D5.2 Place-making, promotion and commodification of CH resources

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Statement of originality:

This deliverable contains original unpublished work except where clearly indicated otherwise. Acknowledgement of previously published material and of the work of others has been made through appropriate citation, quotation or both.

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1   EXECUTIVE SUMMARY

This study explores the role of place making and promotion in the commodification of cultural heritage resources and how digital technologies intertwine with these processes. This research examines whether locations have coherent strategies to appeal to consumers using cultural resources and attributes such as place promotion, product and quality. Analysis will centre on the contemporary influences and contribution of digital technologies in the exploitation of cultural heritage. The study adopts a culture economy approach, which is concerned with the exploitation of cultural products for achieving territorial development goals. These products comprise historical and pre-historical sites, landscapes, artisanship, languages, dialects, folklore, drama, literary references and visual arts. A further dimension under consideration is the watering down or 'Disneyfication' effect of commodification on place image and identity. This relates to practice or situations where cultural items, interpretations and rituals are homogenised or diluted to the extent that they are no longer meaningful or representative of local people.

Drawing on case studies of reshaping built environments across Europe, the study examines efforts to promote and produce distinctive place images using digital technologies, which are able to compete in an increasingly crowded virtual marketplace. The research further considers the economic role of localism, local initiatives and community action in taking responsibility for local cultural heritage. The case studies are:
- Empúries archaeological site on the Iberian Peninsula, Catalonia, Spain;
- the Monastery of the Holy Cross, Rostock, Germany;
- Palazzo Pretorio in Pontedera, an industrial town in the Arno Valley, Pisa, Italy;
- Talking Statues, Copenhagen, Denmark.

In addition to the case studies, a desk research chapter examines three larger scale examples to further illustrate how place making, promotion and commodification of cultural heritage resources have become intertwined with digital technology innovations. This includes:
- the digital operation of Shakespeare's birthplace, Stratford-upon-Avon, UK;
- a brief description of the UNESCO and Google partnership to virtually visit 19 European World Heritage sites
- the use of digital technologies in the Vatican Museum's Sistine Chapel to manage the effects of heighted tourist visits.

The results show that digital technologies such as Augmented Reality (AR) and dedicated mobile phone applications can be used to enhance visitors' experiences of cultural heritage and bolster the promotion of place and production of distinctive place images in the commodification of cultural heritage resources. This enhances visitors' engagement, interaction and enjoyment of sites, offering a new and exciting approach in public participation and engagement with cultural heritage. Various other, non-AR applications are used to facilitate planning, exhibitions, online presence, promotion and brand development, as well as preservation of cultural heritage.

While digital technologies can provide exciting windows and access routes into cultural heritage, there are also challenges around how to promote a deeper and more lasting engagement with cultural heritage. In this context, the practice of commodification appears to present a paradox to heritage promoters. The dilemma is how to attract visitors, preserve cultural heritage assets and maintain the cultural meaning(s) for local people, simultaneously. Part of the solution is increased diversification – both in terms of audience and employing a range of activities to avoid pressure solely on one attraction. Striving for equilibrium in the exploitation of cultural heritage promotes an increase in the diversity of activities, usage and education content, which helps to augment a more robust refashioning of cultural heritage sites as spaces of consumption.

Digital technologies have become critical in the creation and communication of distinctive place images and new ways of conception and engagement with cultural heritage. They have reinforced livelihood streams, planning, design and management of public spaces and reinvigorated the consumption of cultural heritage, making an important contribution to the sustainability of Europe's cultural assets. Heterogeneous strategies in the use of heritage sites have opened up new spaces of consumption and broadened choice of activities and audiences. This could help to reduce the negative impacts of commodification on attractions and, as such, makes an important contribution to the sustainability of cultural heritage and built environments, while simultaneously adding to economic and territorial revalorisation, as well as tourism development, even though the exact impact of digital technologies is hard to measure.

RICHES
Deliverable: D5.2
Place-making, promotion and commodification of CH resources

RICHES
RENEWAL, INNOVATION AND CHANGE:
HERITAGE AND EUROPEAN SOCIETY

2   INTRODUCTION

The idea of commodification[1] is concerned with the process of constructing commodities out of anything previously unrealised for trade. It is the 'modification of relationships, formerly unaffected by commerce, into commercial relationships' (Go´mez-Baggethun and Ruiz-Pe´rez 2011: 620). The operation converts use-values into exchange-values and signals a change in production relations. The commodification of heritage captures the process in which economic value is communicated, described, perceived and marketed by means of cultural expressions, experiences and objects. The process represents the transformation of cultural heritage into a commodity, which is packaged and sold (Cole 2007). Cultural heritage[2] thus undergoes a process of reconstruction, which is rationalised by its intrinsic value when exchanged as 'goods'. This means that 'culture becomes commoditized' as 'cultural assets are refined as consumables' (Cole 2007: 945).

Cultural heritage not only refers to material expressions like sites and objects, but also to intangible and tangible[3] representations such as language, oral traditions, social practices, rituals, festive and performance activities (UNESCO 2006). Culture, in this context, is more reflective of 'ways of life' and everyday practices which are 'manifest in buildings, sites and monuments' (ibid. 2006: 11). Cultural heritage is thus linked with (group) identity and is both a symbol of the cultural identity of a self-identified group (a nation or people) and an essential element in the construction of that group's identity. The term is politically constructed and involves notions of ownership, which reflect social and economic systems of value and cultural politics including human rights. Cultural heritage is not just history, but is an iterative, continuous process concerned with contemporary 'living cultures' that may reinterpret and recreate themselves and can play a vital co-creative[4] and participatory role in their cultural expression, production and consumption.

Rooted in consumption as opposed to production (Storey 2006), commodification of cultural resources is a strategy deployed to exploit identity and uniqueness of place, landscapes, building styles, artefacts, people, experiences, traditions, products and quality. An underlying theme is to alter products in such a way that they are 'capable of catching the attention and attracting demand and customers' (Bauman 2007: 3). While a principal motive is to generate revenue, the process of commodification can contribute toward the preservation of cultural heritage and assist local people in asserting their identity, articulating their own narratives and underpinning the importance of local experiences (Cole 2007 and Sharpley 2009). This is due, in part, to what Kneafsey (2000: 43) characterised as 'objectification', the phenomenon of people forgetting the value of the things that surround them and only revalue their cultural heritage through the eyes of tourists or others (Cooper et al. 2005: 246). Moreover, art, festivals, musical performances, a building or a museum object can stir people's emotions and make an impression on them (UNESCO 2006).

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[1] RICHES Taxonomy definition of commodification - http://resources.riches-project.eu/glossary/commodification/
[2] RICHES Taxonomy definition of cultural heritage - http://resources.riches-project.eu/glossary/cultural-heritage/
[3] RICHES Taxonomy definition of tangible and intangible cultural heritage - http://resources.riches-project.eu/glossary/tangible-and-intangible-cultural-heritage/
[4] RICHES Taxonomy definition of co-creation - http://resources.riches-project.eu/glossary/co-creation-2/

'Intangible and tangible expressions of culture act as triggers for interpreting the world past and present' (ibid. 2006: 10). Heritage commodification can also be a source of capital flow from touristic activities, which can be directed and invested to benefit local communities living around heritage sites thus contributing to sustainable development.

However, commodification is also associated with the negative effects of globalisation, causing the dispersion of local value and authenticity, while a local culture is aligned to a global economy. Concerns are often raised over whether the significance of cultural items or rituals lose their meaning for local people as a consequence of being commodified (Ruiz-Ballesteros and Hernández-Ramírez 2010). In some cases, traditional arts and crafts are reduced to souvenirs losing their genuineness and being transformed into mere mementos, or performances clipped to appeal to audiences (Cole 2007). Moreover, the practice is scrutinised for promoting Disneyfication, staged authenticity, romantification, sanitisation, contestation and dissonance in relation to identity and place image (Storey 2006, Cole 2007, MacCannell 1984). These ideas relate to practices or situations where cultural items and rituals are homogenised or diluted to the extent that they are no longer meaningful to local people (Ruiz-Ballesteros and Hernández-Ramírez 2010). At the same time, cultural heritage is a critical development tool imbued with economic, environmental and social values. However, developers face communication and innovation challenges in exploiting the legacy of intangible attributes and tangible artefacts, particularly in relation to promotion of place.

As part of a broader strategy of the commodification of cultural resources, there has been a growing reliance on digital technologies in conveying branding messages and strategies and the packaging, presentation and selling of cultural heritage to consumers. Digital technologies are concerned with applications, platforms and tools used to create, store, manipulate, retrieve, and transmit coded computer information. The innovations have radically transformed the way contemporary societies deal with and enjoy information and communication, and are deployed universally in employment, culture, services, public administration and leisure. Valentina et al. (2015: 16) argue that the role of digital technologies and social media is proving significant with a wide variety of economic, social and cultural activities. 'The old model of cultural consumption is no longer attractive as we have many possibilities for getting information about heritage assets without on-site visit' (ibid. 2015: 16). Digital technologies also play an important role in transmitting the 'spirit of place' – the invisible fabric of culture such as folk tales, art, memories, beliefs, histories, etc. – in digitised forms (Hong et al. 2008). However, despite the evolution in communicative and virtual reality technologies, they cannot reproduce experiences of basic human contact, encounters and exchanges (UNESCO 2006). While the use of digital technologies have an important part to play in communicating place promotion and providing a gateway to places for consumers, it is clear there are critical issues, as to their role in creating distinctive place images in the planning, design and management of public spaces across the European Union.

Drawing on four case studies of reshaping built environments across Europe, this study explores efforts to produce distinctive place images using digital technologies, which can compete in the highly crowded virtual environment. This refers to a digital domain, which enables simulation of physical reality and sensorial experiences, in which user interactions and engagement are supported by computer graphical interfaces or stereoscopic displays.

The research further examines the economic role of localism, local initiatives and community action in taking responsibility for local cultural heritage. It also investigates the possibilities, conditions and contexts of the re-use of buildings of historic value and their significance to place of existence. The intention is to deliver insights on the potential of the built environment as a cultural heritage resource and how this can add to the economic development of Europe. The premise is that cultural heritage across the continent is often locked away, crumbling, inaccessible and of little relevance particularly to young people, immigrants and the older generation. Digital technologies are offering new dimensions to engage, interact, experience and enjoy this cultural heritage.

With the objectives of the research defined, it was important that multiple case studies were undertaken that considered different localities (urban or rural); places with historical resonance or those that are comparatively new; situations where technology is an integral part of the strategy and where it is part of a wider approach; sites that have traditionally attracted tourist (and want to hold and maximise market share) and those that are seeking to create new attractions to generate sources of revenue. As such, RICHES research has considered particular places that fall into these categories; they are:

- the Empúries archaeological site on the Iberian Peninsula, Catalonia, Spain;
- the Museum of Cultural History in the Monastery of the Holy Cross, Rostock, Germany;
- the Talking Statues, Copenhagen, Denmark;
- Palazzo Pretorio in Pontedera, an industrial town in the Arno Valley, Pisa, Italy.

Even though some of the case studies are in a process of change and transformation, the intention is to try to identify problems, solutions and lessons to be shared across the European Union. Some are currently in a process of transformation to try to identify problems, solutions, and lessons that can contribute to existing knowledge, further research, planning, management, marketing, and user engagement and interaction.

Three more established and larger scale examples further examine how place making, promotion and commodification of cultural heritage resources have become intertwined with technology innovations, these are:

- the digital operation of Shakespeare's birthplace, Stratford-upon-Avon, UK;
- a brief description of the UNESCO and Google partnership to virtually visit 19 European World Heritage sites;
- the use of digital technologies in the Vatican Museum's Sistine Chapel to manage the effects of heighted tourist visits.

The study adopts a culture economy approach[5], which is concerned with the exploitation of cultural products for achieving territorial development goals. These products comprise historical and pre-historical sites, landscapes, artisanship, languages, dialects, folklore, drama, literary references and visual arts (Ray 2001). Culture economy is an attempt by rural and urban areas, particularly in Western Europe, to affect economic control locally by ascribing or re-ascribing value to place through its cultural identity in pursuit of socio-economic wellbeing

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[5] RICHES Taxonomy definition for creative economy - http://resources.riches-project.eu/glossary/creative-economy/

(Ibid.). In the context of this study, economy concerns the relationship between resources, production and consumption, while culture reflects the re-organisation of economies based on territorial identity and place promotion. 'A culture economy both makes use of locality, as an asset and frees local communities from territorial limitations in a market economy' (Jenkins 2000: 310). The idea is a reflection of the changing nature of post-industrial consumer capitalism, the trajectory of rural development policy in the EU and the growth of regionalism/ localism as a European and global phenomenon.

The culture economy approach thus functions to recalibrate the growing influence of consumerism and the embeddedness of local production methods. Moreover, the operation of the culture economy incorporates dimensions of culture commodification, creation and promotion of territorial identity and the development of a repertoire of cultural products and services.

2.1   BACKGROUND

New technologies are animating the consumption of cultural heritage (Valentina et al. 2015). Digital imagination, the ways in which people interact with technology, is pluralising the dimensions of access to cultural heritage assets. While online windows are popular openings to view and experience cultural heritage, virtual reality, innovative applications and devices are enhancing on-site visits. Consequently, various urban and rural places across Europe are embracing strategies for the interlinked exploitation of cultural resources through branding, product and quality attributes. The motivation is to appeal to tourists, day-trippers and the local population. However, there are concerns about whether the commodification of place image and identity leads to adulteration or a 'Disneyfication' effect, where cultural items and rituals are homogenised or diluted to the extent that they are no longer meaningful to local people (Ruiz-Ballesteros and Hernández-Ramírez 2010). Commodification is also said to contribute to staged authenticity, romantification, sanitisation, contestation and dissonance in relation to identity, cultural traditions and place image (Storey 2006, Cole 2007, MacCannell 1984). However, the exploitation of cultural resources is also a good way to generate revenue and can also contribute toward the preservation of cultural heritage. It assists local people in asserting their identity, articulating their own narratives and underpinning the importance of local experiences (Cole 2007 and Sharpley 2009). Even though shifts such as these have been recorded for some time, there has been little exploration of the role of digital technologies in the process, including its contribution to communicating place promotion, providing a gateway to places for consumers and enhancing its engagement and interaction with cultural heritage. Moreover, questions abound as to how digital technologies could be used to create distinctive place images in the context of increased place making efforts across the EU.

The study thus examines the struggle to produce distinctive place images that are able to compete in the highly crowded virtual marketplace. It draws on cases of reshaping built environments across Europe and considers the economic role of local initiatives and community action in taking responsibility for local cultural heritage, and especially for the re-use of cultural heritage spaces.

2.2   ROLE OF THIS DELIVERABLE IN THE PROJECT

This deliverable sits within the RICHES project's Work Package 5 – *Impact of CH on economic development* - which seeks to investigate the potential of cultural heritage for economic development in Europe, exploring its exploitation, re-use, innovation, regeneration, the context of change and its inextricability with digital technologies. This research reflects on how transmission of cultural heritage in Europe happens as cultures change; it embodies new forms of consumption and preservation.

Moreover, through contributing to livelihood streams, planning, design and management of public spaces, reinvigorating the desire for cultural heritage and endowing its sustainability, the study illustrates that cultural heritage resources are important forces in the digital age and the new economy of Europe. Overall, the study provides insights on the innovation that is driving the revalorisation of cultural assets. At the same time, it confirms the influence of digital technologies in communicating, promoting and conceptualising new ways of engagement with and sustaining cultural heritage. A salient feature of the study that resonates with other parts of the project is how cultural heritage is purposive in an ever-changing European cultural landscape.

Although this deliverable has an economic focus many themes form other work packages are considered, especially WP4 – *Role of CH in European social development* – and specifically, Task 4.2 – *Co-creation and living heritage for social cohesion*. As with all RICHES deliverables, this document is underpinned by the conceptual framework developed in WP2 and also considers further themes from WP3 – *Understanding the context of change for tangible and intangible CH* – in particular aspects of mediated heritage and the discussions of Task 3.4 – *Transformation of physical spaces, places and territories.*

2.3   APPROACH

As the DoW outlined that COVUNI was responsible for development of this deliverable, it was considered best by partners that they also took on the role of Task Leader, in place of the DoW designate Rostock. The rationale was to provide a consistent approach and clear lines of reporting.

COVUNI issued 'Guidelines for completing Task 5.2 – cultural heritage and places' to the four task partners on 25 November 2014. The six page document reiterated the text from the DoW, with key themes highlighted. To create structural consistency within the deliverable, topics, methods and approaches were suggested, with indicative word count guidance. It also encouraged each case study to interview a minimum of two experts/leading figures in the area.

It was deemed that due to the exploratory nature of the study required a mixed method (quantitative and qualitative) approach was required, relying on both primary and secondary sources of data production. This involved feedback questionnaires regarding the use of digital applications, semi-structured expert interviews and focus groups with leading figures in each location, and desktop research. Questions focussed on exploring the features of culture economy, its contribution to place promotion and place image, impacts and reshaping built environments. Responses were also sought to explore the extent to which culture economy promotes local initiatives and community action, and encourages locals to take responsibility for local cultural heritage. Moreover, there was examination of the role of digital technologies in the creation of distinctive place images across the EU and their contribution to the experience of users and workers. Semi-structured interviews addressed issues relating to ethics and aspirations, impacts, branding, place making, promotion and commodification of cultural heritage resources. Analysis of data relied on a mix of discourse and content analyses. The intention was to uncover the socio-psychological influences of the role of digital technologies in place promotion, and the role of place making in the commodification of cultural resources and producing valid and reliable inferences. Consideration was also given to the transmission and benefits from cultural heritage in Europe.

As the task progressed, it became clear that further contributions would be needed, as it was uncertain whether a case study considering the Hamamönü district of Ankara would be prepared. Following a discussion between the Task Leader COVUN, the Project Manager and WP5 Leader, the latter agreed to formulate a new case for inclusion; this ultimately explored the Talking Statues, Copenhagen. To maximise the research finding, COVUNI also took on further desk research to provide three further examples of place making, to broaden the analysis of the topic. With the commission of this additional work, further time was required to complete this deliverable.

2.4   STRUCTURE OF THE DOCUMENT

This document has been structured into eight chapters:

Chapter 1:   Executive Summary
Chapter 2:   Introduction

Chapter 3:   Empúries Archaeological Site
Chapter 4:   Monastery of the Holy Cross
Chapter 5:   Talking Statues of Copenhagen
Chapter 6:   Palazzo Pretorio, Pontedera

Chapter 7:   Further Reflections on Place Making

Chapter 8:   Conclusion

Bibiography

3   EMPÚRIES ARCHAEOLOGICAL SITE

3.1   INTRODUCTION

The Empúries archaeological site is a significant Graeco-Roman site on the Iberian Peninsula and includes a Greek-Emporion colony enclave, with the remains of a Roman city founded in the early 1st Century BC on the structures of a Roman military camp installed during the previous century. Located in the Costa Brava, Catalonia, Empúries constitutes a privileged site for understanding Greek culture and civilisation, commercial and cultural relations across the Mediterranean, as well as the Romanisation of the Iberian Peninsula. Visitors to archaeological sites such as the MAC-Empúries need to make a great effort of imagination to recreate the ruins, as they were at its beginning. This report presents findings from the research at Empúries, which explores the use of digital technologies and their role in communicating place promotion and providing a gateway to places for consumers. With the emergence of AR, the Empúries has embraced this technology to enhance visitors' experience and engagement. Findings indicate digital devices are helping to boost visitor experiences and interaction at Empúries and assisting workers in devising novel ways of exploiting cultural assets. The site is also playing a critical role in terms of economic, territorial revalorisation and tourism development. However, locals highlight that commodification of cultural resources should not be at any cost.

As an actual case of reshaping built environments, the mission of the archaeological site of Empúries is to determine and track the reshaping process to identify problems, solutions and lessons, which can be shared.

3.2   BACKGROUND

Tourist activity in the Costa Brava dates from the middle of the 19th Century. Warm climate, beach space and fresh air proved a magnet for wealthy Catalan society. During the 1950s and 1960s and despite Franco's regime being at its peak, foreign tourists were enthusiastically accepted. This led to a boom in tourism, but the increasing numbers of resorts had a devastating impact on the environment and surrounding natural resources.

Aerial view of the Empúries Site with the impressive landscape surroundings

A lack of restrictive laws and protectionist policies attracted many public and private investments, which led to unplanned growth and over-development, abusive building in sensitive natural areas and unsustainable use of cultural heritage resources. Although it might have generated benefits in the short term, natural and cultural heritage suffered due to the pervasiveness of medium or low quality products. This badly affected traditional and other economic, industrial and agricultural activities, which were almost abandoned. This led to Costa Brava and the wider Spanish Mediterranean becoming increasingly dependent on tourism and other associated aspects of cultural and leisure activities[6].

The Costa Brava region boasts an array of cultural assets and sites that display the wonderful legacy of celebrated Spanish surrealist painter Salvador Dalí in Empordà. They include the Monastery of Sant Pere de Rodes or the Castle of Peratallada; medieval towns such as Tossa de Mar, Púbol or Pals; and the ruins of Empúries. There are also traditional ceramics of La Bisbal, Girona's old quarter, featuring a superb historical gem and the call (Jewish quarter).

As Gemma Suñer, online promotion and communications worker for Costa Brava-Girona Tourism, explained, in recent years, the Costa Brava Tourism Board has been trying to bring together new innovative experiences to visitors using new technologies, internet, social networks and applications. 'These are, nowadays, the best channels to reach broader audiences and to promote our destination, boost economy and exploit the Costa Brava territory and its touristic brand,'[7] said Suñer. Girona Tourist Board promotes Costa Brava as a cultural tourism destination. In 2012, National Geographic rated it one of the best tourist destinations in the World.[8]

Data also show the Costa Brava brand was (2009) the second most recognised by foreign tourists after Barcelona, with 79% of respondents claiming to know the destination. In 2009, Costa Brava received 6.5 million visitors, who spent an estimated 2,532 million Euro. This confirms that the influx of tourists has significantly increased over the years, boosting the local economy and directly accounting for the employment of an estimated 39,000 people.[9]

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[6] Riches Taxonomy definition of cultural tourism - http://resources.riches-project.eu/glossary/cultural-tourism/
[7] Gemma Suñer, "Advantages and challenges of Augmented Reality for the diffusion of heritage and tourism promotion." Paper presented at the conference JornadesApp, Applications for the promotion of cultural heritage. Girona, Spain, October 2, 2014.
[8] *The National Geographic blog*. http://travel.nationalgeographic.com/travel/best-trips-2012/#/03-gallery-costa-brava-beach_41281_600x450.jpg.
[9] Agencia Catalana de Notícies, "Uns 3 milions de turistes que visiten la Costa Brava s'allotgen en apartaments turístics." *Ara Girona.cat,* 2011, accessed January 21, 2015, ACN/ARAGIRONA.CAT.

3.3 CONTRIBUTION OF CULTURE ECONOMY

Empúries is the most important Roman and Greek archaeological site in Catalonia and one of the most visited cultural attractions of its kind in the region. Interest in archaeological and paleontological sites in Catalonia grew significantly in 2013 with 4.5 million registered visitors, 1.5 million more than the previous year, according to the Department of Culture. Empúries, with 142,000 visitors in 2014, is fourth in the rankings.

View of Asclepius statue (reproduction), the most emblematic archaeological piece in the site. The original is preserved and exhibited inside the Museum.

Currently, research in this area in Catalonia includes 30 working groups, 12 research missions abroad and four research institutes (Catalan Institute of Human Palaeontology and Social Evolution, Catalan Institute of Classical Archaeology (ICAC) and the Institute Milà i Fontanals CSIC). It is estimated that Catalonia has 13,226 archaeological and paleontological sites, 37% of which have not yet been excavated or remain intact. Of the total, 285 are classified as Cultural Heritage of General Interest.[10]

In this regard, the Catalan government, in collaboration with the Catalan Agency for Heritage, has implemented an action plan with objectives to undertake archaeological and paleontological research, diffusion, promotion and commodification. The new resolution includes legal reforms (which reform the regulations and standards on archaeological heritage reports) and implementation of a research framework aimed at professionalising archaeological study.

The culture department of the Catalonia government and the 'Obra Social 'la Caixa'', a banking foundation that funds welfare projects, joined forces in November 2014 to launch a new programme: 'Patrimoni en Acció' (*Heritage in Action*). The 1.9 million Euro initiative aims to finance six iconic monuments in Catalonia, including the Empúries site, over a six-year period. The money will be spent on intervention work such as ruin preservation, restoration, space reshaping and enhancing visitor experience using innovative approaches and contemporary practices that promote Catalan cultural heritage. It is the first time that the Museum of Empúries has received such significant funding from the private sector.

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[10]Pau Cortina, "Empúries, amb 142,000 persones, quart jaciment amb més visites." *Empordá*, 2014, accessed January 21, 2015: http://www.emporda.info/cultura/2014/03/26/empuries-142000-persones-quart-jaciment/230480.html.

Empúries mainly relies on public support through the Catalan government. Marta Santos is general coordinator of the museum and is responsible for its cultural programmes, activities and exhibitions. She argues that the cash injection is a once in a lifetime opportunity and a positive contribution to their development agenda. She believes the initiative could also form a springboard for other private and public sector collaborations to fund cultural heritage operations in the region.

The idea of *Heritage in Action* is to establish contemporary, transparent and aesthetic foundations to reach a more heterogeneous audience and to encourage new knowledge and experiences focusing on visitor entertainment. The programme includes the following objectives:

- increase the use and knowledge of cultural heritage among local community and the territory to increase visitor numbers by 30% over the next five years;
- increase the diversity of public and visits to the monuments;
- increase the degree of users' satisfaction;
- link the programme with local and regional economic development strategies;
- improve the management of cultural heritage resources and related services.

With 1,351,539 Euro, the Empúries site has received the largest financial contribution. 'These monuments shape the collective identity of Catalonia and also have a potential for tourism,' explains Ferran Mascarell, Catalan Minister of Culture. 'Now it is not a matter of what visitors can see, but what they can live and experience,'[11] adds the Minister. Marta Santos points out: 'Empúries is the most important heritage site in this part of the Costa Brava and since the beginning, has brought years of research experience and identity in the area. In that sense, it has been, and is still an important economic resource in this part of the territory'. She argues that Empúries has about 150,000 visitors every year and is a very touristic attraction that helps to promote the area. She adds that the municipality of L'Escala (the village next to the site and the municipality of which our museum belongs to) is very conscious of the importance of the site for the economic development of this municipality, and concludes by stating that 'we develop a lot of activities in collaboration with the municipality of L'Escala to help to improve this relationship/partnership.'

3.4   ROLE OF DIGITAL TECHNOLOGIES IN THE CULTURE ECONOMY

Empúries is a live site. Every year excavation work takes place and new treasures are uncovered helping to re-build the historical and cultural heritage narrative in Catalonia. The original building that houses the Catalan Museum of Archaeology – Empúries, was a convent for monks founded in 1606. After excavation work began, between 1914 and 1916, the old convent was partially rebuilt to construct the first museum building, which was designed to explain the history of Empúries and to facilitate research, conservation and promotion of the site.

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[11] Jaume Vidal, "Acció Patrimonial."*El Punt Avui. Comarques Gironès*, 2014, accessed January 22, 2015: http://www.elpuntavui.cat/noticia/article/5-cultura/19-cultura/799625-accio-patrimonial.html?cca=1&tmpl=component&print=1&page.

Since 1998, Empúries has put a framework in place by the Ministry of Culture of the Government of Catalonia.[12] Its main objective is to define the action programmes (research, documentation, preservation and dissemination) to be developed over the next ten years. This includes organisation of services, infrastructure and existing buildings, as well as promoting new facilities that a cultural attraction/site of such importance requires.

Empúries has followed regular standards, in terms of the impact of digital technologies in the management, preservation, documentation and diffusion of the museum's artworks and the site in general. Although the museum has undertaken digitisation of written documentation related to the excavation works, especially during the period before the Spanish Civil War, it has not, until quite recently, fully embraced innovative solutions to promote its cultural heritage by means of digital technologies. Over the past few years, Empúries has expanded its internet presence and incorporated digital technologies to enhance visitor experience. The initiatives go beyond technology within exhibits and rooms. It includes pervasive use of technology to create interactive experiences for visitors throughout the museum and archaeological site, as well as remote experiences for those who cannot get there. In that sense, among the online resources launched by the museum in recent years are:

- MAC Online: The Archaeology Museum of Catalonia Online Project is a cultural web allowing visitors to remotely explore part of the museum's extensive collection and prepare the physical visit or consult and participate in the activities organised by the museum.
- Prepatc Project: An online exhibition dedicated to introducing the excavation works undertaken in the site highlighting the rich variety of mosaics preserved and the Roman Forum: http://www.mac.cat/alt/prepact/cat/emp/01_02.html.
- A promotional online video of the archaeological site, the museum's pieces and surroundings: http://youtu.be/hq-27uJNHvA.
- 3D modelling and image reconstruction of the Statue of Asclepius and a 3D model restitution of one of the buildings at the Greek City.[13]

3D interactive restitutions and video of the Asclepius statue

[12] AQUILUÉ, X, "Pla Director del Museu d'Arqueologia de Catalunya-Empúries. Un projecte pel Primer Centenari de la recuperació d'Empúries (1908-2008)" in *Proposta dels programes de recerca, documentació, conservació i difusió d'Empúries*, Vol. I. Generalitat de Catalunya: Empúries, 1998.
[13] X. Aquilué, T. Bases, P. Castanyer et al, "El proyecto de restitución virtual de la ciudad griega y romana de Empúries." In *Marq. Museos, Arqueologia y nuevas tecnologias,* Vol. 00, (Spain: Marquealicante, 2005) 113-124.

Although the use of digital technologies supporting these initiatives has made a significant impact in the field of archaeological studies and enhanced research and scientific knowledge, it has had little impact on visitors' appreciation and usage.

Serapis Temple 3D reconstruction, an infographic design

Marta Santos argues that these initiatives were unusual in the past and often remained as temporary projects due to budget constraints. However, current funding means that the embrace of new technologies, the implementation of innovative resources to enrich visitor experience and enhancing public knowledge and appreciation have been given priority. While improving the museum's infrastructure with the creation of a new exhibition space in the permanent collection as well as building a new visitors' reception centre, a new audio visual resource to introduce the public to the site will be constructed. Santos says improving the audio guide facility in the site, which had become obsolete, is now the most important project they are undertaking. 'At the moment, it is a traditional audio guide, just audio explanations, but in the future we hope that we can integrate new technologies like 3D reconstructions of the ruins and also the AR features,' explains Santos. She adds: 'The experience of this pilot application that we have developed with i2CAT Foundation, is the beginning of this future improvement of the visitor's resources.'

It is clear that, in current times, the proliferation of smart phones and tablets continue to expand and challenge cultural heritage institutions, which are trying to adapt by launching new mobile features into the visitor experience. Gemma Suñer believes that developing AR applications in archaeological sites can attract visitors' attention and give an extra value to the museums and 'although it's a mistake, sometimes we see museums as old places, old-fashion institutions.' She adds that 'applying new technologies to the experience of the users gives them a sense of futuristic innovation. Suñer is convinced that new technologies applied to cultural heritage provide easy and open access to information to all: 'It is a natural transformation of accessing information from past traditional and theoretical ways to more practical and interactive practices nowadays.'

3.5   THE EMPÚRIES APP: BRINGING THE RUINS TO LIFE

With Empúries as a benchmark, the i2CAT Foundation has developed *Empúries+* app, a pilot application based on AR, which offers a new interpretation of the archaeological site through innovative solutions to all users.

The development of the application has brought together experts (the Museum's curators and archaeologists, developers and technicians), and has established cooperation with academics, researchers and professionals to incorporate innovative services for the enhancement of the natural and cultural heritage at Empúries. Focusing on the use of AR, multimedia and interactive techniques, the product (not yet implemented in the site) is committed to the knowledge transfer, mobile interpretation, appreciation and commodification of the cultural and natural heritage around the site.

Amongst its many features, this pilot AR app allows visitors to discover, in a moving 3D environment and in real time, how the Greek and Roman cities of Empúries were in the beginning. It has been developed under the following requirements and objectives:

- to study the usability of AR technology applied to cultural heritage and its capability to support and enhance visitors' knowledge of archaeological sites, both in educational and leisure contexts;
- to provide all users with an ICT supported tour of Catalonia's Greek and Roman past, evoking a bygone era explained through its living heritage, while discovering the works of 3D reconstruction, restoration and preservation undertaken in the site;
- to highlight the historical and artistic heritage of Empúries through a pathway of AR experiences, highlighting the main characteristics of the Greek and Roman cultures contextualising the ruins while giving value to the archaeological site and its heritage as a source of important historical facts and documentation.

Examples of Empúries+ app users interface

Amongst its many functionalities, the app offers visitors access to the following contents with just one click:

- a tour with 12 POI (Points of Interest): a selection of the most emblematic buildings to identify the main characteristics of the Greek and Roman cultures, contextualising the ruins of the Greek polis and the Roman city of Empúries;
- an interactive map: an overview map of both polis (the Greek and the Roman) and the location of each POI featuring the user's real time location;
- relevant information related to the Empúries site and its historical and artistic heritage from various sources (images, videos, sounds and other graphic documents) highlighting their possibilities and contents;
- 3D reconstructions through AR: markers recognition places life-size 3D highly detailed models of the buildings with the actual landscape of Empúries, its ruins and current territory**;**
- privileged access to unique videos from the site and virtual visits featuring 3D reconstructions of the main temples and close-ups of the main archaeological findings in the site such as the emblematic statue of Asclepius;
- audio button on each text to listen its full description;
- multiple language options (Catalan, Spanish and English).

3.6   3D RECONSTRUCTIONS AND AR VISUALISATION

AR is an innovative tool used in mobile devices to enhance the visitor experience through linking the real and virtual world. Virtual computer created objects and information amplification are merged with the surrounding real world, and virtual information, graphics and multimedia objects are included. Furthermore, with the Empúries+ app, the information about twelve ruins in the archaeological site becomes live, interactive and digitally manipulable.

Examples of 3D restitutions visualisations with AR advanced technology on site

New technologies such as AR provide a visitor with virtual models of the site to allow easier comprehension of the ruins and an idea of what might have been there. 'Although visitors have information panels that explain the buildings, sometimes this is not enough,' admits Santos. 'For us, the archaeologists, it is easier, but for the visitors it is complicated to imagine the real volume of the buildings just by looking at the ruins they have before them. AR is a tool that happens to recreate the look of the ancient cities in a very realistic way, it can place buildings how they were in the site, recreate the exact shapes, decorative objects and other elements that can help visitors to understand better the site,' she explains.

Santos also refers to the AR app as a pioneering experience in the site and in the territory. Although it is not yet implemented, she believes it is a very positive first step to improve visitors' knowledge of the site; a tool that will help them to understand the rich historical and cultural heritage that the museum can offer.

The app was tested at the Empúries archaeological site in October 2014 among a heterogenic group of participants, with the intention to examine its usability and detect the prototype's weaknesses and strengths. The empirical data extracted from this session showed the users' interaction with the app and helped to evaluate their experiences. A focus group session conducted after the practical testing also helped to better understand their expectations and to collect their opinions in relation to the use of AR technology in archaeological sites from the users' point of view.

The questionnaire included the relevance of the app in different professional or regional contexts (work, country, tourism sector and cultural heritage sector); SUS (System Usability Scale) as standard of usability; usage types (most used features); level of user satisfaction (interest, aesthetics, innovativeness and practical usage); appeal or usefulness of the app (for tourists and locals); and the perceived benefits of the AR (and digital technologies in general) for the understanding of the archaeological sites, archaeological research and Cultural Heritage promotion and commodification.

To better assess the pilot app and the impacts of new technologies and AR tools within archaeological touristic sites, a sample of participants was selected that had never interacted with the prototype before, but were familiar with or working in the cultural heritage, tourism sectors or were researchers (developers and archaeologists). The sample comprised 40 people, 18 from the cultural heritage sector, four students/researchers, five technicians/developers, four stakeholders from the tourism sector and eight undefined persons (codified as "others"). All questionnaires were answered and handled *in situ* after the testing session.

In terms of the relevance of the app, the great majority of respondents consider it to be relevant to the cultural heritage sector, in contrast with other areas (such as participant's own work, country context and tourism sector). 96% considered the cultural heritage sector as the main beneficiary from this product.

Percentages of SUS (System Usability Scale) obtained
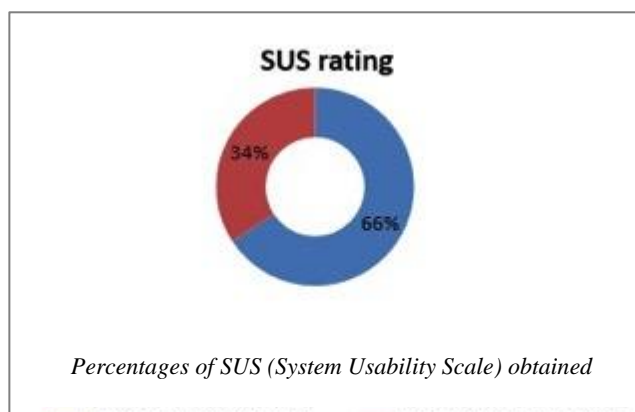
In terms of usability, the users' interface and easiness of use were considered to be within acceptable ranges, although the prototype product needed further development. Nevertheless, the overall view was that an app of such kind, especially its AR features, fulfilled users' expectations and satisfied their needs in the context it was used, which is basic for this type of technology. The graphic, displayed at the bottom of the previous page, shows the SUS (System Usability Scale) rating obtained.
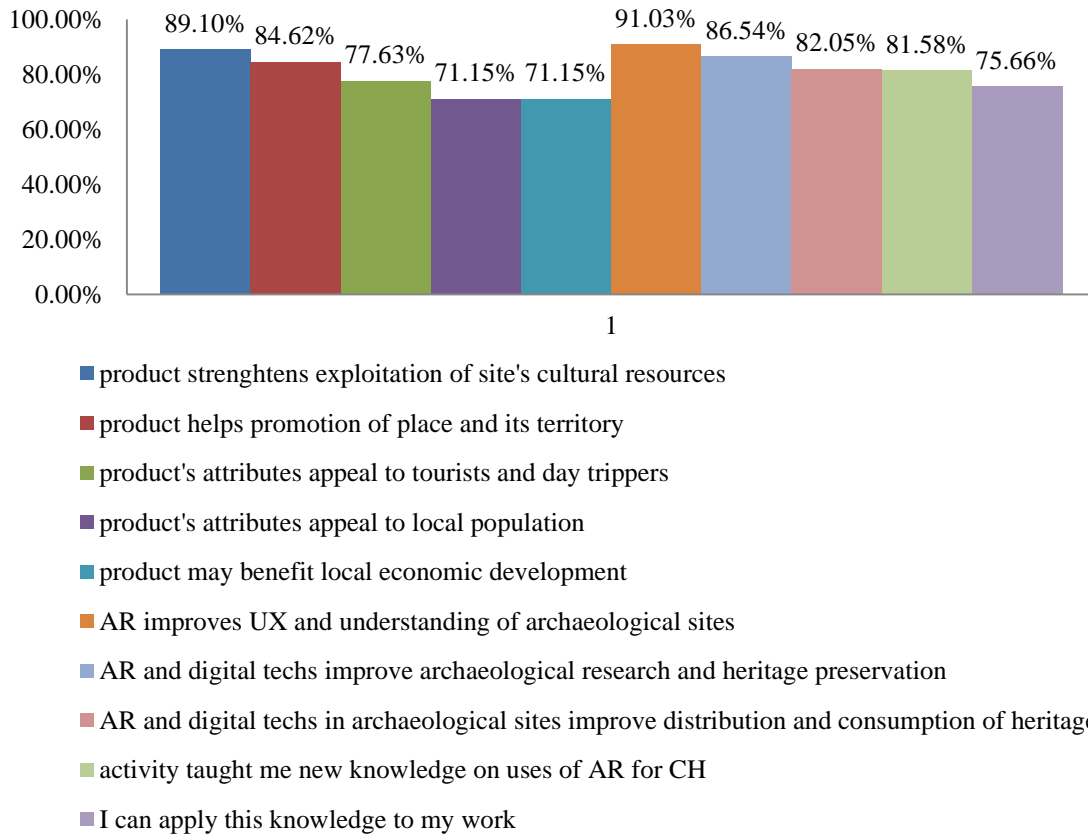
In general terms, the impact of the app for all the users was very optimistic. More detailed examination of the empirical data revealed that the product reached its objectives, provided an interesting and innovative solution that enhanced visitor experience. User satisfaction related to the practical implementation of the app in terms of different themes/topics was rated third on the SUS scale. The lowest rated item was the ease of use, which led to the interpretation that the results in two directions: a) the App's interface needed to be simplified and less disruptive and b) AR features were still new technologies, which might be a handicap considering visitors' habits. Additionally, it must be noted that the testing was conducted with a prototype, not a final commercial product. Consequently, the product's aesthetics were not fully developed (which explains the low rated percentage obtained when measuring this item). However, the lowest rated items did not affect the main functionalities that were being analysed and tested: the role and advantages of AR and digital technologies applied to this specific archaeological site and its cultural heritage.
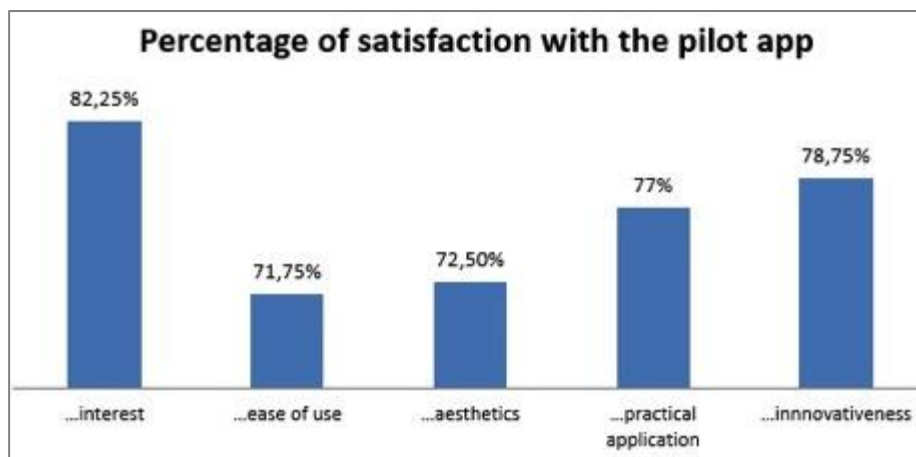
Percentage of satisfaction with the Empúries's pilot app

This part of the questionnaire was specially designed to analyse the overall impressions of the users and the potentialities of this product (and others of such kind) in similar contexts. Participants were asked to take different aspects into consideration and rate them according to their opinion. These included prospective benefits of the app within the economic and local development, tourism perspectives, research and scientific knowledge, visitors' comprehension and site exploitation etc. The figure below shows all the topics analysed and how they were rated. The item 'AR improves UX (Users Experience) and understanding of archaeological sites' was the most valuated and ranks first with 91% on the evaluation index. The data analysed confirmed that the general opinion was that AR and digital technologies increased the understanding of cultural heritage sites, enriched the global experience of the visitors and increased the value of cultural heritage and digital technologies.

RICHES
Deliverable: D5.2
Place-making, promotion and commodification of CH resources

RICHES
RENEWAL, INNOVATION AND CHANGE:
HERITAGE AND EUROPEAN SOCIETY

In relation to economic perspectives and social and territorial development, the general opinion gives positive feedback with participants evaluating the app as a product that could benefit the museum, engage and attract more visitors, and also impact positively on economic development in the area. However, during a prototype stage it is difficult to measure a value scenario for the future. The following graphic shows the users' general opinion ratings by topics/themes:

- product strenghtens exploitation of site's cultural resources
- product helps promotion of place and its territory
- product's attributes appeal to tourists and day trippers
- product's attributes appeal to local population
- product may benefit local economic development
- AR improves UX and understanding of archaeological sites
- AR and digital techs improve archaeological research and heritage preservation
- AR and digital techs in archaeological sites improve distribution and consumption of heritage
- activity taught me new knowledge on uses of AR for CH
- I can apply this knowledge to my work

User's general opinion ratings by topics/themes

The global valuation of the pilot app presented and tested at Empúries has provided an enthusiastic and very positive feedback from all participants. Although the product was still under development, the general opinion was that both future visitors (mainly tourist and local visitors) and the museum could potentially benefit from it. Remarkably, the data analysis also shows that other segments of the society, such as museum curators and archaeologists, researchers and scientists, could improve their daily work with the use of AR and digital technologies, finding new ways of exploitation and investigation of cultural assets. Even though AR is a new technology still under development and expansion, the participants are optimistic in assessing that the product's overall attribute, which they believe can, in the near future, appeal to locals and foreign visitors, and increase the museum's appreciation and revalorising of the cultural heritage at the site.

3.7   SUMMARY

The struggle to attract visitors and the competition to produce distinctive tools and innovative experiences without taking into consideration the product or its quality, have generated debate whether this new wave of museums' promotion is actually helping or, on the contrary, risking the natural and culture heritage resources and visitors' satisfaction.

 Marta Santos has a very strong determination and although the museum wants to increase the number of visitors, she affirms they will not do that at any cost, but always under the objective to improve visitor experience and satisfaction. Santos explains: 'we can't lose our minds. Empúries is a very important and unique archaeological site, we already have many visitors as we are in the middle of Costa Brava. It is a privileged site because its location (near the beaches and other tourist attractions), but nevertheless, it is a very important cultural heritage resource and we cannot lose sight of this aspect. This idea has to be transferred to our visitors.' In that sense, Santos argues that since the beginning, the museum has made efforts to diversify audiences and provide them with alternative activities, other experiences and diverse educational content too. There are other uses to the museum and the ruins. These include musical events, theatre performances, public presentations of research publications and festivals or showcases to promote local artists with the objective to 'offer different activities to satisfy the various expectations of our visitors'.

Nevertheless, it is undeniable that times are changing and the ways in which society communicates and consumes culture has changed drastically in recent years. The permeability of digital technologies in daily life has increased drastically and Gemma Suñer recommends that museums should incorporate these tools if they want to attract new and returning visitors. As she reflects, the problem nowadays is that 'the average tourist doesn't spend more than two hours visiting a museum and our objective is to get them back'. She also argues that 'society is used to consume culture quickly and since recent years, people in general are used to receive information through their mobile devices, in an easy and fast way, without putting much effort into it. The only way (*to attract more visitors*) is to offer them something innovative, interesting and funny to do in a museum or cultural site'. Suñer also believes that adding a component of 'fun and games' into a visit can actually help people to learn more about a museum and the historical and cultural heritage preserved in it. In her opinion it is all about storytelling, and nowadays, visitors learn more through having fun and adding 'gamification' into a cultural visit: 'look at children, it is proven that they learn faster while playing; so why can't adults do the same with culture?'

4 THE MONASTERY OF THE HOLY CROSS

4.1 INTRODUCTION

Margarete Sambiria, Queen Consort to Denmark's King Christopher 1, founded the Monastery of the Holy Cross Rostock in 1270. It is named after the foundation relic, a flake of the Cross of Jesu Christi, which was brought by Margarete Rostock from her pilgrimage to Rome. The study focuses on the quarters of the Monastery, as part of a historical complex comprising a museum, monastery garden, church and tenanted houses. It also considers the multiple uses of the development, forms, owners, interests, image change from medieval times to 19th Century, specialised planning and political and citizens' initiatives. Findings suggest the Monastery is proving successful in meeting the demand for the creation of meaning, and providing satisfactory and user-friendly experiences that contribute to emotional wellbeing. However, there are limitations in staff resources, marketing and a 'cluster approach' would boost links with other local businesses and attractions thus increasing visitor numbers.

Digital technologies provide Rostock's Museum of Cultural History with innovative tools that enable users to engage and interact with collections, presentations and a vast breadth of information. As such, applications, platforms and tools used to create, store, manipulate, retrieve and transmit information have featured prominently in attempts to involve new target groups in the implementation of cultural heritage initiatives at the institution. Digital technologies also play a critical role in the integration of marketing strategies for the Monastery of the Holy Cross which houses the museum, as well as the City of Rostock and the wider region of Mecklenburg-Vorpommern as cultural tourism attractions. This case study shows that digital technologies have become important tools, which are used to optimise the reach of target groups, generate understandings about visitors to the Museum of Cultural History and their engagement and experiences with collections, presentations and information. The study also highlights the contribution of cultural resources to the development of the local economy and cultural heritage sites in Rostock.

4.2 BACKGROUND

The Monastery of the Holy Cross in Rostock is the centrepiece in an historical complex including the Museum of Cultural History, a monastery garden, a church which doubles as a concert hall, and the University of Rostock's chapel and former domestic quarters that have been converted into residential apartments. The establishment has been a multi-use site since medieval times, but has undergone a plethora of makeovers and alterations. After Queen Margarete's death in 1282, the Cistercian Monastery became one of four medieval monasteries and convents in Rostock, but it was the only one built inside the city walls. The number of nuns living in the monastery increased significantly over the years and the establishment is now an economically successful institution. This is largely due to several acquisitions, which have increased its income and real estate value.

Monastery of the Holy Cross, Rostock, Germany

The Bishop of Schwerin reorganised the monastery in 1492 and it became home to 40 nuns and ten lay sisters, who were mainly from bourgeois Rostockean families. Many entered the monastery with dowries. Building expansions have been responsible for continuous modification of the monastery with adaptations such as the south wing, which involved the rearranging of its basement and the addition of a west wing in the 14th and 15th centuries. During the reformation period in 1584, the monastery was transformed into a Protestant convent for women (unmarried daughters of Rostockean families and Mecklenburgian noblemen) following their conversion to the religion. In the 17th Century, Rostock's economy experienced a downturn, which mimicked the regression of Mecklenburg-Vorpommern as a whole. Real estate value plummeted in the 18th and 19th centuries and in 1920 the monastery was closed and became the possession of the Free State of Mecklenburg-Vorpommern. Rostock, following its destruction in the Second World War, was reconstructed in line with socialist architectural principles. The monastery complex remains the last closed ensemble of the medieval period in Rostock.

The Museum of Cultural History, which was founded in 1859, holds a comprehensive art history and cultural history collection, including paintings, graphic art, handcraft, coins, furniture, military objects, everyday culture and archaeology. Many of the artefacts were provided by the Museum of Art and Antiquity, which was first opened in 1903. The art collection includes important works by Dutch, German, French and Italian master painters from the 16th to 20th Centuries. Sacral art treasures and evidence of the Hanseatic past, urban trade and bourgeois life, have been exhibited since the 19th Century. Today, the museum, housed in the monastery since the 1960s, holds an extensive art and cultural history collection and is one of the most important locations documenting bourgeois cultural history in the State of Mecklenburg-Vorpommern.[14]

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[14] www.kulturhistorisches-museum-rostock.de

The foci of the permanent exhibitions in the museum include monasteries in Rostock, medieval art, handcraft, toys and Dutch paintings from the16th to the 19th Centuries. The museum also stages special national and international exhibitions, which are regularly alternated. However, the overriding emphasis is on maintaining collections related to Rostock's art and cultural history, ethnology (toys and textiles), numismatics, handcraft and arts.

The Museum of Cultural History has been a major driving force in the promotion of the Monastery of the Holy Cross and has proved a popular tourist attraction. The number of visitors has been on an upward trajectory with 61,000 recorded in 2012. This puts the museum in the top five attraction of its type in Mecklenburg-Vorpommern. An estimated 165,000 cruise ship passengers visited the Rostock area in 2015, contributing approximately 15 million Euro to the local economy (Hafen-Entwicklungsgesellschaft Rostock 2015). The report now discusses the findings of the study.

4.3   CONTRIBUTION OF THE CULTURE ECONOMY

As one of Mecklenburg-Vorpommern's most important attractions, the Museum of Cultural History has played an integral role in the region's tourism industry over the past twenty years. Drawing on an array of artefacts, collections and exhibitions, the institution has proved to be a magnet for tourists, who want to engage with and experience cultural heritage. In attracting huge numbers of people, the museum has helped to prolong the tourist season, thus bolstering the local economy. Rostock's cultural heritage and facilities help to raise the city's cultural profile and its economic development. Such has been their significance that Mecklenburg-Vorpommern's marketing and promotion strategy centres on the Museum of Cultural History. The area's tourism planners believe cultural heritage adds to surrounding characteristics of the region such as landscape and climate. Rostock is promoted as a place of flair, cultural heritage and atmosphere and as a Hanseatic city on the Baltic Sea with a comparatively good transport infrastructure and connections to main German cities such as Berlin and Hamburg. Moreover, Rostock has established links, via ferry connections, to Sweden, Denmark and Finland, which broadens its appeal to Europe.

Dr Steffen Stuth, Head of the Museum of Cultural History and the Regional Association of Museums, argues that the museum is a communicator and promoter of the city, region and state's image and cultural heritage. According to him, this creates positive associations and ensures it conveys the locality's identity to visitors. He adds: 'The marketing of cultural institutions like ours, must be an integral part of the urban and regional marketing of our tourism destination and part of the overall tourism promotion of the site'. Interviews with local tourism experts confirm the role of the museum in attracting visitors to the region. In turn, these tourists contribute to the local economy in ways such as the 'multiplier effect' where visitors add additional tourist attractions/leisure offers to their visits such as accommodation, and gastronomic and retail experiences.

As it is a local public institution, the Rostock municipality provides the basic funding for the Museum of Cultural History. The institution also receives EU money for extra activities and initiatives such as tourism marketing. Peter Möller, owner and manager of a music instrument shop in Rostock, is committed to local culture. As cultural expert, he believes the public authority should be the main responsible body for financing and promoting local culture and the area as a tourist destination. He argues that the brand 'Rostock' should be a significant feature of this strategy. This is supported by Dr Bernd Lukasch, Deputy Director of Mecklenburg-Vorpommern's Museum Association. However, Dr Lukasch also believes the private sector has an important role to play in promoting the local culture economy and the overall structure of cultural institutions and historical heritage. At the same time, both Möller and Dr Lukasch agree that cultural tourism was becoming increasingly important to the economic development of Rostock and the state of Mecklenburg-Vorpommern. However, they believe not enough was being done to exploit this potential. They argue that cultural institutions and tourism marketing strategists at both city and regional levels, need to adapt their development plans to encompass the desire of tourists to engage, interact and experience their region's rich cultural heritage. They insist the focus should be on the 'aura of the original artefact' and the maintenance of the original site as main selling points.

The Museum of Cultural History has responded to this development and has over the past seven years has been expanding its site. A new building has been constructed to house contemporary presentations of additional artefacts and collections including the Boehmer, Germany's only collection of 'degenerated art'. This will be on shown from 2018, adding another unique selling point to the establishment. The expansion project is seen as part of a broader modernisation and vitalisation effort so the museum can help ensure the sustainability of Rostock's cultural heritage development for the future. At its heart, museum directors believe it is an essential step to present the local and regional history in a new way that is modern, lively, transparent and appealing. This will involve new forms of communication focussing on storytelling, digital applications and interactive visitor entertainment devices. It is envisaged that this 'new way' will generate interest among visitors thereby boosting attendance.

The museum's strategy for modernisations and digitisation work includes:
- doubling the number of visitors within the next five years;
- enlarging the scope of visitors, i.e. addressing new visitor groups;
- increasing user satisfaction;
- improving the management of cultural heritage collections and resources;
- improving cultural heritage related services;
- integrating the cultural heritage work of the museum with the site's overall marketing strategy and activities.

The new building will also house historical art and antiquities, which were part of the museum's collections since 1901 until a reorganisation of exhibited works in 1968 led to them been moved to their current location. As the only historical municipal museum building in Mecklenburg-Vorpommern, the site generates supra-regional interest. It is located in a very central position in the city centre, with its facade and presence like a beacon.

Public opinion and comments on the unique architecture of the building, which will become a new stand-alone cultural heritage monument in Rostock, will be sought following restoration.

4.4   PROMOTING LOCALISM

Möller and Dr Lukasch have similar views on the role of digital technologies in increasing awareness of the Museum of Cultural History and the city's place image in the context of increased place making efforts. They argue that dissemination and promotional activities aimed at the public are two of the major potentials of the use of digital technologies alongside documentation of cultural heritage. A further important consideration is the use of digital technologies for restoring historical premises or urban areas. They also believe digital technologies are important in developing modern cultural heritage presentations and exhibitions. As part of its new approach, the museum used digital technologies extensively in promoting the concept of their expansion from the outset. The museum established its website in 2004 and in 2013 it was restructured followed by a re-launch. In its journey into digital technologies, the museum is developing a Facebook profile and an audio video guide app for tablet computers. It furthermore aims to integrate museum presentations into relevant site promotional tools and to install digital information terminals in exhibitions.
A critical development at the museum is the use of digital technologies for research. This has allowed greater public access to collections and databases and a partnership with the University of Rostock and helped to reinforce the museum's image as a site of high-quality research. The museum's research profile include:

* a collection of 180,000 objects with 150,000 of these digitised, making it the largest museum database in the state;
* online availability of a database, developed along with a link to feed into the German Digital Library system and Europeana;
* research database 'Digital index of works of Egon Tschirch', which is available online internally;
* involvement in pilot of 'state database Cultural Goods' in 2011 in conjunction with the University Library Greifswald.

An institutional analysis helped the museum to determine how best to implement its online marketing and branding strategy. The plan incorporated a number of factors that reflect local marketing trends, aims and objectives of the institute, its unique characteristics and the future use of digital media to raise awareness, appeal to target groups and capture user satisfaction information. Other marketing and branding strategies and uses of digital technologies include:

* feedback on positioning, engagement and interaction of users and workers with digital technologies including emotional and social responses;
* increasing recognition of the museum by creating joint presentations, which bundle together various offers such as *Rostock time travels*, *Future out of Tradition*, *Adventure Culture* or *Adventure Human Being & Culture*. Joint presentations will mainly be used on websites, Facebook, YouTube and TV/radio;

- using slogans, which communicate a core message, address emotion and express a service and benefit promise such as *Passion for Inquisitives*, *Explore the Museums* and *Where the Horizon Widens*. Such measures will help to anchor the quality and performance of the promise in the mind of users and potential users. Development of the brand is strategic to ensure better positioning;

- establishing a brand name for communication on real and virtual levels including incorporation of the name of the city and logo colours into all digital presentations, to ensure visibly of the locality's corporate identity;

- competing for visitors with other leisure offers using approaches such as social media to target various groups;

- introducing measures to ensure identified target group of mostly older and formally educated females are maintained using forums such as websites and social media;

- increasing use of digital media in the marketing of the museum, which should be reinforced by the wider campaign incorporating Rostock;

- brochures, website presentations and YouTube videos used to promote the museum in a similar way to campaigns such as 'Monasteries and Pilgrimage in Mecklenburg-Vorpommern' to target visitors from other federal states like Nordrhein-Westfalen, Lower Saxony, Bavaria and Baden-Württemberg;

- branding both the Museum and Rostock as major cultural tourism destinations to be advertised in publications and outlets of ferry companies to appeal to visitors from Baltic Sea countries and other parts of Europe;

- focus on raising awareness, locally and nationally, among the four so-called 'sinus milieus' to unlock the potential of visitors such as executives, civil servants, freelancers and students using keywords like service, sustainability and networking;

- extensive use of communication channels such as printed newspapers and online versions, local radio and TV networks, social media, related user applications and other innovative methods;

- strategies for attracting children should reflect an ethos of sustainability, be based on use of digital technologies such as interactive tools and virtual approaches and seek to foster links with kindergartens, schools, etc.

The museum's marketing framework should involve greater cooperation with established marketing tools and partners. This means building on already established linkages with German Central Tourism Office, Deutsches Küstenland e.V., Baltic Sea Tourism Forum, Seaside Resort Association, Landurlaub e.V., German Railways, DEHOGA, Golfverband M-V, and airlines. There are also cross-marketing partnerships with several airlines, Scandlines, a ferry company, the business sector network BioConvalley, regional TV channel NDR, local TV channel TV Rostock and the publishing house Hinstorff-Verlag. A museum tourism strategy would enable consolidation of these linkages and partnerships, which would help to enlarge the interface between museum, tourism service providers, target groups and digital technologies.

4.5   SUMMARY

This investigation shows that the Rostock Museum of Cultural History is striving to address the market of 'meaning-creation' by implementing a range of innovative activities based on digital technologies. Local users confirmed they found the digital technology-based communication devices satisfactory, user-friendly and that they met their needs for both relaxation and furthering knowledge. Moreover, they indicated that the museum provided a space in which there could be greater interaction, engagement and experiences with cultural heritage. This represented their need for (re?)orientation; a new slowness in contrast to everyday life.

However, the study also found that a stronger commitment of museum pedagogical and marketing experts was needed to exploit the full potential of their cultural heritage. There were further concerns about deficits in marketing the location and its unique profile as an important regional cultural tourism destination. Participants argued that the regional profile needs to be sharpened by specifically honing in on linkages with other coastal locations and a stronger focus on tourism offers, and claimed that the museum has the potential to play a major role in this regard. There also needed to be greater exploitation of its links with other institutions.

Even though the Rostock Museum of Cultural History has a number of established partnerships and links with public and private sector businesses and organisations, its potential as a tourism attraction, was considered a 'closed unit', as its various interfaces and activities are not fully revealed. The study highlights a need for greater crossover offers with areas such as recreation, nature experience, wellness and high-quality hotels and restaurants to expand the museum's customer base. This would also lead to a broader spread of the benefits of the culture economy and, at the same time, ensure the sustainability of the museum's cultural heritage.

5   TALKING STATUES COPENHAGEN

'*Living art belongs to the living people … It must not only be the rich man's possession. It must be just as joyous for the common man so that he too can feel the power of its beauty. Let the art ennoble our city, so that it may ennoble our lives*' - Carl Jacobsen (1842-1914).

5.1   INTRODUCTION

This research seeks to identify how digital technologies have been implemented in the dissemination of built heritage in urban spaces, contributing to the reshaping of the built heritage environment in Denmark. Talking Statues as a project was established in Copenhagen in 2012 to raise the profile of the sculptures by using digital technologies. The project also aimed to bring the cultural heritage of Copenhagen to a wider audience and to increase the opportunity for cultural encounters outside of the museum setting. The initiative relies on a combination of mobile technology and modern animation techniques to 'bring to life' or give voice to a selection of public statues that represent some of Denmark's most famous historical figures. They include Hans Christian Andersen, Søren Kierkegaard and Adam Oehlenschläger. Findings suggest that the talking statues offer a new and exciting approach to encouraging public participation in cultural heritage. However, concerns were raised that in trying to appeal to a wider audience, the 'entertainment factor' could become the focus of the project at the expense of the educational potential that it is supposed to represent.

This chapter presents the findings of the case study of Talking Statues of Copenhagen. Modern technologies are transforming the way in which cultural heritage and built environments are perceived and experienced by visitors. Cultural heritage institutions increasingly acknowledge digital technologies as a means to enhance the communication and delivery of cultural knowledge. They simultaneously recognise the economic potential that such technologies represent especially where they succeed in making cultural heritage more attractive and accessible to consumers.

5.2   BACKGROUND

Denmark's capital Copenhagen, situated on the eastern coast of the island of Zealand, has an urban population of 1,263,698 (2015) and a metropolitan population of 1,992,114 (2015). Tourism constitutes a substantial contributor to the Danish economy, generating approximately 91.9bn Danish Kroner (DKK; about 12.3bn Euro) in revenue and 11,.460 jobs annually. Tourism in Denmark generates taxes of 37.9bn DKK (about 5.1bn Euro) and represents 3.6% of Danish exports.[15]

Tourism to areas outside of the capital region has stagnated in recent years, losing out to competition in neighbouring countries. Over the ten-year period from 2004 to 2014, growth in the Danish tourism industry slowed to 4%, compared to a 25% average across 48 Organization for Security and Co-operation in Europe (OSCE) countries.

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[15] VisitDenmark, The Economic Contribution of Tourism in Denmark, 2013.

However, as Denmark's coastal and rural regions have seen a significant decline in tourism, Copenhagen's tourism sector has experienced steady growth in recent years, with an increase of 35% in the period from 2008 to 2012, compared to an average of 29% in similar European cities. Tourism in the capital region alone generates 21.5bn DKK (about 2.9bn Euro), which eclipses the revenue generated in the remaining nine of Denmark's ten largest tourist destinations.[16]

Copenhagen is the most visited city of the Nordic countries, with approximately 9.1 million overnight stays recorded for 2014, a 6% increase from 2013. The rising trends have continued into 2015, with 1.54 million overnight stays in the capital recorded in January, February and March – 140,000 more than in the first quarter of 2014. The summer period for 2015 saw overnight stays in the capital reach a record high of 2.3m, an increase of 5% from the previous year.

Sweden, Norway, USA, Germany, and the UK represent the five largest tourist markets, with a significant increase of 21% in the number of visitors from the USA recorded in the summer period 2015, followed by a 16% increase in visitors from China. The most recent figures from Statistics Denmark show the expected turnover from the first half of 2015 was more than 400 million DKK (about 53.6m Euro) higher than the same period in 2014.[17]

Copenhagen's prominent status as the cultural hub of wider Scandinavia, contributes to the international appeal of the city. Increased capital spending on culture and infrastructure since the late 1990s, has boosted Copenhagen's reputation, as a city at the forefront of innovative architecture, design, urban planning and, increasingly, as an internationally-renowned gourmet destination.

The city's long-established status as a commercial hub, finds attestation in its name, a derivative *of Køpmannæhafn*, or 'merchants harbour,' in use from 1253. Herring fishing contributed to Copenhagen's development as an important trade centre from its beginnings as a small settlement in the 11th Century, and the town continued to prosper following its fortification by the Danish archbishop and statesman, Absalon, in the latter half of the 12th Century.

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[16] Ibid.
[17] VisitCopenhagen, http://www.visitcopenhagen.dk/da/wonderful-copenhagen/kobenhavn/turister-laegger-over-400-mio-kr-ekstra-i-hovedstaden-i-foerste-halvaar, accessed September 28, 2015.

The iconic Nyhavn quarter in central Copenhagen

From the late 16th Century, Copenhagen expanded significantly, gaining prestige as the dominant trade and military power in the Nordic region under King Christian IV. The Oldenburg monarch actively sought to establish Copenhagen's standing as a Renaissance city of cultural renown, commissioning prominent German and Dutch architects to build many of the impressive structures that remain key attractions in Copenhagen's cityscape today, such as the Rosenborg Palace, The Stock Exchange building, and the Round Tower astronomical observatory.

While the city suffered a series of setbacks throughout the course of the 18th Century, including plagues and fires that devastated the city's population as well as its built structures, the early years of the 19th Century saw renewed efforts to develop the cultural and built environment of Copenhagen. The period known as the Danish Golden Age saw the establishment of various cultural institutions to foster and safeguard the city's artistic and cultural traditions, as well as the rebuilding of fire-damaged parts in line with the ideals of neo-classical architecture and urban planning. Many of Copenhagen's most famous landmarks, including Christiansborg Palace Chapel and the cathedral of Copenhagen (*Vor Frue Kirke*) are associated with this period. The many important cultural figures active in the city at this time, including writer Hans Christian Andersen and philosopher Søren Kierkegaard, played an important role in the cultural rejuvenation of Copenhagen during this era.

In recent years, place making efforts in the Danish capital have increasingly focused on cultural appeal with Copenhagen marketed as a city of creative talent with a unique design aesthetic. Copenhagen is promoted as a tourist destination by Wonderful Copenhagen, a network organisation formed in 1992 from various government agencies, including the official tourism organisation VisitDenmark.

The organisation promotes Copenhagen as a city in which cultural heritage and tradition co-exist alongside innovative technology and infrastructure: 'Copenhagen is a pocket-sized fairy tale and at the same time, a buzzing and innovative hub of ideas … A unique blend between the harmonies of old world charm and the progressive beat of a truly cosmopolitan city.'[18]

In 2013, Wonderful Copenhagen announced BIG TOURISM, a tourism growth strategy for Copenhagen from 2014-2016. The project's vision identified a number of key areas to be addressed in the effort to improve growth in the tourism sector. Among these seven 'must-win battles' is the need for an intensified effort to exploit the city's cultural potential. In recognition of the increasing prominence of *cultural* tourism as one of the largest and fastest-growing global tourism markets, Copenhagen's tourism strategy seeks to address the 'unfulfilled market potential' that the city's cultural tourism represents, pinpointing increased co-operation and partnership between cultural bodies and the tourism industry. In addition, the strategy identifies the exploitation of digital and mobile technologies as a key growth opportunity for Copenhagen's tourism sector.[19]

VisitDenmark's cultural tourism analysis (2014) identifies the profile of the average cultural tourist as belonging to three of the prioritised target audiences of the Danish tourism industry, including the good life; fun, play and learning; and city breaks.

VisitDenmark defines the cultural tourist as one whose decision to travel to a particular location is primarily motivated by the cultural and historical experiences that the location can offer.[20] However, the analysis acknowledges the overlap in markets catering for tourists solely motivated by culture, and those whose travel may be motivated by other reasons, but who are culturally active while travelling.
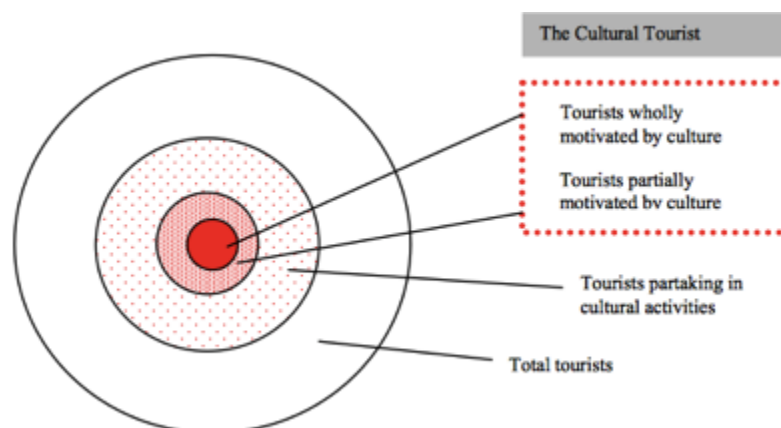
Ontario Cultural and Heritage Tourism Product Research Paper (2009)

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[18] VisitCopenhagen, www.visitcopenhagen.com/copenhagen/thisiscopenhagen, accessed September 28, 2015.
[19] BIG TOURISM strategy: http://www.bigtourism.dk, accessed September 28, 2015.
[20] VisitDenmark, Kulturturister I Danmark: Viden & Analyse, 2014.

VisitDenmark's data identifies cultural activities as:

- visiting historical attractions, buildings, and monuments;
- visiting museums and exhibitions;
- attending concerts, festivals, and events.

Their data furthermore shows that 34% of Denmark's domestic and international tourists are solely motivated by culture, while 58% partake in one or more of these three activities. 82% of cultural tourists to Denmark (i.e. those solely motivated by culture) have visited the country either once or more in the past five years.

Visitors to the capital region account for the largest share of cultural tourists in Denmark (27%), with foreign visitors showing a greater tendency to seek out cultural activities than their Danish counterparts. 79% of cultural tourists in Denmark visit historical attractions, buildings and monuments, while 74% visit museums and exhibitions. 27% of tourists who travel for other reasons but partake in cultural activities, visit both museums and historical attractions.

In January 2014, the tourism organisation Wonderful Copenhagen, in partnership with development and consultancy firm Socialsquare, carried out an analysis of the digital behaviours and needs of city tourists as part of a project supported by the European Regional Development Fund, 'Copenhagen Communities'. The report 'The Digital Traveller' finds that all urban travellers are users of digital technologies and concludes that digital city travellers use digital platforms to achieve:

- CONTROL: Social digital platforms allow travellers greater control over the quality of the experiences they can encounter. Advanced planning represents a key aspect of the digital behaviour of city tourists.
- EFFICIENCY: Efficient time management is a priority for digital city travellers, with all interviewees stating that digital social media helped them to use their travel time more effectively.
- SECURITY: Social digital platforms create security for digital city travellers, many of whom feel that such platforms allow them to make the 'right' choices when travelling.
- THE UNIQUE: Social media allows digital city travellers to seek out 'authentic' travel experiences and avoid encounters that are perceived as 'touristic'.
- IDENTIFICATION: Social digital platforms allow digital city travellers greater opportunity to identify the types of experiences that will best suit their individual preferences via recommendations from other users, who share these preferences.
- RELATIONSHIPS: Social media allows digital travellers to maintain close contact with their personal network at home while travelling. Digital city travellers primarily use those social digital platforms that they are accustomed to using at home, with very few opting to acquire new platforms when they reach their destination, e.g. a mobile 'Copenhagen App'.

The report contains the following recommendations for the Danish tourism industry:

- focus on niche rather than mass markets in order to drive the mainstream;
- segment and target in relation to interests and needs;
- not attempting to target everyone at once;

- facilitate that which already exists, without trying to control everything;
- move the visitor centre online;
- focus on services surrounding specific problems;
- link to the best digital tools and platforms;
- generate better information and better data;
- create organisations that have the right digital skills;
- support digital and social markets.

(Source: 'The Digital Traveller,' 2014)

5.2.1   COPENHAGEN'S CIVIC STATUARY

Copenhagen's built heritage continues to play an important role in the city's touristic appeal. Copenhagen's historical monuments and statues play a particularly significant function in the distinctive place image of the city, which has often been marketed as a 'fairy tale city'. The Little Mermaid sculpture, based on Hans Christian Andersen's famed fairy tale character, is widely recognised as Copenhagen's most popular tourist attraction, drawing more than one million visitors annually. The 1.25 m (4.1 ft) figure was commissioned in 1909 by Carl Jacobsen, son of the Carlsberg brewery founder and created by the Danish-Icelandic sculptor Edvard Eriksen.

Jacobsen was instrumental in commissioning many of the statues that adorn Copenhagen's streets today. An avid collector and an enthusiastic patron of the arts, he believed that monuments celebrating the nation's heroes, monarchs and leading cultural figures, played an important role in educating the populace and fostering a sense of national identity. Jacobsen believed that art should be readily accessible to citizens outside of the museum setting, declaring: 'Living art belongs to the living people … It must not only be the rich man's possession. It must be just as joyous for the common man so that he too can feel the power of its beauty. Let the art ennoble our city, so that it may ennoble our lives.'[21] He commissioned works by Danish sculptors Jens Adolph Jerichau and Herman Wilhelm Bissen, whose creations have become iconic landmarks in Copenhagen today.

5.3   TALKING STATUES COPENHAGEN PROJECT

The arrival of digital platforms and mobile applications has transformed the way in which people encounter architecture and built heritage. The extensive selection of virtual platforms available today can contribute to a much wider dissemination of the architecture, monuments and statues that have come to play such an important role in the place making and branding of Copenhagen as a culturally rich location. The new technologies provide opportunities for citizens and tourists to engage with built heritage in new ways, facilitating access to knowledge outside of the traditional museum setting and allowing people to use services when and where it suits their individual needs.

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[21] Carlsberg Group, http://www.carlsberggroup.com/Company/heritage, accessed September 29, 2015.

Promotional material on Talking Statues

The talking statues are activated by a QR code that is located on or near the monument itself. Smartphone users scan the code, using a freely available app, and are led directly to the Talking Statues app, where they can see and hear the statues speak about their lives, and the time period in which they lived. The viewer is also presented with text containing background information on the historical figure, with links to further information, as well as a map showing the location of more talking statues.

Activating Talking Statues by a QR code

David Fox, the founder of Talking Statues, explains that the driving idea behind the project is 'to revitalise history … to bring the museum outside … by letting people use digital technologies that they are already familiar with.' Inspired by his own background in filmmaking, Fox saw the unexploited potential that the city's statues represented and thought about ways in which to broaden their appeal to passers-by. He adds: 'The statues are such an integral part of the urban cityscape, and they represent significant figures that played such instrumental roles throughout the history of the city, yet they so often go unnoticed. I thought it might be interesting if they could tell their own stories, in their own words'.

The project received 80,000 DKK (about 11,000 Euros) funding from the City of Copenhagen, as well as procuring sponsorship from the company behind the mobile app, ScanLife. The main objectives of the project were:
- to get locals and tourists alike to actively participate in, and engage with, the cultural fabric of the city;
- to disseminate knowledge on key historical figures and the history of the city in a fun and interesting way.

The challenge presented by the silent and static nature of the statues was overcome by the implementation of AR, a technology increasingly used in the museum community in the dissemination of knowledge pertaining to cultural heritage.[22] The system provides users with an on-screen view of an actual, physical environment, of which elements are modified or augmented by the superimposition of computer-generated images onto depictions of real-world objects. The real-world environment is recorded on camera from the perspective of the user and the image of the object (in this case the statue) is merged with a computer-generated animation, which appears on the viewer's smartphone screen.

Thus, the on-screen representation of the statue appears to 'speak' to the viewer, displaying moving eyes, lips and teeth. The virtual statue delivers a one-minute monologue outlining the achievements of the figures they represent and describing the period in which they lived. The scripts were written under the expert guidance of historian and keeper of Copenhagen's public monuments, Jens Peter Munk. Well-known Danish actors Jens Jacob Tychsen and Søren Sætter-Lassen provided the voices for the statues. Once recorded, the audio track is calibrated to the animation. The audio is provided in both Danish and English with the smartphone settings determining the language in which the statues speak to each viewer.

Fox points out that the project was initially geared more towards local audiences in an attempt to encourage the citizens of Copenhagen to engage more with the heritage around them. However, as the project developed, it became clear that (foreign) tourists represented a potentially important target group. Fox explains: '*As we began to look at how to draw more funding for the project, we started to look more closely at what tourists would want to see or visit if we got them into our target group.*'

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[22] Brogni et al. 1999.

Map of the Talking Statues route

From the beginning, the project sought to strike a balance between entertainment and education. Fox explains: 'We chose statues that represented historically and culturally significant figures that are already well known … there is a sense that people want to see or hear stories that they already know a little about. For example, the two Hans Christian Andersen sculptures are very popular, and people are generally already quite familiar with him. However, it was important to highlight other significant but perhaps lesser-known figures, and to offer some new information, something that people might not necessarily have known before'.

'However, we realised that we would have to cater for the nature of our target audience: we wanted to engage the attention of the average passer-by, who might be struck by the novelty of a 'talking statue'. But, then we found that we had a relatively short window of opportunity in which to deliver succinct, historically accurate information that would hopefully provide listeners with some knowledge about the culture and history of the place. We found that one minute was the optimal timeframe; any more and we would risk alienating our audience with an information overload.'

'Likewise, we found that it was important that the statue's monologue struck the right 'tone' with the audience; for example, a certain degree of humour was necessary to gain the viewer's attention, and to create a sense of 'rapport' between the statue and the audience. If the character of the statue was perceived to be standoffish or overly didactic, then the engagement between the subject and audience seemed to suffer.'

'The talking statues are supposed to function as an entry point … a stepping-stone towards finding out more. We had to be realistic about the extent of information that we could deliver within one minute, which might amount to six or seven sentences in a history book. That is why it is important that we offer people the chance to find out more themselves, and the mobile app allows for that. Once the animation has played, the viewer is offered the chance to save the video or audio track to their phone, and is provided with a further, in-depth biography of the figure in question, as well as information about the sculpture itself, and the sculptor who created it'.

The expertise of professional screenwriter, Carsten Rudolf, was essential in ensuring that the monologues were engaging and relevant.

5.3.1   CRITICAL ASSESSMENT

With its innovative combination of digital technologies and built heritage, the concept of 'talking statues' offers a new and exciting approach to encouraging public participation in cultural heritage. 'I think that a project like Talking Statues is successful in its objective to get people to engage with a form of public, urban art that so often goes unnoticed,' Fox argues. What is also significant is that members of the public are encouraged to actively engage with sculptures on-site in their original setting. It is an experience, so the project team hopes, which will invite contemplation, not only about the celebrated figures represented, but also the nature of civic statuary and its impact on the constantly changing and evolving urban and social spaces.

However, Fox points out that one possible drawback is that, in trying to appeal to a wider audience, the 'entertainment factor' becomes the main focus of the project, at the expense of the educational potential that it represents. According to him: 'The possibility to use an app in order to hear a statue 'talk' definitely has a wide appeal as a new and exciting concept … but there is a risk that it is seen as nothing more than a novelty, a short-lived amusement with little lasting impact. And while digital technologies certainly facilitate greater access to cultural and historical knowledge, the act of scanning a code and watching a visual presentation is, in itself, quite passive.'

He adds: 'Ideally, the project would prompt people to take a more active role in the knowledge-acquisition process, presenting them with the first steps towards finding out more, with links to further information … but will people go home and research more after? We have to be realistic about the extent to which we can influence peoples' patterns of behaviour.'

Since the launch of the project with the animation of the Copenhagen statues in 2013, Fox and his company have completed a similar project in San Diego, California, USA, and have plans to bring Talking Statues to other locations around the world. The Copenhagen pilot project has allowed the production team to assess the strengths of Talking Statues, as well as the lessons-to-be-learned: 'the strength of the concept is that it draws people in to the cultural framework of the city. The talking statues are dotted all around the city, and app users can plot their course around the city with the map provided on-screen'.

In a sense, the experience should function a little bit like a 'treasure hunt', where visitors can facilitate their own cultural walking tour of the city, beginning at the City Hall and ending up at the 17th Century observatory, the Round Tower. Having scanned all ten of the QR codes on the statues, the visitor receives a coupon to their mobile phone, granting them free admittance to the Round Tower. 'For the first project in Copenhagen, we selected the statues that could be considered the most prominent in the city, so in a way, the celebrity of the historical figure depicted dictated the selection process. There is little sense of an over-arching theme that connects the statues we have chosen to animate, with the city in which they lived', Fox explains.

'In the future, I would hope that we could build on the idea of a central theme that binds the statues together, so that the statues that we 'animate' are selected based on how they each fit within a certain subject that pertains to the history of the specific location, for example: art, science, literature, maritime, etc. The aim would be to give the user a greater sense of cohesion between the figures represented in sculpture and the places in which they lived and worked, and which influenced much of their achievement in turn,' argued Fox.

'I would like to build on the idea of a 'jigsaw puzzle' experience, in which the digital user takes a greater participatory role in plotting the course of their 'cultural knowledge' journey. I would hope that this would go some way further in consolidating the relationship between the entertainment and educational aspects of Talking Statues,' explained Fox.

Noticeably absent from the Talking Statues map is Copenhagen's most famous statue, The Little Mermaid. However, the production team hopes to give voice to the effigy of Denmark's most popular fairy-tale character in the near future. Fox explained: 'We plan to launch a competition where people from all around the world can submit a 60 second monologue for her, and we will choose the best and record it - the theme being 'what would she say today, if she could speak?'

Talking Statues as a concept has also been brought to the United Kingdom, under the partnership of arts collective group Sing London and media and entertainment organisation Antenna.[23] The London project, which shares the Talking Statues title, facilitates the interaction between audience and art in a slightly different way. By scanning a statue's QR code, the digital user activates a NFC transmission, prompting them to receive a phone call from the statue in question. In such a way, 40 celebrated personages from English history, from William Shakespeare to Sherlock Holmes, address members of the public. The scripts for the statues' monologues were written and performed by prominent figures in British media, including the broadcaster and journalist Jeremy Paxman and the actor Patrick Stewart.

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[23] The London Talking Statues case study is also described within RICHES D5.4 - *CH Best Practice in the Digital Economy*

Absent from Talking Statues UK, is the inclusion of AR technology in the form of an animated video of the statue. While this allows for a lower cost of production (as the animation process is expensive and time-consuming), it also encourages audiences to focus more on the statue itself. A study carried out by Leeds University on the user experience of Talking Statues in the UK, says: 'Users commented how the recording helped them to look at the statue more carefully, to notice how it had been constructed or understand tiny details. Listening to the audio recording actually focused users' attention on the statue; 72% said that they were looking at the statue while listening to the audio.'[24]

It can be argued that the animated video of the statues, while creating a 'wow factor' that has a wide appeal, ultimately fails to encourage a deeper contemplation of the actual sculptures themselves, e.g. their aesthetic appeal, relationship with their urban surroundings, etc.

The London project has received extensive local, national and international media coverage (including the BBC, CNN, and Fox News). The study carried out by Leeds University reveals that 41% of users had been prompted to use the app, having seen, read or heard about it in the media. The study shows how highest usage took place during the first eight days after the project launch date in August 2014, with 3.720 scans recorded, a figure which represents almost one third (27%) of total usage up until 9th October which year.[25]

Thus, the media coverage surrounding Talking Statues in the UK was crucial in stimulating public interest. By comparison, Talking Statues Copenhagen has received relatively little coverage by international media. Although Talking Statues in Copenhagen receives a relatively high number of users, approximately 9-11,000 users annually, increased access to information about the project may help to attract potential users. While national media has highlighted the project to local audiences, further efforts could be made to increase awareness of the facility among (foreign), short-term visitors to the city. An increased social media presence may also help to engage new audiences.

5.4   SUMMARY

The Talking Statues app represents an exciting and innovative tool for experiencing cultural heritage in non-traditional museum environments. It encourages digital users to engage with the cultural framework of the city by using technology that is already familiar to them (the mobile App) and allows for a greater flexibility in the way in which culturally active citizens and tourists encounter cultural heritage. The project demonstrates the potential that digital technologies represent for the promotion of built heritage within the Danish context.

The implementation of AR technology can be seen to constitute a strength: in a highly visual tourism market, where a multitude of images compete for the attention of the viewer, AR responds to the heightened demand for visual stimuli where textual information increasingly fails to compete.

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[24] 'Talking Statues: The User Experience.' A report for Sing London by the Research Centre for Museums and Galleries (RCMG), 2015, p. 36.
[25] Ibid., p. 22.

However, it may ultimately fail to encourage users to contemplate the actual sculptures as they stand in their physical surroundings. Talking Statues can be seen to have succeeded in bringing the museum outdoors, but in catering for the demand for brief, entertaining delivery of information, educational content has been reduced. However, with additional conceptual development and testing, it may be possible to achieve a better educational impact, given time and money.

Greater collaboration with cultural institutions in the city may help to provide more insights into the nature of civic statuary and how it functions in relation to gallery and museum-based cultural heritage. Despite the fact that the majority of urban travellers are digital users in some form, the necessity of a smartphone to engage with the Talking Statues has a number of potential drawbacks:

- conserving phone battery is often a priority, especially for short-term visitors, who may not have the opportunity to recharge frequently;
- users have varying quality of internet access depending on networks, and in the case of visitors from outside of Denmark, the cost of international roaming charges represents a real deterrent for potential users;
- lack of free Wi fi is therefore a major obstacle to expanding the audience of the App.

6 PALAZZO PRETORIO, PONTEDERA

6.1 INTRODUCTION

Palazzo Pretorio, is a historical building representative of cultural heritage change in Pontedera, an industrial town in Pisa, Tuscany, Italy. It is located in the Arno valley at the confluence of the Era River and the Arno River. The town itself officially dates back to 1163, when it was included in an official document listing the castles in the Pisa region. Pontedera was the seat of several historical battles, but its identity as a commercial town began during the Renaissance in the XIX Century. In 1924, Rinaldo Piaggio took over an industrial plant in an area near the town to which he moved part of his well-established company 'Piaggio'.

The industrial town of Pontedera is undergoing a process of change where cultural heritage is being integrated into the town's economic model and future development strategies. At its heart is the Palazzo Pretorio, a historical building, which is representative of the city's cultural heritage and its ongoing metamorphosis. The public administration has undertaken a participatory process involving local citizens and key economic actors to define new development strategies and identify potential additional? new? strategic? uses of the historical building. This represents a genuine process that involves the local communities in place making, promotion and potential commodification of cultural heritage resources, and provides the focus for this case study.

6.2 BACKGROUND

Pontedera is an industrial town in the province of Pisa, Tuscany, central Italy. Canals and the Era's tributaries also cross its territory. As with many Italian villages close to rivers, the area has been inhabited since the Palaeolithic period. Pontedera's name derives from the Latin Pons ad Herae (Bridge on the Era) and refers to an ancient bridge that was built around 1099. Dating back to 1163, Pontedera was the seat of several historical battles and during the Renaissance period its identity as a commercial town took shape. It became more industrial in the 19th Century.

Map showing Pontedera

When Rinaldo Piaggio moved part of his well-established company 'Piaggio' closer to town in 1924, his company initially produced locomotives and railway carriages, but later focused on aircrafts during the First World War. In the 1940s, the company switched production to personal vehicles. Today, Pontedera is still the headquarters of the Piaggio company and the town is characterised by numerous subsidiaries and outlets, which have links with the firm.

The global economic downturn, particularly in 2008 and 2009, have badly affected the more heavily industrialised areas of Pontedera. Increased price competition among big firms such as Piaggio led to a reduction in sales of motor vehicles. Many companies were desperate to reduce production costs and switched manufacturing to countries such as India, China and Vietnam to take advantage of cheaper labour. Piaggio's move abroad had a knock-on effect on operations in Pontedera resulting in huge job cuts and local company closures.

The manufacturing fallout in Pontedera marked a shift in the local economy away from being heavily based on industrial production to an economy that favours/invests in/relies on culture. For many locals, making a living now means exploiting the area's cultural heritage, its range of high quality food and drink, and tourism. Examples of this include the Castellani wine company and the Amedei chocolate factory for which Pontedera now receives international attention. In an effort to build on the commodification of local cultural and natural resources, inhabitants are undergoing a process of reflection to try to establish the right strategies to achieve this. It is an endeavour aiming to ensure that locals benefit from their cultural, industrial and natural heritage in a sustainable way.

Pontedera trademarks such as Piaggio and Vespa embody more than industrial value and meaning. They are symbols of Italy's Golden Age of the 1950s and 60s, its economic boom, la bella vita (the beautiful life); the *Roman Holiday*. These representations are as internationally acclaimed as they are intertwined with local Italian culture.

Poster advertising the 1953 American comedy, 'Roman Holiday'

In Pontedera, the prestigious and long history of the Piaggio company and its symbols are celebrated within the *Museo Piaggio*, a museum inaugurated in 2000 and occupies 3,000 m^2 of what used to be the firm's tool shop. It is one of the oldest buildings in Pontedera. Fondazione Piaggio created the museum with support from the Pontedera municipality, the Province of Pisa and the Piaggio company, to try to preserve the historic memory of the most important metal-mechanical company in the southern centre of Italy. The museum tells the history of products that represent excellence in creativity and technological competence, while

Display of Vespas

praising/celebrating the entrepreneurial capabilities of the people who designed and produced them. Displays include Vespa and Gilera collections alongside the most significant of Piaggio's numerous products. The Vespas on display are aesthetically appealing and are among the rarest in existence such as the prestigious Vespa Dalí. In 2003, the museum won the prestigious 'IC Company and Culture' Award for the best company museum and archive.

The famous Vespa signed by Salvador Dalí

The Museo Piaggio is the most significant cultural attraction in Pontedera. It has been part of the municipality's pursuit of discovering and enhancing contemporary art and culture for more than a decade. Several modern artworks are used to embellish urban facades. Among them is Enrico Baj's wall of Pontedera. It is one of the largest mosaics in Italy and the last creation of this genre of pop art. It was inaugurated in 2005 and constructed like a mosaic to represent the artist's sketches. The wall was also part of the 54th edition of La Biennale International Art Fair in Venice.

Enrico Baj's wall in Pontedera

The theatre foundation, which is another cultural asset in Pontedera; Fondazione Pontedera Teatro, has become recognised at national level, because of its experimental activity in theatre production. With the exception of these cases, however, Pontedera does not have a strong vocation towards large-scale cultural tourism and is not rich in wonderful monuments, big museums, or unspoiled landscapes. However, the town is affordable and has the potential to become a centre of services that are related to the culture economy and to its local actors. Pontedera's geographical position as largest and most significant town of Valdera and its central location in the axis of Florence-Pisa, create the potential to attract visitors nationally and internationally. However, there is a need to create new ways to engage with local citizens, entrepreneurs, immigrants and associations in the territory. An example of this is sustaining the community-building Palazzo Pretorio, which is a part of the municipality's attempts to secure opportunities that could help to preserve and encourage the development of cultural and social activities in town. Palazzo Pretorio appeals to the local community, because it offers a modern and lively space where historic cultural traditions can mix with new technologies and trends.

Past images of the Palazzo Pretorio in Pontedera

From an architectural point of view, Pontedera is a modern place. Only a few historical buildings survived the extensive bombing in the Second World War means, the oldest being the Palazzo Pretorio. The building dates back to the 13th Century and got its current structure, with the loggia, during 1500. Since then the building has hosted town governors, served as a prison and, more recently, a section was used as a courthouse. The building is located in the centre of town at the intersection of two roads, which form the heart of Pontedera's commercial activities, and boast an array of shops and bars.

In September 2014, the courthouse was closed and the building left empty. This had a negative impact on the town with local people having to travel 30 km to Pisa for judicial matters. The building is owned by the Pontedera municipality, which faces the challenge of identifying new usage for it. Ideas for the future of Palazzo Pretorio include cultural, touristic, directional and possibly commercial activities. The intention is to ensure the building maintains its central role in the town and provides both economic and social advantages for the municipality and local citizens. The building is recognized as cultural heritage and therefore subject to strict planning rules. Only internal refurbishment is allowed. Estimated costs of restoration of Palazzo Pretorio are approximately 4M Euro.

6.3   LEARNING FROM SUCCESSFUL EXAMPLES

To inform the decision making process, two case studies have been used to explore potential new usage of the Palazzo Pretorio, both enhanced their built cultural environments in innovative ways.

6.3.1   THE CASE OF CITTADELLARTE

Cittadellarte Centro Michelangelo Pistoletto in Biella

Cittadellarte incorporates two meanings: citadel or rather an area where art is protected and well defended and city, which corresponds to the idea of openness and inter-relational complexities with the world. Cittadellarte[26] is a great laboratory, a generator of creative energy that supports unedited processes of development in diverse fields of culture, production, economics and politics.

Cittadellarte is structured organically as a cellular system that configures itself in a main nucleus, subdivided into different nuclei. These take the name of Uffizi. Each 'office' carries out its own activities addressing specific areas of the social system. The Uffizi are divided into the following categories: Art, Education, Ecology, Economy, Politics, Spirituality, Production, Work, Communication, Architecture, Fashion and Nourishment.

Cittadellarte is situated in Biella, along the banks of the Cervo River in the restored premises of the Trombetta Wool Mill, a former industrial complex in the historical textile centre of Biella. The development is an interesting example of adaptive re-use of a building that can be considered as industrial archaeology. It is noteworthy because in

Layout of Cittadellarte Centro Michelangelo Pistoletto

Europe the main forms of adaptive re-use have been around former palaces and unused residences of royal families, which have been transformed into publicly galleries and museums.

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[26] http://cittadellarte.it

Many of the spaces have been restored with period finishes and display different collections of art and design such as the Louvre. In Italy the re-use of former industrial buildings is rarely subject to restrictions, with few examples of protected sites. However, there is a trend of re-using such large buildings instead of dismantling them. In some cases, they are transformed into apartments and, because many are relatively recent structures, the costs for refurbishment are affordable. This means many more are currently being converted for public utility use.

6.3.2   THE CASE OF THE MUSEUM 'RODOLFO LANCIANI'

The municipality of Guidonia Montecelio hosts an archaeological museum dedicated to the Italian researcher, Rodolfo Lanciani. The museum, located in the former monastery of San Michele Arcangelo, hosts precious artefacts from the Roman period including the sculpture of the Triade Capitolina.

Recently, the municipality, in cooperation with the ISIA Roma Design (the design institute connected to the MISE Italian Ministry for Economic Development), developed a study for six alternative
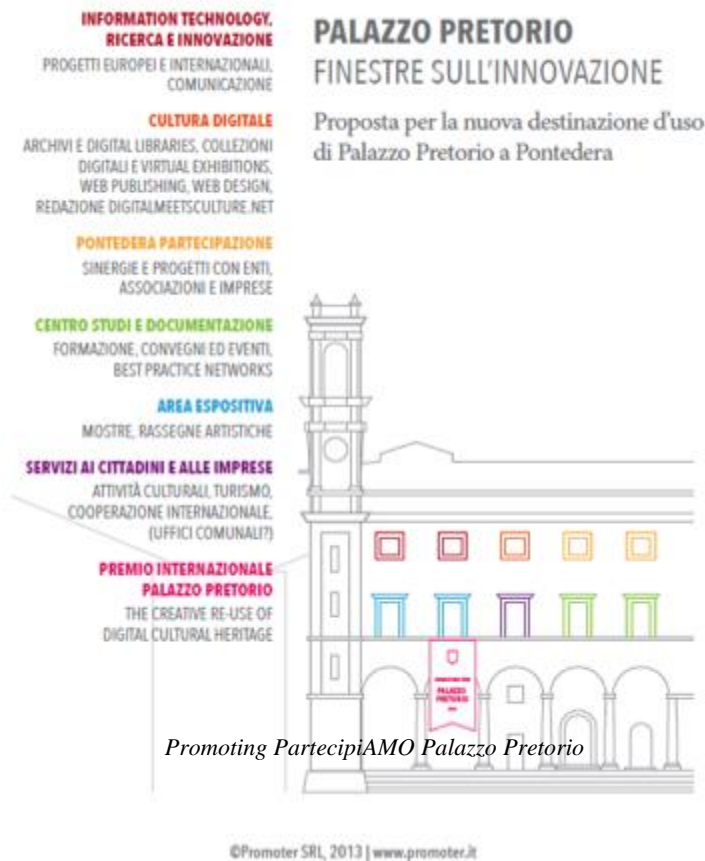
The Triade Capitolina sculpture

projects for renovation and upgrade of the museum and its services. The idea is to enhance a 'traditional' facility into a modern, interactive and innovative space, which is able to attract more visitors and drive the economic development of the area.

The projects include modernising the visitor's experience providing interactive communication, visual tools, cafe and a bookshop (Museo Archeologico Guidonia Montecelio), exhibitions using light effects to enhance artefacts (Il buio Svelato) and presenting archaeological artefacts in various contexts to illustrate the different phases of their discovery and historical reconstruction (Frammenti di identità), and space design with modular seat systems (Multicubo) and consciously preserving original structures (De Minimis).

The creation of the museum is part of a larger project to rejuvenate the town and its cultural activities. Moreover, by highlighting the artistic, architectural and environmental features of the area, it is hoped to leverage greater economic benefits for locals. At the same time, the upgrade fits in with the municipality's commitment to manage the cultural heritage of Guidonia Montecelio, by intertwining preservation and innovation. The intention is to unlock the economic potential of local cultural heritage and raise the profile of Guidonia Montecelio as a national and international tourist attraction.

6.4   CONTRIBUTION TO THE CULTURE ECONOMY

The move of the courthouse from Palazzo Pretorio and its transformation to a living cultural resource could be a significant step to a new culture economy model for the city, linking the available resources (museum, theatre, urban contemporary art, creative industries, etc.) to an innovative intervention.

In 2013, the Mayor of Pontedera presented an approach by RICHES project partner Promoter Srl to transform Palazzo Pretorio into a digital culture, creative business innovation and open participation hub. This proposal (PartecipiAMO Palazzo Pretorio – a participative approach for the re-use of Palazzo Pretorio) opened a dialogue for (re-)defining the future use of Palazzo Pretorio.

Promoting PartecipiAMO Palazzo Pretorio

The challenge related to the re-use of Palazzo Pretorio was to ensure the full involvement and consideration of the views of local inhabitants and actors such as retailers, members of associations and organisations and the management of Museo Piaggio.

Logo for partecipiAMO Palazzo Pretorio

It was felt that local cultural heritage was a resource belonging to everyone and from which they could all benefit so it was, therefore, important to incorporate their views and concerns into the re-use plans for the building. Moreover, such a 'bottom up' approach could help to avoid possible alienation of the project by locals during subsequent development phases.

Even though it was argued that promotion and commodification of cultural heritage resources could contribute to the development of a culture economy in Pontedera, locals might not be aware of this potential. It was critical to get the whole community on board with the slogan '*PartecipiAMO Palazzo Pretorio*', which loosely translates as 'I love to participate.'

The central themes, which underpin the public consultation exercise include: raising awareness among locals regarding the significance of their cultural heritage resource belonging to and potentially benefitting everybody; fostering a sense of community with locals involved in decision-making regarding exploitation of common assets; collecting fresh, innovative and bottom-up ideas, which could be explored and possibly be exploited; and establishing a process in which the Palazzo Pretorio could become central to everyday life in Pontedera and encourage more people venturing into/visiting the heart of the town.

The participatory approach, which relied on digital tools and social media in the period between November 2014 and January 2015, featured a series of user-segmented workshops to collect ideas for the re-use of Palazzo Pretorio.[27]

The main activities during the period of consultation included meetings for the public, and various workshops with locals, district council officials, members of youth and sport associations, local cultural associations (including immigrants), local retailers, shopkeepers and representatives of local accommodation facilities and a final public assembly to present the results of the process.

The workshops covered 1) people's actual experience (through a questionnaire that included questions regarding previous knowledge of and visits to Palazzo Pretorio, occasions for and special memories of visits, the history and role of the Palazzo, what emotional qualities visitors attributed to it (pleasant, safe, sad, abandoned)), 2) observation, discussion and reflection (guided by pre-determined questions), and 3) conceptualisation of the findings and action plan.

Participants underlined having the building back to its original splendour due to the cultural activities hosted there, while respecting its history, the importance of accessibility of the building for all citizens, its qualities as a symbol of Pontedera, and it being a lively pace, every day of the week.

Round table discussions at Palazzo

Each interest group underlined functions, roles and activities of the building according to its focus. All interest groups recognised the potential of public and private activities such as bookshops, library, bar and grill, retailers, cultural and artistic activities, hostel, and a community/leisure centre. As museum it could further host the town's historical archive, the local art centre 'Otello Cirri', a museum of sport, and a 'memory' museum. It could also play a role as 'headquarters' for the coordination of various Associations and offer rooms for events and meetings.

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[27] Images of the participatory activities by Piermichele Malucchi.

Available spaces at no cost for cultural activities (laboratories, exhibitions) could be sustained via the commercial activities in the Palazzo, and the possibilities of volunteer staff as well as international level funding were mentioned.

Researchers also met a delegation of the Pontedera municipality, consisting of the Mayor (Simone Millozzi), the Councillor for education and culture (Liviana Canovai), an officer of Fifth Sector Second Service for Education, Culture and Social Policies (Maria Grazia Marchetti), a referent for cultural activities (Silvia Guidi), the Councillor for youth policies (Mattia Belli) and finally an architect member of the Urban Centre Association (Eleonora dell'Aquila).

The group discussed the themes of culture economy, promotion of place, commodification of built heritage environment, opportunities and threats faced by the municipality, generally, and in particular regarding the process of re-use of Palazzo Pretorio.

Simone Millozzi, Mayor of Pontedera

The Mayor described how for the past fifteen years Pontedera has been involved in a process of enhancement of culture and contemporary art, to make the town attractive for tourists and visitors, locally and internationally. He argued that Museo Piaggio was a key element of the town's cultural development. In the future, the Mayor outlined, the area connected to the Museo will be enlarged to host an open laboratory and museum about robotics, in conjunction with University of Pisa Sant'Anna Research Centre, as well as an atelier or gallery dedicated to the Italian icon, Ferrari. The requalification of urban areas feature art decorations and objects such as the Baj wall and benches to make the town aesthetically pleasing to tourists and locals. Feedback is often sought from locals on the cultural development of the town.

Liviana Canovai, Silvia Guidi and Maria Grazia Marchetti underlined the importance of the Fondazione Pontedera Teatro, which, in conjunction with Teatro La Pergola of Florence, was being examined for recognition as a national theatre. The role of Fondazione Pontedera Teatro is of particular relevance in the context of 'culture to foster a sense of community,' because the theatrical production of Teatro Era always aim to involve the citizens with ad hoc and experimental productions.

The group furthermore discussed the misconception that locals in industrial small towns are not attracted or do not care about their area's cultural heritage and initiatives. Statistics reveal that performances at Teatro Era are very popular; the local library daily attracts 800/900 students and readers, and when the Palazzo Pretorio was opened with guided tours, large numbers of people participated. The Councillor of Culture and the Mayor stressed the importance of the municipality and citizens believing in the local culture economy, which can be enhanced to create economic and social benefits for everyone. For this reason, they added, it was extremely important to develop public-private partnerships where local entrepreneurs invest in the territory and its cultural assets to exploit an economic advantage.

Silvia Guidi reflected on the idea of Italy's art and culture being considered 'pure', in some quarters, and not to be polluted with money and business. However, such an approach was viewed antiquated with art and culture being the true 'gasoline' for Italy's economic growth.

It was clear from the discussion that Palazzo Pretorio should play a high-profile role in town. The idea of it being turned into domestic

From the left: Valentina Bachi (Promoter), Mattia Belli, Maria Grazia Marchetti, Eleonora dell'Aquila. Seated: Liviana Canovai and Silvia Guidi

apartments was frowned on. The group was adamant that the building was a vital 'heart of the town' that belonged to everyone and should be available to be used by them. The municipality would consider various multifunctional uses.

6.5   ROLE OF DIGITAL TECHNOLOGIES IN THE CULTURE ECONOMY


Planned makeover of Palazzo Pretorio

Digital technologies have played little role in the culture economy of Pontedera in terms of branding or developing a distinctive place image. In fact, they do not feature in any economic activities of the area. Although Italians generally make wide use of smartphones, applications, social media, etc., the digital activity of companies and institutions in Pontedera are limited to the use of the internet for information and promotional means. The municipality does have a website and social media channels, but they are essentially used to disseminate information. In 2014 however, the app InPontedera[28] was developed and launched by the Association of Retailers dedicated to Pontedera citizens and visitors. This app offers a town guide, with information about places of cultural and recreational interest, shops and stores, events, news and information.

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[28] http://www.inpontedera.it/index.xhtml.

The target group includes retailers, who can join in and add information on their shops and activities; and end users/citizens, who want to use this information. The app is available for android and IOS in Italian language, and is accompanied by a Facebook page.[29]

App pages on InPontedera

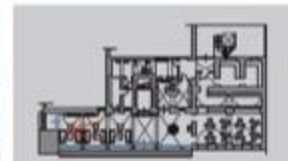[29] https://www.facebook.com/pages/InPontedera/1470512286515835.
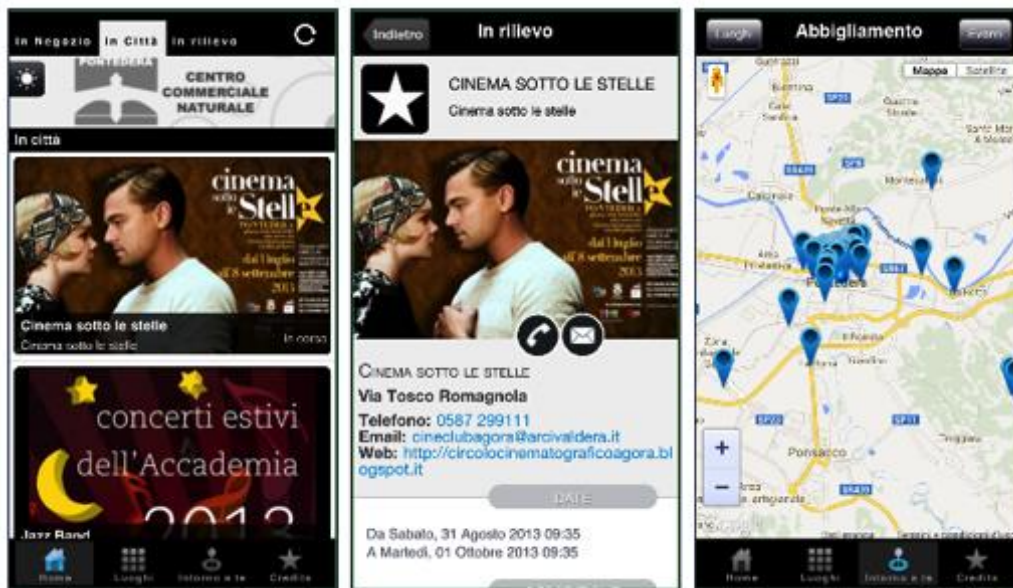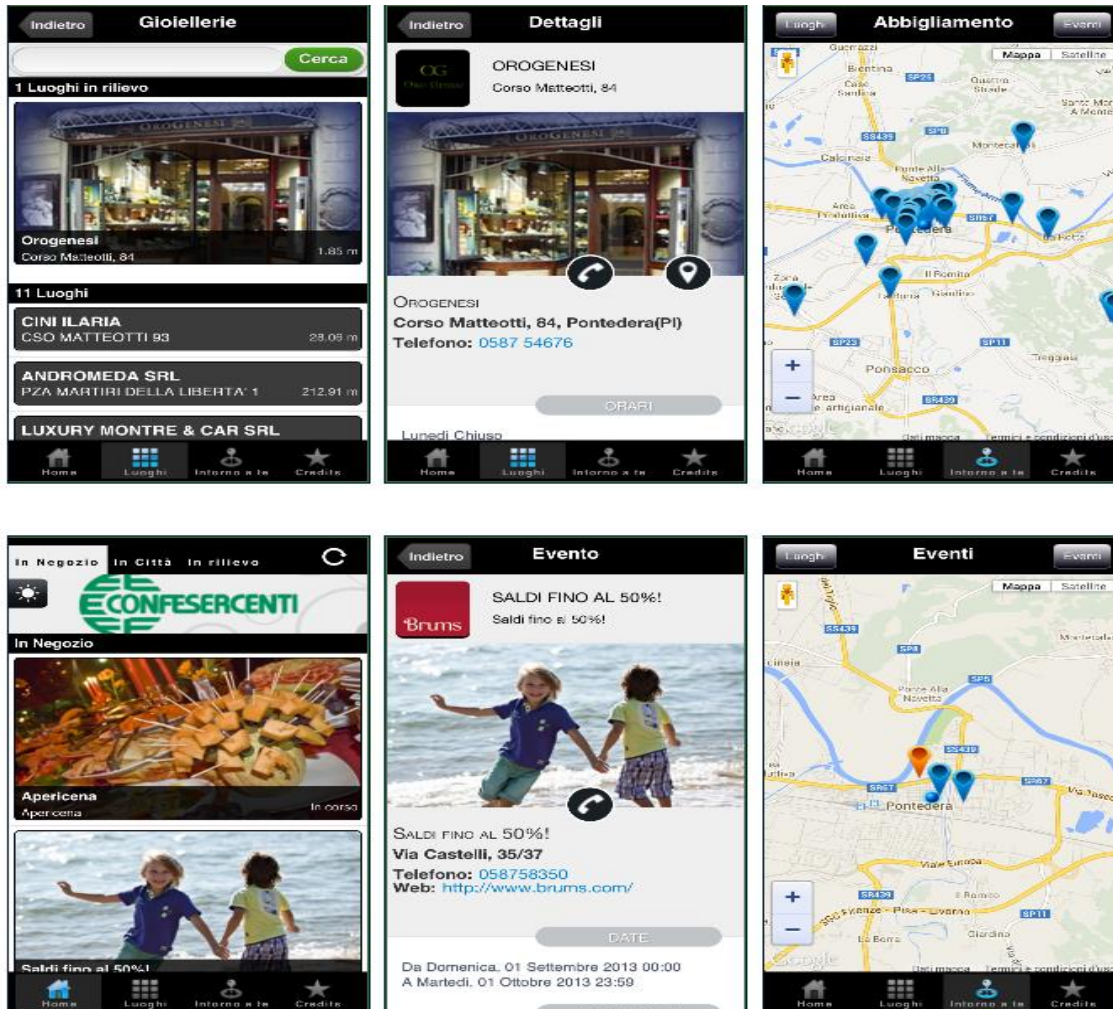
App pages on InPontedera

These images depict what appears to be a constrained move towards the digital era in Pontedera, which is still affected by a 'digital divide,' not in the strict sense of missing access to digital technologies, but more of a cultural reticence in the use of innovative tools and services. There are sectors in Pontedera, however, where digital technologies are widely accepted and used because of the improvements they have brought to practices such as architecture and design. While the participative process of Palazzo Pretorio involved traditional paper notes, the proposals that were eventually presented by two creative teams, featured highly innovative digital renderings of possible re-use ideas. The presentations were made during a final consultation, where ideas were shown to the Municipality and later to the community and the press.[30]

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[30] http://iltirreno.gelocal.it/pontedera/cronaca/2015/01/31/news/palazzo-pretorio-concluso-il-percorso-si-pensa-al-bando-1.10772713
http://iltirreno.gelocal.it/pontedera/cronaca/2015/01/30/news/palazzo-pretorio-ci-sono-due-progetti-presentati-da-privati-1.10766859.

'PALP' presented by Colucci&partners

The first proposal, 'PALP' was presented by Colucci&partners and the second by Pontedera OpenArted.[31]

Architect Giuseppe Colucci, explained that 'PALP' was a feasibility study, which 'does not give detailed indications on the materials; it is more an idea born from the indications given in the expression of interest and based on two considerations: the possible destinations of the Palazzo according to the restrictions of the Soprintendenza and the economic sustainability.' This plan foresees interventions on the ground, first and third floors and installations on the external area of the square. 'We wanted to leave the second floor completely at the disposal of the Municipality,' Colucci explained. The ground floor is occupied by a coffee bar, which would be transformed into a meeting point for books and music. The loggia might be closed with glass walls. The first floor would be dedicated to exhibitions, installations and mobile structures, which could be used as meeting rooms or workshop areas to be rented to companies and enterprises for their events. The third floor (formerly prison blocks) would be a space for art and hosting permanent exhibitions of local artists. Finally, the terrace of the prison, which had been used as recreation space for convicts, could be used as an exclusive private club.

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[31] http://www.quinewsvaldera.it/dal-book-cafe-al-fascio-di-luce-il-futuro-palazzo.htm.

The second proposal, Pontedera OpenArted, presented by publicists Italo Altalmura, Stefano Stacchini and building expert Vittorio Lukacs. Stacchini explained: 'Palazzo Pretorio is to be intended as monument. It is a historical memory building, which should add value to the town. The first idea thought of is a shaft of light to enlighten it from the outside'. The shaft of light represents the time axis, the zero point of past and future of the building.

The ground floor will host a Vespa Cafe, which will attract visitors from Italy and abroad who are passionate about the local brand. According to Stacchini, 'the spaces should also satisfy the other senses, so for example, should host the food excellences of our territory.' Finally, the prisons 'should be touched only by an artist, with delicacy. That space and its strength should stay as frozen in time.'

After the participative exercise, a call for proposals will be issued by the municipality, which takes into account the results from the public consultation. Among the evaluation criteria will be the possibility of developing activities connected to digital technologies that apply to culture, especially the plan to create a local museum in the Palazzo. The technological innovation of the proposals will form part of the call.

6.5.1 OPPORTUNITIES AND THREATS OF THE CULTURE ECONOMY

During the workshop session with the Pontedera municipality, participants were invited to reflect on the strengths, weaknesses, opportunities and threats posed to the municipality in relation to the Palazzo Pretorio project and more generally to the development of a culture economy in Pontedera. These include:

Strengths:	*Weaknesses:*
- established process for contemporary art to leverage; - valuable geographic position in the axis of Florence-Pisa; - well known trademarks, specific to the area (Vespa and Piaggio); - ongoing social processes related to immigration; demographic growth; - limited dimensions of the local economy, which allow for effectiveness of focused actions.	- limited dimensions of the local economy, which may cause lack of resources and investment possibilities; - limited awareness of the potential and strengths of the area; - hesitant approach towards digital technologies, lack of awareness of the potential of digital technologies to enhance the culture economy of the town.
Opportunities:	*Threats:*
- social inclusion processes, which drive bigger openness towards different cultures; - cultural enrichment possibilities for both the natives and the immigrants (new citizens); - expansion of the cultural activities linked to the Piaggio foundation.	- budget and sustainability challenges; - scepticism and distrust in the municipality by the general population, essentially due to a fear of the unknown; - risk of failure due to non-innovative proposals.

In closing the session, Liviana Canovai explained: 'We are discussing about culture economy and cultural development of the town, but this term does not refer only to cultural heritage assets, buildings, and artworks and erudition. Fostering cultural development is also creating opportunities for the citizens to meet, reflect, talk and discuss, as well as to interact and integrate with the new citizens (immigrants), in order to create and share a sense of 'belonging'. This is certainly the most important meaning of the concept of 'community-building'. This statement is similar to the ideas offered in the workshops with citizens and various associations, as described earlier in this section. Although at this point there is no data on whether these suggestions have been carried out, it is encouraging that the ideas came from people coming from a range of angles and carrying different responsibilities.

7 FURTHER REFLECTIONS ON PLACE MAKING

7.1 INTRODUCTION

Where the previous chapters looked at relatively local case studies, this chapter examines three larger scale examples from across Europe to further illustrate how place making, promotion and commodification of cultural heritage resources have become intertwined with digital technology innovations. Firstly, the chapter analyses the digital operation of Shakespeare's birthplace, Stratford-upon-Avon, UK, and describes the difficulties of such a relatively small place coping with enormous visitor numbers. This is followed by a brief description of the UNESCO and Google partnership which makes it possible for internet users to virtually visit 19 European World Heritage sites using Google's Street View interface. The initiative is aimed at exploiting the potential of digital technologies to increase awareness and encourage participation in the preservation of Europe's cultural heritage. Finally, this chapter discussed the use of digital technologies in the Vatican Museum's Sistine Chapel to manage the effects of heighted tourist visits.

7.2 CULTURAL HERITAGE AT STRATFORD-UPON-AVON

7.2.1 SHAKESPEARE BIRTHPLACE TRUST'S DIGITAL OPERATION

More than 800,000 people annually visit SBT's cultural heritage sites at Stratford-upon-Avon generating an estimated income of 9.8 million UK pounds. Visitors are from across the globe and enjoy one of the Trust's five attractions or houses - Shakespeare's Birthplace and the Shakespeare Centre, Nash's House and New Place, Hall's Croft, Anne Hathaway's Cottage and Gardens and Mary Arden's Farm. The sites cover a distance of three miles and are said to have belonged to the family of the poet, playwright and actor, who has been dubbed the 'Bard of Avon'. SBT, an independent charity established by government legislation in 1961, oversees a collection of more than 700 objects, some dating back more than 500 years. They include books, manuscripts, records of historic interest, pictures, photographs and objects of antiquity pertaining to Shakespeare, widely recognised as the greatest writer in the English language.

Waving the flag for Shakespeare
Image: Taylor 2015

SBT increasingly applies digital technologies to enhance user engagement as well as to support the daily routine of running the charity. 69% of the Trust's bookings are done online and various social media platforms are used to maintain links with people from 229 countries. In collaboration with the University of Warwick, SBT launched the Massive Open Online Course (MOOC) 'Shakespeare and His World' in 2014, which involved material from the Trust's collection and featured 26,000 active participants from 65 countries. Another joint initiative with the University of Warwick and the social enterprise media company Misfit Inc. was the 'Shakespeare on the Road' project, which captured a comprehensive picture of Shakespeare's place in contemporary American culture. The Trust has also established a micro-site for Shakespeare's 450th anniversary years from 2014-16.

SBT's main website attracted 463,000 unique visitors in 2014, an increase of 27% on the previous year. The collections' website was visited by 41,000 unique visitors, an increase of 140%. On findingshakespeare.co.uk, 133 blogs were created and visited by 73,000 visitors from across the globe. The digitisation of more than 1,700 items from the Trust's collections means they are now available online. As part of its celebrations marking 400 years since the death of Shakespeare, the British Broadcasting Corporation (BBC) will run an online festival, a digital project tracking Shakespeare's inspirations around the UK and interactive lessons for school children. These initiatives and activities are representative of the charity's increasing embrace of digital technologies. Moreover, the Trust has announced plans to amend its governance for the first time in 50 years to recruit new trustees including people with digital technology experience.

SBT's collaborations, online bookings and visits are a reflection of the charity's ongoing investment to engage people through digital and social media platforms (Kyle 2014). It is also an attempt to keep pace with the demand for products and services brought about by the acceleration of digital innovations (Yip 2015). However, with limited resources and continued cuts to funding, organisations such as SBT tend to struggle to make the same progress as commercial enterprises in adapting to new digital technologies and are therefore unable to maintain a competitive advantage in the digital economy (ibid 2015). Moreover, despite SBT's important contribution to the local culture economy, there have been issues with marketing its sites in terms of conservation and the commodification of place image and identity.

The history and present characteristics of Stratford-upon-Avon are shaped by attempts to maintain and promote various aspects of the life and works of Shakespeare and his family. The town is continuously being re-created with the ultimate aim of attracting more visitors to increase income. Nationally, the UK generates around 26.4bn pounds annually from cultural heritage tourism. In Stratford-upon-Avon, it is estimated to be worth 421M GBP to the local economy and supports some 8,000 jobs from approximately 4.9 million annual visitors to the town (Stratford District Council 2011). However, the district council wants to increase visitor numbers to 6.25 million people, generate a yearly income of 537M GBP and create and extra 1,188 jobs (ibid 2011). The intention is for Stratford-upon-Avon to re-establish itself among the top twenty UK destinations for domestic and international visitors.

However, while the money and jobs generated by tourism will be welcomed in Stratford-upon-Avon, burgeoning tourist numbers will inevitably lead to negative impacts. The town has already faced severe criticism for its Disneyfication effects. The writer and critic Germaine Greer has lambast Stratford-upon-Avon as a 'tourist trap' with overpriced mass-produced foods, products and services, poor accommodation and amenities, nondescript built environment and extortionate car parking charges (Guardian 2006). 'It is because the Bard is such a draw that the 'world-class destination' that is Stratford-upon-Avon will remain a dump' (ibid 2006). While the 2011 Stratford-upon-Avon Visitor Survey did not consider the 'Disneyfication' effects of commodifying local cultural heritage, it found that overcrowding in the town had decreased. 63% of the 500 tourists interviewed in 2011 thought the town was 'not too overcrowded' compared to the 59% of visitors who held this view in 2005 (Stratford-upon-Avon Visitor Survey 2011). 90% of overnight visitors rated their accommodation very good and there were similar ratings for attractions and places to visit (97%), range of places to eat and drink (95%), shops (91%) and cleanliness of the streets (95%) (ibid 2011). Even though 32% of visitors thought car parking in the town was expensive, none felt the general atmosphere of the town was poor (ibid 2011).

However, a Stratford District Council report revealed a disconnect between the local public and private sectors in terms of tourism delivery and believed that greater collaboration and coordination was needed to help the town achieved its sustainable objectives (Stratford District Council 2011). The local authority has insisted it was committed to providing authentic and distinctive experiences, prioritising the needs of residents, visitors and the environment (ibid 2011). A critical consideration for the council is to ensure that residents enjoy the benefits of tourism in a way that does not undermine their local 'sense of place' (ibid 2011). At the same time, the authority is faced with the challenge of being innovative in its use of the Shakespeare theme to provide a gateway to other local cultural heritage resources.

7.2.2   STRATFORD-UPON-AVON'S PLACE IMAGE AND IDENTITY

With deep historical linkages to Shakespeare, it could be argued that Stratford-upon-Avon has become an existential site where experiences and abiding relations with physical and social settings shape and define people's sense of belonging, identity and culture (Giaccardi and Palen 2008). The town undergoes continuous (re)construction for visual and physical consumption through the promotion of certain images of Shakespeare that have effected the built environment, particularly in terms of its preservation (Wirth and Freestone 2003). Stratford-on-Avon thus holds a symbolic and even a spiritual dimension beyond its physicality through interaction and experiences with its intangible and material setting (Qian, Zhu and Liu 2011: 170). Moreover, the town is representative of the 'human self, and is reconstructed through meanings that are inseparable from human subjectivity' (ibid 2011: 170). This can be seen in the life and works of Shakespeare, which have endowed the distinctive symbolic qualities that are key features of the town's individuality and its appeal. This indicates that places matter, because they contribute to the quality of life and by attaching meanings to places the way we root ourselves spatially and historically, they become part of our identity (Taylor 2013).

Attractive: Visitors paying homage to Shakespeare at Stratford-upon-Avon
Image: Taylor 2015

It is apparent that the re-imaging of Stratford-upon-Avon with new cultural meanings of Shakespeare has encouraged greater consumption, both intangible and tangible (Wirth and Freestone 2003). Enjoyment of historical facts about the playwright, his plays, academic studies about his personal life or his literary works bring about different values for each consumer (Yip 2015). Moreover, consuming Shakespeare (virtually or physically) has created a sense of belonging to the town with its sites serving as places of pilgrimage to the playwright's admirers from around the world (ibid 2015). This form of engagement is also leading to a modification in consumption of the town's cultural heritage from passive (tangible) towards active (intangible) participation (Richards 2011). It means the provision of more creative 'activities and experiences related to self-realisation and self-expression whereby tourists become co-performers and co-creators' of the cultural heritage they consume (ibid 2011: 1237). Increasingly, digital technologies have become intertwined with this form of cultural heritage consumption by allowing new ways of engagement, interpretations and the creation of communication and interaction spaces relating to specific settings such as Stratford-upon-Avon (Giaccardi and Palen 2008). In this sense, cultural heritage serves as a 'medium of communication, a means of transmission of ideas and values and a knowledge that includes the material, the intangible and the virtual' (Mason and Baveystock 2008: 15). Understanding the meanings these various perspectives hold for consumers of Shakespeare, will not only help the SBT to better define its target audience and strategies for attracting visitors, but also reveals the paradox of the commodification of place image and identity. The implication of digital technologies on this process is now considered in relation to the Eye Shakespeare app.

7.2.3 THE EYE SHAKESPEARE APP

Eye Shakespeare is a digital app freely available to users of iPhone, iPad or iPod Touch devices. The app offers visitors virtual experiences of Shakespeare's Birthplace at Stratford-upon-Avon and has been billed as having the potential to revolutionise the way tourists and residents interact with cultural heritage (Waddington 2013).

Online: iPhone screenshot of Eye Shakespeare app interface
Image: Apple 2016

Bard: Lock of hair allegedly belonging to the poet and playwright William Shakespeare
Image: Shakespeare Birthplace Trust 2016

A joint collaboration between SBT, Coventry University's Serious Games Institute and Hewlett Packard, the app has benefitted from a 500,000 GBP grant from the UK government's Technology Strategy Board. The first version, which took 18 months to develop, was launched in 2012 with updated editions in 2013. The app features seven languages (English, French, German, Spanish, Italian, Japanese and Chinese (Mandarin)) and allow users to take souvenir photographs posing with virtual images of Shakespeare and provides an interactive map of Stratford-upon-Avon and rarely seen photographs and material from SBT's extensive archive. The app also offers audio description of each of SBT's sites using AR, an events' programme feed and a guide of local amenities in and around Stratford-upon-Avon. Thousands of historically significant artefacts and documents such as birth and death records and a unique image of a lock of the Bard's hair have been made available via the app.

The AR feature allows visitors to visualise Shakespeare's first house, New Place, in the form of a reconstructed 3D model. The house was demolished in 1702, but has been digitally reconstructed based on existing sketches. SBT hopes the app will enhance visitors' experience of Stratford-upon-Avon by allowing them to gain unique insights into the world of Shakespeare, his works and built environment. Furthermore, it is envisaged that sampling the town's cultural heritage via the app will increase physical visits to the town.

Developers of Eye Shakespeare argue that features such as AR offer exciting opportunities for cultural heritage attractions such as Shakespeare's Birthplace by providing visitors with unique, personalised and memorable experiences (Waddington 2013). 'Eye Shakespeare puts us in the vanguard of tourism and most importantly gives us another tool to improve access to our wonderful Shakespearian heritage' (ibid 2013). Eye Shakespeare, like other forms of digital technology, will make cultural heritage collections, landscapes and the built environment available to new online audiences. However, it was noticeable in the publicity surrounding the app's launch that there was a greater focus on the processes involved in its development and on the product itself than on the engagement of the end users. For example, there were detailed discussions of technical artistry such as the challenges of '3D rendering' and innovations like 'chatterbox', a text conversation programme and '3D avatar', a computer-generated image of a person (Waddington 2013 and BBC 2013). However, there was little in relation to end users' perceptions of the topics, individual interpretation or interaction with the cultural heritage content outside of the app's pre-prescribed roles and actions.

Tan and Rahaman (2009: 143) argue that even though virtual heritage is in its early stages of development, there is a danger in overemphasising the 'process' and the 'product' without accounting for the people using it. Moreover, increasing 'heritigisation', the process of socially and culturally constructing things into heritage imbuing it with meaning and values, means that there is a need to recognise its larger social context (Silberman 2005). People can fail to gain meaning from virtual heritage, because of the visually focused nature of design of domains, which can neglect people's sense of perception and how they observe the virtual world (Tan and Rahaman 2009). Furthermore, some virtual heritage platforms have shortcomings in terms of being static and lifeless and lack engagement, realism and meaningful content, confusing interface design, orientation and navigation problems and no feedback mechanism (ibid 2009).

End user feedback relating to the Eye Shakespeare app indicates that it faced some development and engagement issues, which is perhaps not unusual with a new product. The app has been available for download from Apple's App Store since June 2012. There have been 17 ratings of the three versions of the app and 13 reviews. The average rating for the three versions is three out of five. The most negative criticism of the app is its incompatibility with the reviewers' devices and that it was 'childish' and 'gimmicky' (Apple 2016). Others recommend the app as being easy to use, technologically advanced and packed with interesting information (Apple 2016). While it is difficult to fully appreciate the authenticity and veracity of customer reviews on internet sites, public reception of the app appears to be mixed.

Even though there are issues with Eye Shakespeare, such as missing image and audio files, which have been reported by users, developers claim they have now been rectified. Moreover, to ensure the app remains user-friendly, SBT and the development team have promised upgrades on a monthly basis so that its evolution becomes a co-creation between them and the public. The feedback from the public has helped to refine the app's development and a clear understanding of the different issues affecting user experiences have led to improvements (Li, Liew and Su 2011). The willingness of SBT and its developers to see the device as a co-creative development with the public will certainly lead to a more user-friendly app.

Consideration of the Shakespeare app and the on-going digitisation of the SBT's operation indicate that digital technologies have the capacity for active engagement beyond the basic presentation of descriptive, photorealistic images of cultural heritage (Affleck and Kvan 2008). Platforms such as virtual communities not only create environments where participants can join in the reconstruction of the past, but can also develop, communicate and promote a sense of place through sharing experiences of space, time and social interaction (ibid 2008). 'Place attachment is defined as the development of affective bond or link between people or individuals and specific places' (Ujang 2012: 157). It means place identity is thus linked to meanings and perceptions held by people in relation to their environment (ibid 2012). This suggests that people engaged in a virtual environment may be connected by certain characteristics, a love of Shakespeare for example, that manifests in distinctive representations or place images. In this way, virtual reality environments can contribute to the creation of distinctive place images. 'Virtual environments can build meaning for the user in relation to their situatedness, action and embodied interaction' (Tan and Rahaman 2009). However, it must be cautioned that the meanings and issues associated with cultural heritage in a physical environment will be the same as in the digital domain.

7.3   GOOGLE AND UNESCO'S CULTURAL HERITAGE ALLIANCE

Cultural: UNESCO and Google partnership
Image: UNESCO 2009

The alliance between UNESCO and Google allows internet users to visit 19 of Europe's world heritage sites via Google's Street View interface. The emphasis is on harder-to-access sites such as the Palace of Versailles in France, the historic centre of Prague in the Czech Republic, the old town of Cáceres in Spain, Stonehenge, UK and the Archaeological Areas of Pompeii, Italy.

People will be able to see nearly spherical panoramic (360˚ horizontal and 290˚ vertical) views of the selected sites via the internet. The aim of the initiative is to make it possible for everyone to have virtual access to the sites thus increasing awareness and encouraging participation in the preservation of the continent's cultural heritage treasures (UNESCO 2009). UNESCO chose the sites in response to concerns that millions of people may never have the opportunity to visit them. The agreement with Google is a major embrace of digital technologies by UNESCO to raise awareness and to preserve the world's cultural heritage assets. Other digital initiatives include UNESCO's collaboration with Google to provide online access of cultural heritage resources such as biosphere reserves, atlas of disappearing languages and various intangible heritage resources via Google Maps, YouTube and Google Earth.

Partnerships such as between Google and UNESCO are shaping the nature of cultural heritage engagement from a model of provision to one of enabling (Jones 2009). Such relationships offer opportunities to move beyond merely communicating cultural heritage to creating new values for the present and the future (ibid 2009). Moreover, they make the many storied places of the world visible and present a level of familiarity with a particular place thus creating a first layer of understanding (Gilge 2014). The excitement that results from navigating the virtual world builds on a foundation of representation to one of dynamic approximation no longer bounded by the framed two-dimensional view of a 'travel photograph' (ibid 2014: 299). However, while Google's Street View interface can provide a shortcut to knowledge, it can also lead to judgments about places and cultures based on subjective representations in terms of what is included or excluded by the mappers (ibid 2014). Moreover, questions arise in relation to control over historical and intellectual heritage[32] and their potential negative effects to learning in the long term (ibid 2014).

Countries	Cultural Heritage sites
Spain	Santiago de Compostela (Old Town); Old Town of Cáceres; Historic Walled Town of Cuenca; Old City of Salamanca; Old Town of Ávila with its Extra-Muros Churches; Old Town of Segovia and its Aqueduct; Historic City of Toledo
France	Palace and Park of Versailles; Paris, Banks of the Seine
Italy	Archaeological Areas of Pompeii, Herculaneum and Torre Annunziata; Historic Centre of Siena; Historic Centre of Urbino; Historic Centre of San Gimignano

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[32] RICHES Taxonomy definition of intellectual property rights - http://resources.riches-project.eu/glossary/intellectual-property-rights/. Also see RICHES D2.1 - *Digital Copyrights Framework*

Netherlands	Mill Network at Kinderdijk-Elshout
Czech Republic	Holy Trinity Column in Olomouc; Historic Centre of Český Krumlov; Historic Centre of Prague
United Kingdom	Stonehenge, Avebury and Associated Sites; Royal Botanic Gardens, Kew

List of European cultural heritage sites, which internet users can virtually visit following partnership between UNESCO and Google (UNESCO 2009)

With other cultural heritage initiatives such as Google Art Project (GAP), users can virtually walk through museums floor-by-floor via the Street View interface examining works of art (Bayer 2014). However, as the project negotiates the place between the traditional art world and the relative open web domain, user engagement becomes compromised in that people need to create an account with Google thereby 'transforming themselves into a commodity' (ibid 2014: 98). With the might of Google becoming pervasive across all forms, the 'harvesting' of cultural heritage data is presenting it with an unmatchable collection of online capital. While the company's foray into this arena will undoubtedly lead to an increase in access to cultural heritage places and arts, so too is the possibility that this form of 'hypercapitalism' has an unstoppable commercial momentum (Schiller and Yeo 2014). Perhaps, even more disconcerting is Google being viewed not as a 'competitor' but as the 'environment' (Bayer 2014: 99). The question then arises of whether the public wants a company such as Google to tell all of their cultural heritage stories. The analysis now considers the role of digital technologies at the Sistine Chapel.

7.4   DIGITAL TECHNOLOGIES AND THE VATICAN'S CULTURAL HERITAGE

Housing some of the world's most majestic works of art, the Vatican Museum's Sistine Chapel is constantly filled with some of the 20,000 tourists and pilgrims, who visit daily. However, the heat and dirt generated by the wall-to-wall throng, who number more than six million annually, have taken their toll on the 16th Century frescoes, which adorn the 2,500 square metres ceiling of the chapel. The 300 painted figures include the works of Botticelli, Ghirlandaio, Perugino, Pinturicchio and Michelangelo's famed *The Last Judgment* at one end. While the Vatican Museum wanted tourists to enjoy the Roman Catholic church's greatest artistic treasures, it also felt duty bound to ensure they were preserved. However, the 20-year-old air extraction system specially designed to expel humid air, sweat, skin flakes, hair dust and general pollution, was no longer fit for purpose.

RICHES
Deliverable: D5.2
Place-making, promotion and commodification of CH resources

RICHES
RENEWAL, INNOVATION AND CHANGE:
HERITAGE AND EUROPEAN SOCIETY

*Frescoes: View of Michelangelo's famous frescoes including The Last Judgment.
Image: Guardian 2012*

Turning to digital technologies, the Vatican introduced smart cameras to help cap tourist numbers by limiting the time that they can stay and installed new intelligent lighting and air conditioning. Disposable digital glasses, similar to Google Glass, were also handed out to visitors so that they could explore the chapel in 3D and delve deeper into its history before the actual visit (Hooper 2014). More than 7,000 light emitting diodes (LEDs), which used 90% less electricity than previous lighting, have been laid out on gilded, rail-like structures mounted high on the walls of the chapel to protect the art works and provide brighter lighting (ibid 2014). The lights have added a dramatic effect to the paintings by making them appear closer than they really are with some of Michelangelo's muscular nude portraits being revealed in life-like three-dimensional poses (ibid 2014). The new lights also enhance the vivid colours of the frescoes making them more eye-catching to visitors. Smart cameras mounted on walls count the number of people in the chapel to limit numbers to 2,000 at any one time, regulate the temperature and humidity and filter out dust brought in by tourists. According to John Mandyck of the American company Carrier, which installed the air conditioning system, only a technological solution could have solved the problems faced by the Sistine Chapel without arbitrarily stopping people from entering the room (Hooper 2014). 'The actual technology of delivering conditioned air is not new. What's new here is understanding how air works in this space and also adding the intelligent aspect,' said Mandyck (ibid 2014).

Largely, the Vatican's problems with mass tourist numbers is a synopsis of the broader picture of the impact of commodification of cultural heritage resources across Italy. With more cultural heritage sites on UNESCO's World Heritage List than any other European country, Italy welcomes more than 30 million tourists a year. Dealing with such huge numbers has become of critical concern and places such has the picturesque Cinque Terre have taken dramatic action to limit the number of tourists from 2.5 million to 1.5 million this year (Guardian 2016).

This measure followed complaints by locals, who claimed day-trippers had overwhelmed their communities and there were fears their rugged coastline was being damaged by coaches and cruise ships. Digital devices will now be fitted along entry roads to gauge the numbers of people heading to villages and an app will be developed to show tourists features that they may not get to see due to overcrowding.

However, despite such concerns, possible solutions such as the Vatican's embrace of digital technologies, has seen the organisation accused of viewing tourists as the 'enemy' and Italy being 'snobbish' about its cultural heritage (Jones 2014). The Vatican is further criticised for offering digital substitutes for the real deal and warned that its global distribution of a 3D film about the Sistine Chapel might actually encourage more visits than act as a deterrent (ibid 2014). 'Many of us come for art, not God. It's at once a challenge and a thrill to join the queues for the museums, then explore epic corridors and galleries full of antiquities until you reach your ultimate goal, the Sistine Chapel' (ibid 2014). It is clear that what the Vatican sees as its attempt to exploit digital technologies to enhance and preserve its cultural heritage, communicate place image and identity and combat the effects of mass tourism is complex and contested development. A key concern, it appears, is a question of trust as to whether digital substitutes of real world cultural heritage can be accurately replicated. This can be done, but digital surrogates need to be constructed transparently and based on authentic and reliable scientific principles and representations (Mudge, Ashley and Schroer 2007). In this way, digital technologies can help to democratise knowledge, increase enjoyment and remove physical barriers to cultural heritage assets like those in the Sistine Chapel (ibid 2007).

7.5   SUMMARY

The analysis illustrates the multidimensionality of digital technologies in helping to preserve cultural heritage, offer a deeper understanding of the meanings they hold, facilitate greater user engagement, limit and increase tourist numbers and communicate place image and identity. With cultural heritage accounting for some 40% of global tourism income and nearly half of UNESCO's 1,007 world heritage sites located in Europe, the potential for interlinked exploitation of cultural heritage resources is enormous. Even sites not on UNESCO's list such as Stratford-upon-Avon attract significant numbers of tourists to make cultural heritage the major contributor to the local economy. The marketing of many areas revolve around exploitation of cultural heritage resources through the promotion of place, products and quality attributes that appeal to all types of tourists. However, as the analysis illustrates the commodification of cultural heritage resources can have negative impacts. This has left cultural heritage promoters and local authorities facing the paradox of needing to attract visitors to boost the local economy and create jobs, but at the same time, find solutions to the impact of commodification.

The role of digital technologies has become critical in these endeavours, as the reports indicate. The Eye Shakespeare app is being promoted as an initiative to increase tourism, engage visitors to the town, offer insights and access to the works and life of Shakespeare and a guide to local amenities.

The alliance between Google and UNESCO aims to increase awareness and participation in the preservation of Europe's cultural heritage and digital technologies are facilitating access, knowledge and preservation of the Vatican's cultural heritage assets. While, the important role of digital technologies to cultural heritage businesses, is somewhat obvious, it is essential that they correspond with the expectations of today's complex and sophisticated and visitors (Surugiu and Surugiu 2015). There are valid concerns about the need for greater investment, intellectual rights and the potential for infrastructures such as Google's to monopolise the democratisation of knowledge. A more discerning consideration, however, is whether digital technologies can satisfy the diverse desires of today's visitors for unique, everyday and co-creative experiences.

8   CONCLUSION

Place-making, promotion and commodification of cultural heritage resources across Europe are being redefined by digital technologies. As this research shows, new digital tools are radically altering consumption, conservation, mitigation, administration, reconstruction, consumer engagement and enjoyment of the continent's cultural heritage assets. Each of the distinctive case studies (Chapters 3-6) and the more broader exploration of cultural heritage's adaptation of digital technologies across Europe (Chapter 7), have shown that the form has become enmeshed with the operation of the sector and its audience. This is represented in wide availability and use of software applications such as maps, event calendars as well as AR, which includes optical projection systems, monitors, hand-held devices and display systems, smart cameras and lighting and various social media platforms.

Many places, whether urban or rural, have developed strategies for the inter-linked exploitation of cultural resources through the promotion of place, product and quality attributes to appeal to tourists as well as the local population. Digital technologies have an important role to play in communicating these aspects and providing a gateway for consumers to cultural heritage. This deliverable investigated how digital technologies can be used to create distinctive place images in the context of increased place-making efforts across the EU, and look at the challenges and opportunities of competing in a highly crowded virtual market place.

The four case studies (Chapters 3-6) (considering the Empúries archaeological site, the Monastery of the Holy Cross, Palazzo Pretorio and the Talking Statues) highlight how specific cultural heritage sites embrace and introduce digital technologies to complement the existing repertoire of tools. The places that were selected, both in large urban centres as well as in villages, were in a process of transformation and re-shaping strategies, some of which were re-using buildings of historic value and importance to the area. Their digital strategies enhance visitors' experiences of and engagement with cultural heritage, and simultaneously amplify local branding strategies, economic and territorial revalorisation, and tourism development. The merit of these analyses lies in the thorough and detailed descriptions of specific contexts, and the role that digital technologies play in the facilitation of interaction between people, local culture and sites. Where the case studies looked at relatively local examples, Chapter 7 examined three larger scale exploits /phenomena, such as the digital operation of the Shakespearean village Stratford-upon-Avon which attracts a global audience, a newly established alliance between UNESCO and Google, and the Vatican Museum's Sistine Chapel, each of which in their own way shed additional light on the impact, scope, challenges and benefits of digital technologies.

The study shows how AR strategies are used in several ways. It can provide on-site reconstructions of ancient places, or audio alerts and descriptions so that the visitor is aided in a lively process of re-imagining the past (Empúries archaeological site). AR is also used to enhance learning experiences in museums by offering different content layers or supplying computer-generated simulations, or by addressing the demand for visual stimuli, alongside purely textual information (Talking Statues). Users describe increased levels of engagement, interaction and enjoyment of visits.

Other (non-AR) digital technologies are applied for planning purposes, presentations, websites and social media platforms, exhibitions, audio video guides, online presence and promotion (Monastery of the Holy Cross in Rostock). Visitors consider the monastery successful in meeting the demand for the creation of meaning, and providing satisfactory and user-friendly experiences. The use of digital technologies facilitate connections between locals, as well as interaction with new citizens such as immigrants to integrate into the local culture by building a community sense of 'belonging'[33] (Pontedera). A final chapter describes the more complex digital operations of managing massive touristic attractions such as Shakespeare's birthplace, and the Vatican museum, as well as digital partnership between UNESCO and Google. This shows the scope and possibilities of modern approaches to cultural heritage.

Although digital technologies augment the consumption of cultural heritage and add new dimensions to the culture economy, the practice of commodification presents a paradox to heritage promoters. Their dilemma is how to simultaneously attract visitors through varied offers and events, preserve cultural heritage assets and ensure maintenance of meanings that culture hold for locals, without putting pressure on one single attraction or activity to try to ameliorate any impacts of commodification. Striving for balance has led to an increase in the diversity of activities, usage and education content and the refashioning of cultural heritage sites as spaces of consumption. Locations are being used for musical events, games, meetings workshops, public presentations, exhibitions and the sale of refreshments. Justification for monuments and understanding of their milieu have become a critical feature of attractions, particularly in contrast to everyday life and experiences.

While digital technologies can provide exciting windows and access routes into cultural heritage, there are also challenges around how to promote a deeper and more lasting engagement with cultural heritage, and gaps to be addressed in the implementation of further projects.

First of all, there is strong competition from various leisure activity providers to attract visitors and in this 'rush', sites seem to be swept away into a current of thought that digitalisation is the 'modern' and most sensible thing to do. However, very few sites seem to have an integrated vision on the use and purpose of technology, or indeed an assessment of interest and needs from the public. Developing these technologies fits within the European Parliament Cultural Heritage Resolution 'Towards an integrated approach to cultural heritage for Europe' (8 September 2015), which emphasises preservation of cultural landscapes, cultural heritage and living cultures for both the general autochthonous public (which already includes a wide variety of (minority) cultures) as well as immigrant populations. However, it is unclear whether there is a demand from citizens for the development of such technologies, or whether institutions and app developers are simply working from an (unchallenged) assumption that cultural heritage is 'good for you'? If that is the case, is it good for everyone and at what levels (personal leisure, education, community building and establishing connections), or is it simply considered valuable as an economical factor and perhaps a logistic asset?

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[33] RICHES Taxonomy definition of belonging - http://resources.riches-project.eu/glossary/belonging-2/

To some extent, the notion of culture economy seems to have more relevance for suppliers of the local experience than for visitors. Either way, a bottom up strategy is advised over a top down approach. This is apparent in several case studies, where the lack of market research and vision statement led to local people's indifference toward the use of digital technologies and these services actually contributing to a 'digital divide' between people who use such technologies and those who do not (such as the older generations). In the case of Pontedera for example, digital activity was limited to the use of internet for information and promotional purposes only, hence the existing framework did not support the implementation of digital technologies, and people skills and access were insufficiently addressed to make it a success. It also should be noted that, in general, not yet all visitors have mobile devices. Market research and a vision statement could furthermore include how technology can have a role pre-visit, onsite and after the visit, how visits can be extended virtually; and how return-visits can be stimulated, as well as looking at the interaction between visitors and technological experiences, by for example inviting user-generated content and stories to personalise the relationship with cultural heritage. Doing this before costly resources are thrown at developing ill adapted digital products can thus be avoided.

A second major challenge concerns the so-called 'Disneyfication' effect of increased tourism, as digital technologies can reach a much wider audience than local advertising. With increased numbers of visitors, is it possible for a place to retain its original features and atmosphere, or does too much popularity lead to a diluted, watered down effect and even ruin? Sometimes it concerns actual preservation choices regarding safeguarding against high humidity and pollution in for example the Sistine Chapel, other sites struggle with the down side of expensive but poor quality accommodation, refreshments, and parking. However, this perhaps has a stronger effect on locals than on tourists, who make a specific effort to visit unique cultural heritage. Moreover, observations about digital substitutes raise anxieties about cultural simulations, the hyper-real and authenticity of the digitisation of cultural heritage. A further downside of digital technology, this study reveals, is that its success in promoting places to wider audiences could actually increase visitor numbers thus exacerbating the effects of Disneyfication.

Thirdly, a dimension brought to the fore by the alliance between Google and UNESCO, for example, is the possible contribution of digital technologies to subjective representation of places and cultures in relation to what is included or excluded by those in charge of producing place images or discourse. The inherent complexities of intellectual property rights further magnify concerns about digital technologies in terms of control, reproduction and sharing of cultural heritage assets and possible negative effects on long-term learning.

The final challenge concerns the difficulty of defining economic contribution. This project is funded under the socio-economic science and humanities strand transmitting and benefitting cultural heritage in Europe. By communicating place promotion and opening up new spaces of consumption, digital technologies have become critical in the creation of distinctive place images and new ways of engagement with cultural heritage. In doing so, they have added to livelihood streams, planning, design and management of public spaces and the reinvigoration of the consumption of cultural heritage, making an important contribution to its sustainability. However, quantifying these contributions in hard currency is not easy.

One of the reasons for that is that digital technologies are strongly intertwined with social features such as identity, co-creation, and community cohesion through festivals and food (explored in WP4), which are hard to measure.

Further research is necessary to investigate how these challenges can be overcome to ensure a more holistic contribution to preserving and sharing cultural heritage in Europe. However, the project contributes to insights regarding digital technologies on local and global scale, illustrating how it increases the transmission and advantages of Europe's cultural heritage. Site-specific cultural consumption enhances recreational learning about new and old forms of information regarding cultural heritage, and digital technologies can play a supportive role in the future development and consumption of cultural heritage and add new, colourful and experiential dimensions to Europe's culture economy.

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