport modes, but we have also to modify our destination choice criteria (Peeters and Dubois, 2010). According with those significant data and considerations about one of the many critical impact in tourism sector (greenhouse gas emissions), we can confirm that in the near future tourism without long travel distances will be necessary. (Peeters and Dubois, 2010, Becken, & Hay, 2007, Dubois et al 2011). Following this direction, the goal of this work is to investigate possible ways to stimulate and to make the proximity tourism more attractive. Despite proximity tourism involves oppositions for many people, for instance the too familiar and mundane perception referred to places near home that make them unattractive (Jeuring & Haartsen, 2017), this seems the right time to start wondering: how these mundane and familiar places might be revalued and seen by a new perspective (Soria & Llurdés Coit, 2013); which strategies could be effective to encourage tourism near home (Gren & Huijbens, 2014). The proximity tourist experiences need to be far from conventional logics, related to traditional tourism, and closer to the specific needs of local tourists. Following this idea, a holistic territorial analysis was carried out with the consequent hypothesis of the application of the design theories in a real case study. In consideration of all these aspects, this paper aims to understand the limits and opportunities of proximity tourism in a real context and, at the same time, provides design strategies for tourist product-service aimed at local tourists.

Digital tourism and territorial innovation

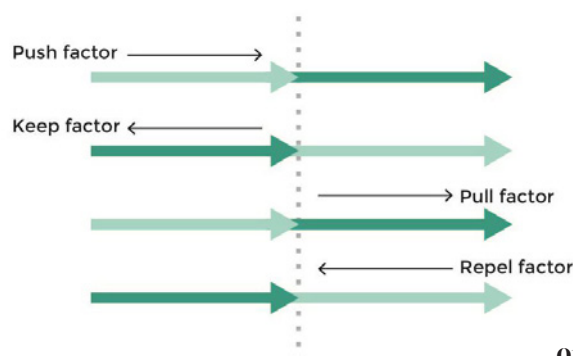
Many scholars noted that the growth and expansion of the internet each year is increasingly evident, the positioning and promotion of tourism products within the various online resources is rising (Jansson, 2018, Karpova, 2013, Kofler et al., 2018, Narangajavana et al., 2017), causing significant revolutions throughout the system. The tourist experience is increasingly mediated by ever growing list of innovative ICTT gadgetry: smartphones, smartwatches, tablets, phablets and much more (Dickinson et al., 2014, Neuhofer, Buhalis, & Ladkin, 2014, Wang, Park, & Fesenmaier, 2012, Wang, Xiang, & Fesenmaier, 2016). The increasing use of digital devices within the experiences affects the dynamic and the roles in tourist system in several way. For instance, contents published and spread via Instagram, for example, can turn contributes to the cultural (re)coding of tourism places and practices (Jansson, 2018). Despite this phenomenon could represent a significant risk for a miscommunication of the territory, it can result also as an important key factor for a bottom-up revaluation and rising of attractiveness of unpopular places near home. In the other perspective from a top-down approach, social media also offer more destinations to marketing organizations, using a tool that reaches a global audience with limited resources (Hays, Page, & Buhalis, 2013). Despite these benefits, and many others highlighted by many scholars, the debate on the digital revolution within the tourism sector causes divergent opinions about the impacts of digital technology. Critical researchers have also argued that tourists in the digital era may experience a new form of alienation, the so-called "e liation" (Tribe & Mkono, 2017). This form of alienation can be the result of a super-connected tourist. In contrast to the traditional notions of tourism, this type of

dystopian behavior during the holiday seems to highlight an important loss of values such as regeneration, stress-free, relax and unplugged from everyday life that for a long time have been strongly associated with the tourism dimension. However, this is not the kind of tourism we will expect for the future, this clearly represents a misuse of digital technology and a lack of well-designed integrated user experience. Tourism is considered the biggest producer of experiences (Binkhorst &, den Dekker 2009) and treating it as an experience production system (Sundbo & Hagedorn-Rasmussen, 2008), open the possibility to design and evoke values and meanings through various contextual elements (Diller, Shedroff, & Rhea, 2008), that approach make the tourist experience more manageable. Following the idea of design as a political act (Papanek, 1971), design can collaborate to imagine and rebuild tourism experiences in a more sustainable way. Designers can do a lot of work, especially through designing experiences with a more ethical and responsible vision. Technology is clearly amazing and extremely powerful, but we strongly need to focus and reflect on desirable holistic results rather than focusing on the means of ICTT.

Proximity tourism

Most people choose to spend vacations near home, within their countries of residence (UNWTO, 2008). This phenomenon of vacation near home, recognized in popular jargon as “staycation”, has been arguably triggered by the economic crisis that emerged in the first decade of this century and has received some attention in the scientific field (Alexander, Lee, & Kim, 2011). Nevertheless, much is still left to be discovered, about the way physically proximate places can be or become attractive tourism destinations (Jeuring & Haartsen, 2017). This type of tourism, in addition to the reduction of the environmental impacts (Peeters and Dubois, 2010, Becken, & Hay, 2007, Dubois et al 2011) could stimulate a responsible behavior “by acting locally near home (as opposed to acting locally far away) and enhancing one’s own regional economy, local culture and social networks” (Jeuring & Haartsen, 2017). To encourage proximity tourism, is necessary, however, to consider many aspects: the meanings of time and distance in tourism culture, the subjectivity of distance and proximity and the motivation factors that drive the tourists. The distance factor in tourism received much attention. Larsen and Guiver (Larsen & Guiver, 2013) found that the role of distance in tourism experience is crucial, it helps people to better perceive the process of moving away from everyday life and the place understood as home. The concepts of distance and proximity are therefore not only physical parameters, they are also influenced by subjective factors that determine the perception of more or less attractiveness of a place (Jeuring & Haartsen, 2017). To better understand the objective and subjective aspects of distance and proximity, we can refer to the three “layers” of distance theorized by Larsen and Guiver (Larsen & Guiver, 2013). These three layers highlight the different aspects that influence spatial perception and explain how people to interpret distance and proximity in various ways (Larsen & Guiver, 2013).

01
Motivational forces for (im)mobility
(based on Spierings & van der Velde,
2013)



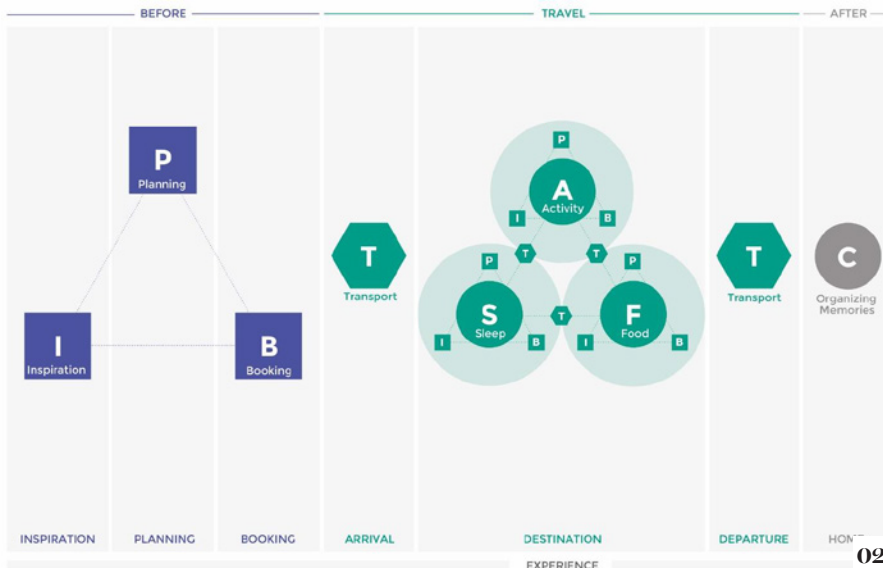
01

Another relevant topic within proximity tourism that need to be mentioned concern people motivations because people’s motivations are also driven by subjective factors. Travel motivations are most of the time linked to the need for people to discover the unknown and move away from everyday life. Prayag and Ryan (Prayag & Ryan, 2010) argue that motivational forces influencing mobility are push and pull factors [Figure 1]. The push factors represent the place recognized as a house that is perceived as unattractive, while the attraction factors refer to the foreign place, associated with the tourist destination. In addition, Spierings and Van Der Velde (Spierings & Van Der Velde, 2013) integrate the factors of maintenance (referred to the place recognized as home) and repulsion (referred to the foreign place) that are reasons for immobility [Figure 1]. All these factors influence the perception of attractiveness or non-attractiveness of a place (tourist destination) and have a fundamental role in the perception of proximity tourism.

Methodology

Tourism is a complex and dynamic phenomenon (Heath & Wall, 1992, Przeclawski, 1993). In order to address this dynamic complexity, the systemic approach plays an important role (Heath & Wall, 1992). In addition, we can say that complex tourism system is an open system, it means that the behavior of the tourism system can be understood only in the context of its environment (Gharajedaghi, 2006). Following these important criteria, the research was conducted through the interchange of global and local vision. The research methodology can be subdivided in three main phases:

- 1. The first phase, with a more global vision, involved an investigation about the state of art of tourism in terms of: organization systems, product-service and phenomenon related with proximity tourism, trends and paradigms that characterize that sector and beyond, and the impact of digital technologies on tourism context. To follow, was built a customer journey [Figure 2] (subdivided in three main phases: before travel, travel, and after travel) with purpose to understand better the dynamics of travel in the era of digital technology. Its categorization has been also useful to mapping all the service and product analyzed.



Finally, as result, four guidelines have been developed to lead the design process and make experiences more suitable and engageable for the context of proximity tourism. The guidelines follow the limits and the opportunities highlighted in the literature review.

They are:

- Escape from the daily routine. Transporting the user to another dimension far away of everyday life and stimulating his exploratory skills.
 - Not cheap. The users have not to perceive service-product of proximity tourism as a second-best option of traditional tourism, but as a different choice.
 - From user to collaborator. The concept is to include users within the organization of experiences. Users are not only considered as consumers of services but after a stratification of experiences can propose experiences or collaborate with experts within the organization.
 - Gamification. Use of the gamification to improve, motivate and stimulate the users during the experience. The use of analogies with traditional travel symbols is one of the key aspects.
- 2. Following the Systemic Design Methodology (Bistagnino, 2011), was conducted a holistic research of territory with the aim of hypothesizing a case study and evaluating the scalability of the project in relation with the specific characteristic

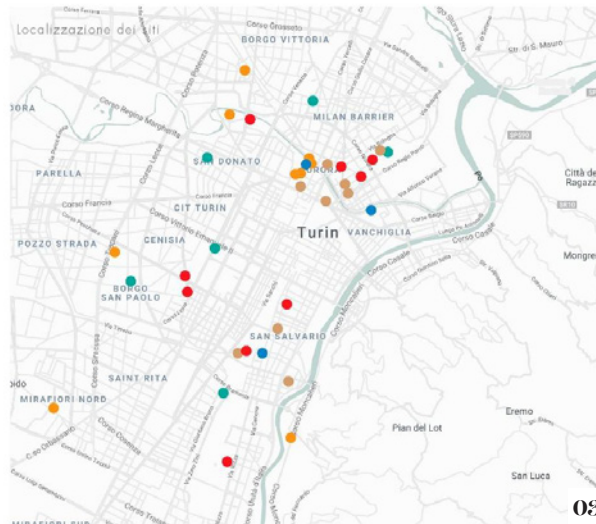
02

Customer Journey of tourism in the era of digital technology.

of territory. The territory concerns the metropolitan area of Turin (Italy). Many data were collected from this territory under several aspects, and a vast investigation was conducted in relation with proximity tourism; all the phenomena already present in the territory were analyzed and a list of possible valuable topics of travel experience was pointed out [Figure 3]. For each topic that emerged from the holistic research, valuable places were identified. To follow, the aspect related to transport was inspected with a focus to public transport, based on the location of these places [Figure 4].

Turin case study
Topic:
Urban Regeneration

- 9 Private Residences
- 3 Education
- 6 Arts / Culture
- 9 Commercial/ Offices
- 9 Public spaces / Social spaces

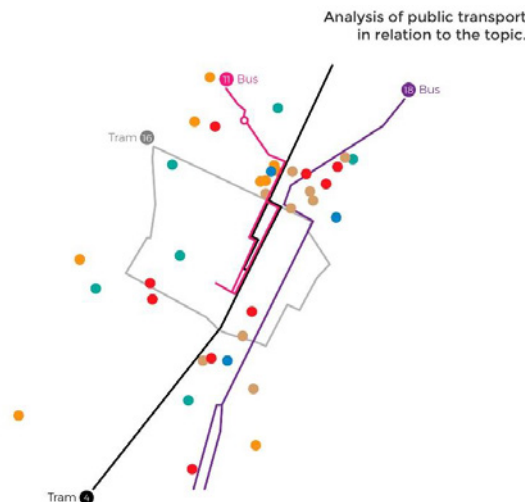


03

The third phase concern the design concept. The travel will include a series of experiences designed for a specific context involving many actors of the territory. During the travel experience will be provided to the user a balanced mix of digital and analogue tools that will support and stimulate him within the experience. The simultaneous presence of virtual and real is a crucial factor in order to avoid the so-called “e-lienation” effect discussed in the literature review (Tribe & Mkonon, 2017).

Turin case study
Topic:
Urban Regeneration

- 9 Private Residences
- 3 Education
- 6 Arts / Culture
- 9 Commercial/ Offices
- 9 Public spaces / Social spaces



04

Some tools regard, for example, a personalized paper map of the territory that will suggest meaningful insight to the user driving and disorienting him during the trip. The disorientation factor could alter and modify the perception of familiar place and then satisfies the necessity of users to escape the mundanity of everyday life (Salazar, 2012). Another tool provided to the user will be a mobile app, this digital tool allows the user to enjoy specific contents and

03
Example of places mapping. Turin case study, Urban Regeneration topic..

04
Example of places mapping. Turin case study, Urban Regeneration topic, detail of public transport.

features of experiences (i.e. augmented reality contents), it contributes to involve him within the community and provides to him a “digital suitcase”; a special section in which users collect and share memories of the tourist experience. The concept is characterized also by an idea of “openness”, the goal is to reduce the barrier between the core of the internal organization and the external actors. In that direction, we would offer the possibility of collaboration to local actors (every kind of citizen) who reach a certain degree of experience with the system.

Once this level of experience has been reached, external actors will also be able to participate in the planning and design of tourist experiences. However, everyone will deal with the design of experiences need to follow specific guidelines and criteria drawn up within an official “Instruction Manual”. This manual aims to ensure that the project’s values and objectives are maintained over the long term.

Conclusion and discussion

The research paper aims to provide a series of valuable insight to the designing of tourist experiences specific for proximity tourism. One of the main innovative contribution to the domain of proximity tourism concerns the introduction of a collaborative strategy that proposes to actively involve all the local actors. This kind of dynamic should trigger the capability of citizen to associate himself an active role in the project, rather than a passive one. The final goal is to offer to the citizen the possibility to create and share interesting contents (e.g. story, knowledge about places, skills, performance and so on) with the community within experiences, turning that in the otherness (Salazar, 2012) for the other citizen. Furthermore, in a world increasing globalized and characterized by a multiethnic coexistence, the citizen can also meet the unfamiliar within the familiar places creating a right balance between these two aspects holiday (Cohen, 1979, Edensor, 2007); they could discover different cultures, new stories, different foods and “make a travel without travelling”. However, despite we define these experiences as “tourist travels”, as highlighted in the guideline, is important to ensure that citizens don’t perceive this tourist product-service in proximity as a completely substitute of traditional tourism. The objective is to embed that kind of tourist experiences in the middle between the everyday life and the traditional tourism. To validate these theories, we intend to continuous the research planning some experimentations in the next work. The first step will be the develop of one topic emerged in the holistic territorial research (considering the needs and desiderata of local tourist) and then the designing of a system of collaborations and sharing of value within the territory. Will be evaluated: the capability of engagement of digital and analogue tools provided to the users, the relationship between the familiar and unfamiliar aspect within the experience and how this strategy affects the motivational forces (Spierings & van der Velde, 2013).

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