

Digital Strategies to a Local Cultural Tourism Development: Project e-Carnide

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Abstract

Digital humanities and smart economy strategies are being seen as an important link between tourism and cultural heritage, as they may contribute to differentiate the audiences and to provide different approaches. Carnide is a peripheral neighbourhood of Lisbon with an elderly population, visible traces of rurality, and strong cultural and religious traditions. The academic project e-Carnide concerns its tangible and intangible cultural heritage and the data dissemination through a website and a mobile app, with textual and visual information. The project aims to analyse the impact of technological solutions on cultural tourism development in a sub-region, involving interdisciplinary research in heritage, history of art, ethnography, design communication and software engineering and the collaboration between the university and local residents in a dynamic and innovative way. Framed by a theoretical approach about the role of smart economy for the cultural tourism development in peripheral areas, this paper focuses on a case study, dealing with documents, interviews and observations, in order to understand how the e-Carnide project evolves. The study comprises an analysis about the strengths, weaknesses, opportunities and threats (SWOT analysis) of the project in view to realize its social and cultural implications and to appreciate how it can be applied in other similar and enlarged projects. Results of the research indicates that the new technological strategies can promote the involvement of the population in the knowledge of its own heritage as a factor of cultural and creative tourism development centred on an authentic and immersive experience of the places.

Keywords: *cultural tourism; heritage; peripheral area; smart tourism; digital humanities*

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Abstract

Digital humanities and smart economy strategies are being seen as an important link between tourism and cultural heritage, as they may contribute to differentiate the audiences and to provide different approaches. Carnide is a peripheral neighbourhood of Lisbon with an elderly population, visible traces of rurality, and strong cultural and religious traditions. The academic project e-Carnide concerns its tangible and intangible cultural heritage and the data dissemination through a website and a mobile app, with textual and visual information. The project aims to analyse the impact of technological solutions on cultural tourism development in a sub-region, involving interdisciplinary research in heritage, history of art, ethnography, design communication and software engineering and the collaboration between the university and local residents in a dynamic and innovative way. Framed by a theoretical approach about the role of smart economy for the cultural tourism development in peripheral areas, this paper focuses on a case study, dealing with documents, interviews and observations, in order to understand how the e-Carnide project evolves. The study comprises an analysis about the strengths, weaknesses, opportunities and threats (SWOT analysis) of the project in view to realize its social and cultural implications and to appreciate how it can be applied in other similar and enlarged projects. Results of the research indicates that the new technological strategies can promote the involvement of the population in the knowledge of its own heritage as a factor of cultural and creative tourism development centred on an authentic and immersive experience of the places.

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JEL Classification: Z320 Tourism and Development

1. Introduction

Tourism development towards destinations where heritage is a decisive factor implies technological features, smart strategies and the support of digital humanities to provide knowledge and experiences about its cultural values and meanings. In turn, places where the tourism is increasing also needs to provide data about their identity using new communication models. Digital technology may present the modularity advantages to differentiate the audiences and to provide them with different approaches to the local cultures.

The relationship between tourism and heritage (Benton, 2010; Waterton & Watson, 2015; West, 2010), even if described as a tension (Nuryanti, 1996), requires a continuous reflection about its features and effects, both in the tangible integrity and the intangible authenticity.

The growth of cultural tourism in the last decades (Richards, 2011; Smith & Richards, 2013; UNWTO, 2015) and its impacts in destination places (Page & Hall, 2003; Weaver, 2005) and in peripheral areas (Blomgren & Sørensen, 1998; Hall, Harrison, Weaver, & Wall, 2013; Turner and Ash, 1975) allows further reflections, contributing to the constant updating of these subjects, accompanying the technological progress and the emergence of new projects.

Smart economy, which “has become a buzzword and a strategic priority for tourism development” (Gretzel, Reino, Kopera, & Koo, 2015, p. 41), broadens the universe of data dissemination, by providing information to all, personalized by everyone, wherever they are, becoming an important tool to deliver knowledge about heritage and to increase tourists’ experience (Buhalis & Amaranggana, 2014; Neuhofer, Buhalis, & Ladkin, 2015; Xiang, Wang, O’Leary, & Fesenmaier, 2015).

The connections between the three axes of tourism, heritage and digital technology will be studied through the description and analysis of the academic project e-Carnide which intends to stablish connections between the Europeia University and its neighbourhood. Carnide is a peripheral area at the Northern end of Lisbon, marked by aging residents, a remaining rurality confronting the urban surroundings and a remarkable heritage, both tangible and intangible with strong cultural and religious traditions.

Figure 1. Location of Carnide and the Europeia University in the Map of Lisbon



Photo: Project e-Carnide, 2016.

The project consists in the heritage inventory and its dissemination through a website and a mobile app, involving wireless and mobile technologies that are accessible to everyone. The goals are: 1) to analyse the impact of technological solutions on cultural tourism development in a sub-region, involving interdisciplinary research in heritage, history of art, ethnography, design communication and software engineering; 2) to reinforce the relationship between the university and its local communities in a dynamic and innovative way; 3) to allow students an opportunity to apply theoretical knowledge in an empirical activity, developing research skills and critical analysis and collaborative work. After a synthesis of the theoretical frame of these issues, we'll present a description of the case study and an analysis SWOT of the project.

2. Literature Review

The relation “centre-periphery”, or “core-periphery” is defined in the *Encyclopedia of tourism* as “such as an urban concentration of demand, and more distant, less powerful areas which are often suppliers of wilderness, rural and dispersed tourism opportunities (Wall, 2000, p. 76).

The peripheral areas definition might be made in opposition to the central areas, according to the central place theory designed by Walter Christaller (Christaller & Baskin, 1966), however updated (e.g. White, Engelen, & Uljee, 2015). According to this theory, the urban centres, as decision centres too, while providing a range of services, implies asymmetric urban-periphery interactions. A collection of case studies of tourism in several peripheral regions in Europe (Brown & Hall, 2000) characterizes them as having poor amenities, aging infrastructures and old or decreasing population, in a frame of a low level of economic activity.

Related issues are framed in the wider context of the studies on tourism and tourism geography far from the second half of the twentieth century (Brown & Hall, 2000; Hall & Page, 2002; Müller & Jansson, 2006; Pearce, 2002; Plog, 1974, 2001; Wachowiak, 2006; Williams, 1998). Dear and Flusty (1999) intended to deal this issue within a postmodern urban process, as well as Evans (1998), Page and Hall (2003), or Weaver (2005) have done, while stressing the fact that relevant tourism activities occurs outside metropolitan areas.

The questions about the relationship tourism and outlying areas were analysed by, among others, Turner et al. (1975) who distinguished central metropole and periphery, labelled as an ever-changing “pleasure periphery”, and Blomgren and Sørensen (1998) who studied the peripherality through objective characteristics of destinations and tourists' perceptions. Otherwise, some authors (e.g. Arp, 1990; Besculides, Lee, & McCormick, 2002; King, Pizam, & Milman, 1993; Mazón, Huete, & Mantecón, 2009; Williams & Lawson, 2001) have been focused on the residents' perceptions on tourism effects. Other authors, such as Lundgren (1982), Hohl and Tisdell (1995) and Wanhill (1997), studied the economic features of tourism in peripheral areas.

More recently, the case studies presented at Müller and Jansson (2007) adverted that tourism development differs from northern to southern peripheries, recognizing a “tension between an often recognized lack of tourism development and a rejuvenated interest in peripheral tourism” (p. 4). These studies, even considering that tourism has an important role in peripheral areas economic growth, allowed the perception that, in general, only few positive accounts are available in this context, so the phenomenon could be alleged as a threat.

Hall et al. (2013), reflecting Hall previous approaches (Hall, 2007; Hall & Boyd, 2005; Hall & Page, 2002) recognized the negative context associated with the concept of ‘periphery’ related to the urban-rural interface or peripheral urban areas, but assumed that “tourism has become used as a means to provide value to lands that are otherwise perceived as waste and unproductive” (Hall et al., 2013, p. 77). So, they conclude that peripheral areas must be regarded as a special concept with economic and social attributes (cf. id., p. 87), which are singular and changeable according to the type of tourism sheltered.

Researchers now tend to evaluate positively the circumstances of tourism in peripheral areas. Barbini and Presutti (2014) points the activation of a tourism destination in these areas as an informal process stimulated and driven by tourists, despite references to tangible and intangible heritage or other marketing approaches. Moreover, heritage can move tourists to peripheral territories, seduced by the promise of authenticity in unspoilt places (Staiff, Bushell, & Watson, 2013). “As more people travel to remote places in search of unique high-quality experiences, seeking unspoilt environments and places, heritage tourism good returns to

those capable of providing a quality destination and exceptional visitor experience.” (Salazar & Bushell, 2013, p. 193) So the relationship between heritage places and tourism seems as or more complex in peripheral than in central touristic points, imposing, as observed by Jenkins (2015) an analyse about the role of tourism in developing areas, identifying its critical issues, both internal and external, and verifying its opportunities and threats.

The relationship between tourism and heritage is assumed as inevitable, despite its implicit opportunities and threats (Benton, 2010; Boniface & Fowler, 1993; Kirshenblatt-Gimblett, 1998; Nuryanti, 1996; Timothy & Boyd, 2003; Waterton et al., 2015; West, 2010). Due to its potential to generate income, tourism may provide heritage preservation, but mass also involves recognizable risks (Harrison, 2010; Messenger & Smith, 2010; Nuryanti, 1996), in both tangible and intangible values.

The heritage perception and management are a lively process, conjoining the promotion of their resources and cultural values with a suitable offer according the expectations (Smith et al., 2013). Nuryanti (1996) pointed the relationship of heritage and tourism as a tension between tradition and modernity, which defines how the past is perceived by the tourist. The heritage presentation for tourist consumption is viewed as a “staged authenticity” (MacCannell, 1999), or a “commodified heritage” (Timothy et al., 2003, p. 240), which means a modernisation of antiquity affecting its genuineness.

To some extent, tourism generates a risk of inauthenticity, requiring a balanced curatorship between an accurate presentation of heritage and tourism development goals. Similarly, MacCannell (1999) also notes the tourism effects in heritage authenticity, describing tourist attractions as “differentiations” or “elements dislodged from their original natural, historical and cultural contexts” (p. 13), while “the displacement of actual human adaptations by manufactured ‘tradition’ and fictionalized ‘heritage’ now extends into every detail of life” (p. 198). Heritage may be settled to correspond to an idealised past and to accommodate to the tourist tastes, desires or expectations (Burnett, 2001; Timothy et al., 2003). As well as it can play a political role to create or to underline a pretended social or cultural identity. “Promoting the heritage if the core society is the main instrument of socialisation, assimilating ‘outsiders’ into the values of the core while continually reasserting and reinforcing it to insiders and outsiders alike.” (Ashworth, Graham, & Tunbridge, 2007, p. 91)

Beyond the uniqueness of each site, reporting to a singular fact or phenomena of the past, its meanings and significances are reinterpreted in different ways, not necessarily contradictory, but complementary (Prats, 1997). As Lazzarotti (2003) had observed, “le tourisme se nourrit, même en partie, des singularités locales, il ne s’oppose donc pas au patrimoine qui, lui, les entretient et qui favorise ainsi en retour le tourisme” (p. 101) and “loin de s’opposer [...], tourisme et patrimoine se valorisent et se renforcent réciproquement et, de plus en plus, inséparablement” (id., *ibid.*). As viewed about tourism in peripheral areas, also Lazzarotti (2003; 2011) evaluate positively the bond that involves both tourism and heritage.

One of the most relevant gains that tourism brings to the heritage sites is its musealization. In fact, heritage sites need a museographic display with textual and visual data (Karp, & Lavine, 1991), used to decode places’ functions and meanings and to provide connections between their different components (Hede, & Thyne, 2010; Olick, Vinitzky-Seroussi, & Levy, 2011).

The tourist relation to heritage is as cognitive, as affective or associate (McIntosh & Prentice, 1999), or there are different modes of tourist concern with inheritance representations, such as amusement, change, interest, rapture, or dedication (Lengkeek, 2008). Besides the inheritance representations, Lengkeek (2008) also considers its significance and “the degree of connection visitors to the object expressed in modes of experience” (p. 17). Somehow, these authors confirm the statement that all tourists claim authenticity, but point to different conceptualisations about what is an authentic, or real or genuine, experience.

Cultural heritage decoding uses digital technology to a more operational efficiency in data dissemination, as data exchange from the analogical to a digital support enables new specific affordances: reactive, interactive and performative capacities; multimedia and networking capabilities; volatile signs; and modularity (Ryan, 2004, p. 416). Benefits of digitization in heritage promotion was recognized and mainly analysed from the 2000s: “Digitization contributes to the conservation and preservation of heritage and scientific resources; it creates new educational opportunities; it can be used to encourage tourism; and it provides ways of improving access by citizens to their patrimony.” (DigiCULT, 2003, n.p.) Then, it was pointed out that the cultural industries, as cultural tourism, should maximize the impact of the heritage digitization investment (cf. European Commission, Directorate-General Information Society, 2002, p. 72). A relevant literature about the relationships between digital technology, heritage and tourism has been

produced since then (e.g. Cameron & Kenderdine, 2007; Cipolla, Castro, Nicol, Kratky, & Cipolla-Ficarra, 2011; Kalay, Kvan, & Affleck, 2008; Labadi & Long, 2010; Logan, Craith, & Kockel, 2015; Rusalić, 2009; Stanco, Battiato, & Gallo, 2011). Digital inventories are to be applied beyond the academic threshold, in promoting knowledge and tourism purposes, namely, in tourist experiences, as mobile devices do.

Once the use of mobile devices has been rapidly growing and are remarkably increasing its capabilities, the inventories dissemination through wireless phones and tablet seems appropriate. In 2015, *Journal of Tourism* dedicated a special issue to smart tourism, where it is defined as “tourism supported by integrated efforts at a destination to find innovative ways to collect and aggregate/harness data [...] in combination with the use of advanced technologies to transform that data into enhanced experiences” (Gretzel, Reino, Kopera, & Koo, 2015, p. 41). However, bucking those who consider that smart tourism automatically enhances the tourism experience, these authors report the gap of digital exclusion even if considering that “the focus on co-creation and meaningful experiences simultaneously suggests that smart tourists will have a high motivation to process the information” (Gretzel et al., 2015, p. 45). Smart tourism experiences are based on technology that incorporates the network benefits of ubiquitous wireless connectivity.

The potential of smart economy on tourism development has been studied, in particular, about destinations infrastructures and services (Buhalis & Amaranggana, 2014; Tussyadiah & Inversini, 2015; Xiang, Tussyadiah, & Buhalis, 2015), but other studies demonstrate these tools’ capacity to increase heritage tourism experience (e.g. Neuhofer et al., 2015). Other more specific issues, as mobile apps, have been approached by Wang and Xiang (2012), who found that travellers combine different apps for different travel purposes, and Lombardo and Damiano (2012), while Dickinson et al. (2014) organize travel apps and their capabilities into various functional categories, including information and context awareness. Xiang et al. (2015) had identified, in traditional online travellers, a new trend of them who are using internet in a creative way for trip planning and to find more authentic experiences. In fact, digital supplementary tools, combining various forms, such as text, sound, video, graphics, or georeferenced contribute to enhance users’ perception of their surrounding (Economou, 2015, p. 218) and to locals’ identity awareness. So, smart or connected tourist products, combining data aggregation and real time synchronization, offer expanding opportunities for new functionalities, like the co-creation and personalization of tourism experiences (Neuhofer et al., 2015). Even if the use of smart technology is still limited in practice, its growing implementation in everyday life allows to consider it an appropriate tool connecting heritage and tourism.

3. Methodology

The project e-Carnide was conceived as an exploratory activity to attempt the groundwork and redefine methodologies and instruments that will be applied in upcoming multidisciplinary projects, also involving several schools, or departments, of the Europea University and the surrounding communities. The exploratory analysis aims to revise the proceedings and the flow of activities between the involved sectors, identifying the strengths and weaknesses of each of them in all the process.

The research has been designed as qualitative and descriptive, which allows “observations about physical aspects of behaviour, descriptions of settings, and other characteristics of the environment” (Gorman & Clayton, 2005, p. 5) about the case in study. Research components to data collection were literature review, participant observation and informal interviews, following a methodological *triangulation* (Berg, 2001, p. 4).

The literature review, conducted to form the basis of the conceptual framework, had two central approaches: analysis and synthesis of theoretical and empirical results in the different fields of heritage, history, ethnography and tourism in peripheral areas; search and evaluation of primary and secondary historical sources, determining their level of credibility and reliability.

Participant observation, allowing an insider’s perspective (Jorgensen, 1989; Schensul, Schensul, & LeCompte, 1999), was applied to obtain data about two correlated intangible occurrences: a fair and a Catholic procession in honour of Our Lady of the Light. Informal interviews, not requiring a structured guide or predetermined questions (Berg, 2001, p. 70), were held with signalled informants: local authorities, the owners or the Persons responsible for of inventoried spaces and neighbourhood inhabitants. As informal conversations, the interviews weren’t recorded, but the interviewers took notes of provided data, increasing the achievements of fieldwork observation (Cohen & Crabtree, 2006).

This initial stage of the research allowed a preliminary identification of cultural heritage resources: architectural and archaeological heritage structures; ethnological objects; historical objects; objects of art; spiritual cultural elements. In addition, the research collected complementary data, such as archive, library and audio-visual material. An analysis of available heritage inventories related to the case study was conducted as a basis for the further work. The inventory of intangible and tangible cultural heritage followed the guidelines defined by the Council of Europe (2012) and the national standards delivered by the Direção-Geral do Património [Directorate-General for Heritage] (2015), from which the inventory-form was designed.

The students in modules Cultural Heritage, Ethnography and History in the Tourism course are in charge of the inventory fieldwork (data collection) and filling up the inventory-form (data organization). Data will be organized in a digital database to feed a website and a mobile app, in construction by the students in module Mobile Interfaces and Usability in the Informatics Engineering course. The students of the modules Communication and Multimedia Design in the Design course, who defined the concept with a headline, a logo and an icon to the store and wireframe, are working on the layouts and the interactive mockup. During the test and validation of the digital product, an analytic report shall be prepared providing support for future multidisciplinary research projects. As this project is conceived as a background research engaged in a strategic planning for a long term action, the SWOT analyses (Pahl & Richter, 2007) is used as a methodological tool to evaluate and fix its objectives and to align internal activities with the external reality.

4. Results

Data collected through documentary research, participant observation and informal interviews, endorsed a description of the historical context and the tangible and intangible heritage, which underlies the inventory constructing and its application on a website and app.

Carnide historical context

The human presence in Carnide is registered far from Neolithic. During the Romanisation (1st century), pre-existing settlements developed into rustic *villas*. The decline of the Roman empire and the Germanic tribes' invasions didn't disrupt the agricultural development, which, during the Muslim domain (8th-12th centuries), have been increased with the introduction of new crops and products that supplied the city. By the time of the foundation of the Kingdom of Portugal and the conquest of Lisbon from the Moors (1147), Carnide had reinforced its agricultural character. At the end of the 12th century, a religious and administrative organization was created, with the formation of a large rural parish. The toponym Carnide appears on a document dated from 1308, although suggesting an older use.

Besides the smallholders and local tenants, the King and the Cistercian Order owned large properties in Carnide. The rural agglomerates and tracks expanded and consolidated its structure, which determined the location of the church of Saint Lawrence, founded in 1342. The hermitage of the Holy Spirit is also mentioned, together with an attached small leprosarium. The cult of the Holy Spirit, widespread during the 13th century, originated an important pilgrimage and an annual procession. In the surroundings, there was the Machada diving fountain, whose waters were renowned for its healing properties. The first systematic settlement was made along the road between the Machada fountain and the church of Saint Lawrence, defining what is now known as the old Carnide.

The area was recognized in Lisbon by the waters and the quality of the air, with strong and healthy winds, so the court and the noble families moved here, particularly, when major epidemics struck the capital. In the 16th century, beside the Machada fountain, the Princess D. Maria, daughter of king D. Manuel, ordered the construction of a new church dedicated to Our Lady of the Light and, adjacent to it, a large building to house the brotherhood, who provided support to the residents and managed the pilgrimages. Next to the church and replacing the old hermitage. D. Maria also commanded an hospital, for which maintenance she willed goods and incomes.

The urban core was being transferred to the nucleus church/hospital, setting the distinction with the surrounding areas remaining rural, conducive to setting up convents of cloisters and contemplatives orders,

as the Carmelites, and manor farms. Nearby, there grew an urban cluster, organized by parallel streets intersected by small alleys traced almost orthogonally, as was usually the case with Portuguese settlements from the 16th-17th centuries. Lately, at one end of the core, taking advantage of the ground, a small rural market has been held, beginning a new social central point which was being converted into a square provided with a bandstand. Farms were being set up near the urban cores or – as the Quinta do Bom-Nome where the university is installed – dispersed far from the centre.

The bandstand square, with small restaurants and terraces, is the centre of the historical site and the most dynamic point of Carnide, attracting foreign visitors, also seduced by the authenticity of the surrounds: the old urban clusters, with its secular popular houses; rural farms along the walled lanes (*azinhagas*); remaining traces of this rurality, like the public washhouse. Carnide is now a neighbourhood where the hints of the past and the new gated condos are mixed, and a new type of inhabitants emerge in the midst of a predominantly aging population. In this process, the old Carnide is being progressively demarked of its surroundings, becoming fragile under the pressure of the urban development in the area.

Figure 2. Bandstand in Carnide’s main square



Photo: Project e-Carnide, 2016.

Carnide tangible heritage

The tangible heritage inventory includes mostly architecture and addorsed elements, like Portuguese tiles. It may be organized into three global sets: religious, secular and vernacular architecture.

In religious architecture, churches and convents were inventoried.

The primitive church of Saint Lawrence, with an attached cemetery, was ruined by the 1755 earthquake, only a few medieval traces remaining, integrated in the actual building which only preserves the original plan. Sets of tiles from the church, now dispersed in museums or public spaces in Lisbon, were also inventoried.

The church of the Light, built between 1575 and 1596, was designed by Jerónimo de Ruão. Only the main chapel, with its monumental mannerist reredos, and the transept remains of the original building, also strongly hit in 1755. The south façade integrates the Machada fountain.

Figure 3. Church of Our Lady of the Light, in Carnide



Photo: Project e-Carnide, 2016.

Two of the most relevant architectural complexes are the convents of the Order of Discalced Carmelite: the Convent of Saint Teresa, founded in 1642, on the outskirts of the old Carnide, to the female branch; the Convent of Saint John of the Cross, founded in 1681, which could accommodate about 600 friars.

In secular architecture, two neoclassical palaces are inventoried, one of them built over the ancient hospital, and five manor farm houses, some of them with remarkable decorative figurative tiles sets.

In vernacular architecture, the inventory lists such item as the bandstand or the public washhouse, and façades with particular elements, like reliefs or tiles. Also, toponymical items are inventoried, whose designation provides micro-narratives about the place.

Carnide intangible heritage

The intangible heritage inventory focusses on two moments where the participant observation was applied: the procession and the fair. Both of them are linked to the secular pilgrimage related to a miraculous legend dated from the 1463, held annually in September and with great projection in the region since the 17th-18th centuries.

The procession occurs on the last Sunday of September, culminating a month of local festivities. It opens with the cross, backed by the brotherhood banners, the stretcher of Saint Lawrence, the Carnide's patron saint, the Host under the canopy and, behind, at the end, the stretcher of Our Lady of the Light, on a fire engine, and the firemen brass band. The cortege begins after a solemn mass in the church of the Light and runs through the old Carnide. Along the ceremonial walk, there are more or less explicit marks that create a demarcation from daily life, understood as profane time. One of those marks is the people's appropriation of the procession: those who participate, integrated in the wards, praying the Rosary or carrying lighted candles; those who oversee, imposing silence and fulfilling known standards; those who watch, looking at who practices the ritual. Another mark is the bedspreads hanging over the windows and balconies along the route. As this is a Lisbon parish, on the outskirts, but near the city centre, it's difficult to distinguish outsiders and residents, although these later are scarce.

Figure 4. Procession of Our Lady of the Light through the streets of Carnide



Photo: Project e-Carnide, 2016.

The fair, throughout September, occupies the space adjacent to the church of the Light. There are about a hundred stallholders selling knick-knacks, pottery, basketry, clothing, fritters, sweets, pork and chicken barbecued and wine. The procession day is the best attended, but there is a border between the fair and the church, or between the noise from the multiple tents and the silence or the religious choirs. Mixed with the population, there are the Marchers of Carnide (which are part of a popular marches festival held in Lisbon),

dressed in theatrical and festive costumes, raising funds and being an expression of the sense of belonging towards the visitors.

Figure 5. Fair near the church of Our Lady of the Light, in Carnide



Photo: Project e-Carnide, 2016.

5. Conclusion

Carnide reflects the features presented by the literature about the peripheral areas (Brown & Hall, 2000), even considered as a “pleasure periphery” (Turner et al., 1975), unspoiled by tourism, but in a recognizable process of changing, by the arriving of a new population around the old core and by the local restaurants’ advertising traditional Portuguese gastronomy. The project e-Carnide included a reflection about the impact of tourism development in the neighbourhood, considering the possibilities of a positive economic growth (Hall et al., 2013; Staiff et al., 2013), but also the threats, as learned through several studies (vd. Müller et al., 2007).

While the literature underlines an ever increasing pressure on the heritage destinations, transforming them into a commercial consumer good, which may threaten their preservation, and the re-enacting of heritage goods for commercial and not identity motives, it’s recognized that this mechanism has direct consequences on the population who, feeling pressurized, tends to recreate the image expected by visitors. Both tangible and intangible heritage, are ready to serve the tourist who very often sees in them his own past, and not that of the natives (Prats, 1997).

E-Carnide project is about heritage, assuming its unavoidable relationship with tourism (Timothy et al., 2003; Waterton et al., 2015), analysing its opportunities and threats, in order to avoid adverse effects or tensions (Nuryanti, 1996) and to preserve local authenticity. The work achieved until now strengthened the

link between the university and the community surrounding in an outdoor research return policy. The inventory that has been done increased residents' curiosity and awareness about their own heritage. Implicit in the spelled objectives, the purpose of this project was focused not only on the tourists, but also on residents as cultural mediators of their cultures towards foreigners, delivering them their memories about the place, framed by the inventory results. It is thus intended to provide a tourist relation to heritage as cognitive as affective (McIntosh et al., 1999), enhancing the visit experience.

It's expected that data dissemination through digital technologies, providing a bigger visibility and above all a deeper knowledge of the cultural heritage, would create or reinforce the sense of belonging, especially concerning the residents. In Carnide, the strengthening of these links, that can be tied and untied in temporal and social dynamics, could contribute to the preservation of some still rural structures by exerting pressure against the economic groups who see them basically as plots for further building. In a more immediate perspective, the project development, having created a link between the community and the university, will establish a stimulating exchange between the two. In addition, among all the benefits that have been described about the impact of the heritage digitization investment (Cameron & Kenderdine, 2007; Kalay et al., 2008; Logan et al., 2015), the provision of information will provide a virtual, non-invasive, musealization of the heritage.

The SWOT analysis enables an evaluation of the project. Its assets and implications are classified into four evaluation categories for the purposes of the SWOT analysis: Strength and Weakness, addressing internal factors of the project; Opportunity and Threat, related to external influencing variables. With this analysis, it's expected to minimize the effect of weaknesses and maximize the strengths in posterior replications.

Table 1. e-Carnide SWOT analysis

<p>Strengths</p> <ul style="list-style-type: none"> - Multidisciplinarity – the several schools at the Europeia University may provide abilities in the scientific domains implied - Data organization – the project organizes textual and visual data dispersed on several sources - Reliability – the university certifies the information on the website and on the mobile app - No production costs 	<p>Weaknesses</p> <ul style="list-style-type: none"> - Difficulties in articulation the work of the several schools - Difficulties in standardizing the students' contributions
<p>Opportunities</p> <ul style="list-style-type: none"> - Affordability – the project will be affordable to all with a smartphone or a tablet - Innovation – there isn't any similar product in the community - Social return – the project includes interaction and social exchange with the community 	<p>Threats</p> <ul style="list-style-type: none"> - People who are digitally excluded - Poor dissemination of the digital products

The strengths related to the academic tasks are related to the multidisciplinary character, with the contributions of several disciplines and abilities in the domain of tourism and heritage studies, communication design and informatics engineering. As the project has been developed using current academic activities, there were no production costs in data organization, concentrating textual and visual documentation dispersed on several sources, and in its dissemination through a website and mobile apps. In addition, the research is credited by the University, which offers a higher level of reliability. Nevertheless, the multidisciplinary character implied some difficulties in articulating tasks and schedules of the several schools. Also, the different skills and competences of the students had hindered the required text standardizing.

The advantages of using smart technologies and, in particular, mobile apps in heritage data dissemination are one of the strengths of this project, which will be available, with no extra charge, to all residents and visitors, as well as to whoever will be interested, who have access to the net and commonly use devices such as smartphones and tablets. Since there isn't any similar product in the community, innovation and community return also are considerable opportunities of this project. However, the old residents are mainly digital excluded, which is a threat, along with the eventual poor advertising of the project.

The project e-Carnide had completed the stages related to data collect, inventory and layout design, which permits to recognize a positive impact in the local community, reinforcing and enhancing its sense of place and identity, and the importance of the residents' commitment to the research, contributing to increasing knowledge with their memories and life narratives. When the current and further stages involving the test and validation of the digital product and data dissemination through a website and a mobile app is accomplished, we expect to strengthen the relationship between the university and its surrounding community. We also hope to promote local tourism in Carnide, based on the knowledge of local history and heritage and their cultural meanings.

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