



# Handbook for Creative Cultural Heritage Cooperation Projects

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A word cloud featuring various terms in blue and dark red colors. The terms are arranged in a non-uniform, overlapping manner. The dark red terms are generally larger and more prominent, while the blue terms are smaller and more numerous. The terms include:

- Participation
- Cultural Heritage
- Citizens
- Regions
- Economy
- ICT
- Experiences
- Creative Industries
- Science & Technology
- Development
- Diversity
- Cooperation
- Financing / Funding
- Communication
- Content / Licensing
- Innovation
- Learning
- Tourism

## Imprint

Creative Cooperation in Cultural Heritage (CreativeCH) project:

**Handbook for Creative Cultural Heritage Cooperation Projects**

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### Online

A digital version of the handbook can be freely downloaded at [www.creative-heritage.eu](http://www.creative-heritage.eu)

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# Creative cooperation – introduction

Heritage values

The Creative Mix

Communication

Innovation

Cultural & creative industries

Valorisation

Cultural heritage

Cultural content

Economy

# Handbook background and content

The Creative Cooperation in Cultural Heritage (CreativeCH) project aims to help regions and cities across Europe to benefit from their cultural heritage assets. The guiding assumption is that many benefits can be realized through cooperative projects of cultural heritage, cultural and creative industry and science & technology organisations and businesses. CreativeCH is funded under the Seventh Framework Programme of the European Union, specifically as a Support Action in the Science in Society strand of the programme. Among the goals of this strand is to promote new forms of creativity and innovation, involving science & technology, cultural and creative domains, and citizens, not just as beneficiaries but active participants. As part of the support activities, the project produced this handbook on how to promote such creative cooperation with a focus on cultural heritage.

## Content of the handbook

Rich and diverse cultural heritage contributes to Europe's strength in several respects, fostering citizens' sense of belonging, inspiring arts and design, attracting tourists, for instance. But the contributions of cultural heritage are not simply given rather the values of heritage must be preserved and promoted.

The handbook summarizes current knowledge about the role of cultural heritage in different fields, for example, revitalization of towns and regions, citizens' cultural participation, cultural tourism, and cultural and creative industries. The topics covered have been discussed in expert workshops organised by the project in the years 2012 to 2014. Also included are 21 case studies of creative cooperation in different cultural heritage domains, including archaeological sites, historic towns, industrial heritage, among others. Building on the results of the workshops, case studies and other knowledge, the handbook also provides a set of recommendations on good practice in creative cooperation.

The interactive online version of the handbook on the project website, [www.creative-heritage.eu](http://www.creative-heritage.eu), includes additional and more detailed content on some topics. The content is freely accessible and published under a Creative Commons licence (CC BY-NC-SA 3.0). Also a digital copy of the printed handbook is available on the website.

## Intended functions and users

The handbook highlights the important role of creative, cross-domain cooperation in the communication and valorisation of cultural heritage assets in the benefit of towns and regions. It highlights values and benefits of heritage assets in economic, social and other respects such as regional identity and quality of life.

The handbook emphasises communication because it is crucial for making cultural heritage known and appreciated and, in turn, helps making the case for preserving heritage sites, buildings and other objects. Therefore the functions of the handbook are

- to provide a useful knowledge base for creative cooperation projects,
- to stimulate such projects through inspiring examples,
- to make participants aware of success factors and lessons learned by other practitioners,
- to provide recommendations on viable approaches and good practices.



The main intended user groups are cultural heritage institutions, creative businesses, centres of science & technology (including arts & humanities research and education institutions), and municipalities and regional development agencies. Special emphasis is also placed on the participation of citizens in projects, particularly students and other young people.

## The Creative Mix

The recent decades have seen a strong increase in the recognition of the value of tangible and intangible cultural heritage. This is due to the rapid socio-economic transformation of societies and communities and the perceived loss of genuine cultural and natural environment (cf. the topic of loss of biodiversity). In parallel, the Internet, mobile services and digital content have changed the forms of interaction at work and for private purposes. “Digitization” has also opened up new markets for cultural products, services and experiences.

Europe with its rich heritage and other cultural resources can greatly benefit from these developments. Yet creative cooperation of the stakeholders is required to fully capture the advantages of preserving, communicating and valorising of cultural heritage.

The economic importance of cultural heritage is most obvious concerning the tourism industry which attracts visitors with Europe’s unique cultural landscapes, historic towns, monuments, and historic narratives, visual content and music. Furthermore cultural richness is a major resource of innovation, inspiring new forms and products (textile and wallpaper designs, for instance) as well as services and experiences (“experience economy”).

But the “raw material”, tools and markets for culture-based innovation have changed. They have become digital throughout, which means that cultural heritage content must be made available in digital formats so that new and interactive media services, cultural learning opportunities and experiences can be offered.

Indeed, ever more cultural heritage is digitised and made accessible through portals, especially Europeana, the flagship European digital library initiative. National libraries and audio-visual collections as well as small museums and archives across Europe contribute to the portal. It is a major resource for learning about Europe’s rich cultural heritage content, though not necessarily for purposes of cultural and creative businesses.

### Cooperation in cultural heritage

CreativeCH explores how cultural heritage can be further promoted and valorised jointly by heritage curators, citizens, arts & humanities researchers, technical experts, and developers of cultural products and services. The reason is that a creative mix, a combination of knowledge and skills of several domains is required for the valorisation of cultural heritage:

- Novel solutions provided by science & technology, e.g. advanced and innovative applications of information and communication technologies (ICT),
- Cultural heritage curatorial and arts & humanities knowledge, e.g. for the realization of virtual museums and exhibitions,
- Citizens engaging in cultural heritage projects, young people and seniors, as participants and promoters of own projects,

- Culture-based creativity and innovative business services, e.g. for novel forms of digital interaction, services and experiences for tourists and citizens,
- Municipal departments and regional development agencies, e.g. policies and measures that support culture-based development projects.

Combining knowledge and skills allows for cross-fertilization and joint development of ideas. Young people can be engaged in collaborative projects, for example, students of different domains, arts & architecture, history and other humanities, technical universities and business schools. Thereby they will also acquire a deeper understanding of why cultural heritage and diversity are important resources, and how culture-based creativity can make an essential difference for cities and regions.

### **Communicating cultural heritage**

The handbook emphasises communication of heritage because this is crucial for making it known, appreciated and used for various cultural and creative purposes. The communication uses heritage values (e.g. historical, social, symbolic or aesthetic) to promote regions and towns, cultural sites and routes, museum and other heritage collections. Tangible heritage (e.g. monuments) as well as intangible heritage (e.g. music, dance and other performances) must be considered. The UNESCO Convention for the Safeguarding of the Intangible Cultural Heritage (2003) notes that the two categories of heritage are not to be understood as separate. Rather, ideational, performative and physical aspects are closely intertwined (for example, in performances specific artefacts and cultural spaces are used).

Both tangible and intangible heritage, objects and performances can be digitised (e.g. an object in digital 3D format, a video of dancers, etc.) and used for cultural products or services, a virtual museum exhibition, for instance. In recent years, a wide range of novel digital technologies has been developed that allow for novel forms of cultural participation, learning and experiences. (Arnold & Geser 2008; Kalay et al. 2007; Parry 2009) Some can be considered as a standard already, e.g. interactive virtual museum exhibitions or mobile guides for historic towns. More recent creations for example are mobile augmented reality (e.g. for comparing actual and historical views of sites) or interactive 3D environments of virtually reconstructed historic buildings and sites.

## **Cultural heritage within the cultural and creative industries**

Since some years the cultural and creative industries are widely understood as important drivers of economic growth and employment. In Europe, the path-breaking report for the policy emphasis on these industries arguably has been the study “The Economy of Culture in Europe”, which was carried out by KEA European Affairs for the European Commission (KEA 2006). Before this study mainly the UK Government Department for Culture, Media and Sport had commissioned work on “mapping” and analysis of the creative industries to prepare policy measures (e.g. DCMS 2001). Culture and creativity have become core elements of the “Europe 2020” strategies for smart, sustainable and inclusive growth. A special focus on the cultural and creative industries has been placed by

the European Commission's Communication on "Promoting cultural and creative sectors for growth and jobs in the EU" (2012).

Reports on cultural and creative industries address a wide range of businesses, organisations and activities, which include arts as well as advertisement, cultural heritage as well as software. Confronted with such a spectrum, it will be helpful to ask what they have in common and where cultural heritage is situated.

### **The spectrum of cultural and creative industries**

Following David Throsby, products and services of creative industries require some input of creativity, and it is this creative element that is valued by customers. However, the creative input can go into or be used for almost anything. Products and services of cultural industries obviously must have some cultural content or properties, usually understood as conveying some form of symbolic meaning or message. They also require creativity in order to be not only re-productive. (Throsby 2008a/b)

The concept of creative industries (or "creative inputs") is much wider than that of cultural industries. Therefore, in order not to become too wide, all classifications of the industries group the businesses of the cultural industries together with some others. The selection is based not on "creativity" but the assumed degree of cultural content or properties that is present in their services or products. The list of cultural and creative industries together typically includes (cf. DCMS 2001; KEA 2006; Throsby 2008; United Nations 2010; WIPO 2003; Wiesand & Söndermann 2005):

- literature, visual and performing arts, photography, film, music,
- libraries, museums, heritage services, arts and antique markets,
- architecture, crafts, design, fashion, advertising,
- publishing, TV and radio,
- computer and videogames, software, and internet firms.

Some studies use concentric, overlapping or connected circles to indicate schematically some differences between, and relations among, these industries (e.g. NESTA 2006).

### **The position of cultural heritage**

The clearest explanations of where cultural heritage sits within the industries are to be found in production cycle or value chain models. The models cover the process of creation, production, manufacturing (reproduction) and distribution of cultural/creative content or commodities.

Cultural Heritage organisations mainly preserve, present and provide information about cultural objects, i.e. they typically sit at the start and end phases of the creative cycle. For example, inspiration by cultural heritage (e.g. museum objects, traditional arts and handicrafts) are placed in the creation stage of new cultural goods, or museums and galleries show up in the distribution (presentation) stage of visual arts. In joint projects with creative businesses the contribution of cultural heritage organisations can span the whole cycle, including also maintenance and preservation.

Cultural heritage institutions offer exhibitions and educational programmes for local people and tourists, provide online cultural services as well as make available content for other cultural and creative products. Though the primary goal of heritage sites, museums and collections is not "industry" but to promote cultural learning and knowledge, enjoyment and creative inspiration.

# Heritage values, creative and socio-economic uses

CreativeCH aims at making cities and regions across Europe aware of the values of cultural heritage and how they can contribute to various cultural, social and economic purposes. It is important to have a good understanding of the heritage value of a site, building or object, because this value is the major reason underlying its preservation and the basis for its economic benefits. But economic benefits are only one of several aspects of cultural heritage.

## Heritage values

The heritage value of a site, building or object lies in its cultural significance, which is a combination of historical, symbolic, spiritual, aesthetic and social values (cf. Sable and Kling 2001; Throsby 2000, 2001, 84–85):

- *historical value*: the historical character and content provide connection with the past and a sense of continuity;
- *symbolic value*: the symbolic meaning and power of certain places and objects adds to people's cultural identity;
- *spiritual value*: the place or object may promote insights in the meaning of religious, sacred and transcendental practices and experiences;
- *aesthetic value*: the aesthetic quality of the cultural object often is an important element for its enjoyment and may inspire new artistic creativity;
- *social value*: the place facilitates connection with others and the shared social experience (e.g., “pride of place”) can help promote local values and social cohesion.

Because of these values heritage sites, buildings and objects can enhance the cultural and social capital and community welfare in a number of ways. The concept of heritage value, however, does not include categories of economic value.

## Valorisation – Creative and socio-economic uses

From the economic point of view, the value of a cultural heritage asset lies in the benefits that can be derived from its direct and indirect use and, even, non-use. (Serageldin 1999; Allen Consulting Group 2005) Valorisation means getting out more from the substantial investment of countries, regions and municipalities in cultural heritage in several ways, not only or primarily in economic return.

There are several ways in which cultural heritage (e.g. heritage sites or museums) can directly and indirectly contribute to society and economy. This can be contributions to commercial activities and employment as well as regional and urban regeneration, skills development, and citizens' cultural participation. The contribution can be to other cultural areas, the tourism and leisure sector, or the expanding creative industries. More specifically, contributions for instance include:

- *Cultural and creative businesses*: Use of digital cultural heritage content; design/forms of products inspired by heritage objects,
- *Cultural tourism*: Tangible cultural heritage as tourist attractor (experiential value),
- *Urban and regional regeneration*: Conservation and (adaptive) re-use of historic buildings,

- *Education and vocational training*: Teaching and learning in the humanities; traditional handcrafts and conservation methods,
- *Citizen cultural participation*: Museum/site visits, cultural learning, volunteering,
- *Soft location factors*: Quality of life, historical depth, cultural identity, sense of belonging.

The inclusion of tourism or creative businesses in the list does not mean that cultural heritage institutions must become commercial players in these fields. Rather, that the resources they curate can allow for commercial valorisation, in which an institution may or may not partake to a considerable degree.

The contribution of the educational function of heritage institutions is included under citizens' cultural participation. Noted separately is the contribution to tertiary education and vocational training by many academic, specialized and highly skilled professionals of the cultural heritage sector.

Particularly highlighted should be the contribution cultural heritage makes to soft location factors such as cultural identity, quality of life and sense of belonging. While museums and sites will rarely be a determining factor in locational decisions of businesses and individuals, their presence can still be an important secondary factor.

But contributions may not be realized just by the existence of cultural heritage, especially if it sits in a museum storage or archive. Even if it is present in the public sphere, it may contribute to a lesser degree than it could. Therefore, our emphasis is on the communication of cultural heritage content and experiences through innovative approaches, products and services.



# Topics in creative cooperation



The CreativeCH project, especially through its series of workshops, works on a number of topics which have been selected according to perceived challenges in communicating and valorising cultural heritage. In this chapter some results of the workshops and additional study work are presented.

### **Cultural and creative clusters, quarters and networks**

The topic of the first CreativeCH workshop was “creative clusters”. Clusters of cultural and creative industries have been analysed by regional and urban studies, however the position of heritage organisations remained somewhat unclear. The aim of the workshop was to explore if “clustering” is a useful concept in the context of cooperation in cultural heritage, and what forms might work.

### **Cultural heritage and ICT in the experience economy**

The “experience economy” inspired another workshop. The basic idea of memorable experiences as the currency of this economy seems to offer a good match with cultural heritage. How to enable or support such experiences with digital tools and content appeared to be the difficult part.

### **New skills and professionalization**

Changing user demands and other trends will necessitate some re-skilling in the heritage sector. Also the need to train students in required skills for digital heritage projects was emphasised in a workshop. The EuroMACHS European Masters Programme was considered as a blueprint.

### **Citizens’ participation in cultural heritage**

Cultural heritage is highly appreciated by most citizens, though participation might be leveraged by a more open way of involving people online. Some institutional barriers to this were identified.

### **Creative culture-based town development**

Culture and heritage based development offers much potential for towns and regions. This section provides an overview of several options with a focus on creativity and quality, including

### **Heritage and cultural tourism**

The final topic of this chapter is favourable and critical aspects of cultural heritage tourism. Some social trends seem to work in favour of this tourism. However, critical effects are perceived at many heritage destinations, which require reinforcing principles of sustainable tourism.



## Cultural and creative clusters, quarters and networks

### Creative clusters in regional and urban studies

Alongside the increasing interest of policy makers in the cultural and creative industries, regional and urban studies of “clusters” of relevant businesses have become a booming field of statistical and other empirical studies. (cf. Flew 2010; Lazzeretti L. & Cooke 2008; Lindqvist et al. 2013)

To provide but one example, Boix et al. (2011) analysed a sample of 596,493 businesses which in 2009 were active in 16 European countries. They identified 1784 clusters across 15 creative industries. Heritage organisations presented the fewest and least dense “clusters”, i.e. relative co-location. Only 24% of the 4526 businesses (institutions) with a heritage focus showed a co-location pattern, compared to over 60% of the businesses in the software, film, video, music, design, architecture and engineering industries. Actually the study only identified 10 “heritage clusters”, for example, compared to 59 R&D, 82 Cultural trade, 102 Fashion, 241 Architecture or 313 Software clusters.

The most common results of the regional and urban studies are that cultural and creative businesses and organisations do cluster, and that the densest agglomerations are to be found in large cities (typically in the central part). Among the main reasons for this are the “creative milieu”, synergies and cross-fertilisation among people in the cultural, creative and other fields, as well as the urban habitat, infrastructure, and connectivity with other places (e.g. telecommunications, airports and train connections, etc.). Also highlighted should be that the “creative cities” (Landry 2000) and “creative class” (Florida 2002) value cultural diversity.

### A useful concept for creative cooperation in cultural heritage?

In the CreativeCH workshop “Creative Clusters” at MFG Baden-Württemberg (Stuttgart, 18.4.2012), the project partners and invited experts discussed the usefulness of the cluster concept for creative cooperation of cultural heritage, science & technology, and cultural and creative organisations and businesses.

The workshop participants understood that the key functions of industrial creative clusters are:

- bringing together the relevant actors and stakeholders,
  - promoting a culture of creativity and innovation,
  - providing technological expertise and services, and
  - supporting business development (e.g. commercial partnerships or start-ups).
- However, the participants felt that a primarily industrial perspective would not fit in the context of cultural heritage. Furthermore, “clustering” was seen as a long-term process that starts with bringing potential partners together, make them understand each other, and stimulate collaborative projects. Regular cooperation would also require sustained funding.

Two workshop participants came from digital technology & content clusters: Virtual Dimension Centre (Germany), with a focus on virtual and augmented reality applications, and Iconoval (France), a regional development agency that promotes the digital image and media sector in the Alsace region (some 400 companies with 5000 employees).

Such clusters bring together science & technology centres and companies that apply novel technology for clients of various sectors, including cultural industries, and sometimes museums and cultural sites. One example was “Limeswelten”, a virtual 3D presentation of a section of 60 km of the Limes in Baden-Württemberg, developed by ArcTron3D and 7reasons Medien for the LEADER Aktionsgruppe Limesregion.

### Quarters, routes and networks

In the field of culture and cultural heritage, mainly the following three forms of “clustering”, with different functions and geographic dimension, were seen as useful:

*Local cultural clusters (quarters):* Various cultural and creative actors, public and private, more or less co-located in a town, including e.g. museums and galleries, media, design and fashion businesses, among others. Small cultural and creative businesses might flock together in particular areas and also share spaces (e.g. “co-working spaces”).

*Cultural routes:* Link cultural sites and towns in and across regions of one or more countries, and that promote regional and town development under a common theme, typically with a focus on cultural tourism. For example, the Routes of Se-farad links towns that have a Jewish quarter (see case study).

*Cultural networks of interest groups:* Are networks of cultural institutions, municipalities, development agencies, consultancies and other organisations promoting common interests; for example, the European Interest Group on Creativity and Innovation (EICI) with some 30 members.

EICI manager Valentina Grillea (MFG Innovation) noted that a bottom-up approach, common values and relationships built on trust allowed EICI to grow and become a community rather than a “network”. She believes that trust is one of the most important elements in clustering: “Trusting each other means that it is going to be easier to learn from each other”. (Grillea 2012)

### Where are the places with the highest density of people employed in cultural and creative industries?

According to a study for the European Cluster Observatory (Power & Nielsen 2010), the cities and wider urban areas with the highest employment in cultural and creative industries relative to the total employment are, in this order: Inner London, Stockholm, Oxford (Berks, Bucks and Oxon), Budapest (Közép-Magyarország), Munich (Upper Bavaria), Madrid, Amsterdam (West-Nederland), Paris (Île de France), Berlin, Rome (Lazio), Helsinki (Etelä-Suomi), Nijmegen (Oost-Nederland), Barcelona (Cataluña) and Milan (Lombardia). In terms of sheer numbers however, Paris, Milan and Amsterdam rank much higher, while Oxford and Stockholm are the last ones on the list. Notably, on the list of the top 15 urban areas are Budapest, Bratislava and Prague.

Concerning regional concentration, creative and cultural industries focused on manufacturing and production activities (e.g. musical instruments, sound and video recording, film production, etc.) are the most concentrated. Consumer oriented activities such as museums, arts facilities, cinemas, advertising and retail businesses can of course be found in all cities. The larger ones also attract a lot of culture, leisure and shopping tourists from within the country as well as other countries, if they can be reached with low cost airlines.

Particularly relevant are the linkages between clusters. Boix et al. (2011) identified that London and Paris each host eleven large clusters of creative industries, Madrid and Stockholm five, Berlin, Brussels, Lisbon and Munich three, and Barcelona, Helsinki, Milan and Rome two. In

addition, these large clusters tend to be surrounded by smaller clusters of the same or different creative industries. Hence larger creative cities show a pattern of synergetic and complementary clusters and networks.

The same pattern can also be found in clothing and fashion industry districts where traditional manufacturers needed a higher responsiveness to consumer demands and market trends. (Evans 2009) These manufacturers are supported by smaller clusters of design, marketing, advertisement and exhibition specialists. In addition there are smaller clusters, often situated in cultural quarters of cities, which are fed by graduates of art and designs schools, independent designers / producers and trendy boutiques.

In a study of the media industries in London, Andy Pratt (2011) highlighted the various micro-geographies of clusters of studios, post-production firms and networks of specialists with different skills. In the case of the film special effects industry there is even a micro-cluster of small firms that are mainly located in one street.

The project Creative Clusters in Low Density Urban Areas (URBACT II, 2008-2011) applied a clustering approach in several areas. For example, one element in the local action plan of the small town of Óbidos (Portugal) was to establish a creative co-working space in an old farmhouse.

## Cultural heritage and ICT in the experience economy

A concept that has inspired much reflection about changes in the preferences of consumers is the “experience economy”. The core idea is that people increasingly prefer goods and services which allow for enriching and memorable experiences. Experience has become a core value of consumption because people want to lead more intensive and meaningful lives, they seek after emotions and meanings, and want to participate in activities in a more individual way. (Pine & Gilmore 1999; Schmitt 2003; Boswijk et al. 2007; Sundbo & Sørensen 2013)

Thus vendors and service providers must differentiate their products by transforming them into experiences which engage the consumer. The concept fits perfectly for the culture, tourism and leisure sectors. But it has also influenced other sectors where the success of organisations and businesses depends highly on the experiential value of their products and services.

There is an enormous growth in experience-rich travel and leisure offerings such as experience travel packages, new types of hotels (e.g. Ice Hotel, boutique or wellness hotels), themed retail malls (e.g. the Eataly Italian food malls), visitor centres of consumer brands (e.g. Autostadt Wolfsburg), theme parks, event gastronomy and so forth. Also science centres have invested a lot in new attractions and engaging experiences.

Cultural heritage organisations should be aware of this trend, be clear about their position, and define and create distinct experiential values for visitors both on-site and online. This does not mean that heritage sites should become entertainment venues and produce spectacles, but seek to find new ways of communicating heritage in engaging and enriching ways (see the Brede Works case study, for instance).

### Communicating experiential value

Customers today want to have “success guaranteed” before they actually buy a product. This is relatively easy with standardized and primarily functional

products, but not with products and services that are marketed based on their experiential value. Communicating the experiential values of an offer, e.g. visiting a historic town, monument or other heritage site, is difficult, because the visitor will gain the enriching and memorable experiences only when he or she is there. Though it is the perceived values that will make people want to actually visit it.

Heritage sites are often lacking out in the communication of experiential values, for example in promotional and interpretive information (cf. Hayes & MacLeod 2007 for material on heritage trails, Voase 2007 for visiting a cathedral). Interactive websites and media allow for more options to convey experiential values, however there considerable requirements must be fulfilled. Below we summarise some options and their requirements:

### ***State-of-the-art Web portals***

A portal will be required in cases such as a historic town where more than one heritage site need to be communicated. This is about a comprehensive offer of value propositions, though not in the typically product-driven approach of a “travel package”. The focus should be on the experiential values of monuments and historic buildings, markets and events, creative cultural courses, local producers, quality retailers, gastronomy, etc.

The overall offer and each individually need to be presented with carefully chosen visuals and messages, centred on what the visitor will experience. Multilingual content will be required, at least for the main visitor segments. A content-rich Web portal can offer a virtual visit of the town, though care must be taken that people do not get lost in a multitude of sub-pages. More advanced Web solutions could provide a kind of online stage, with scenes of different cultural places and proposed engaging activities and experiences.

It should be clear from the above, that platforms of cultural routes or several towns cannot be more than a marketing outlet, a tool for being present alongside other sites which are combined under a common theme. Typically such outlets also offer hotel booking services, city cards, etc. (e.g. Historic Highlights of Germany, a marketing platform of 13 cities in Germany, or Kleine historische Städte, a platform of 18 small historic towns in Austria).

### ***Mobile tour guides***

Mobile tour guides typically offer visitors different thematic entry points and suggestions for walking tours around the town or along a cultural route with information about places and objects, what to look for specifically, etc. Our case studies include some examples, e.g. literary heritage (Edinburgh), pilgrim route (Church on the Move) or a combination of unique local features (Knappensteig). It is very likely that we will see many more mobile augmented reality applications offering a “time travel” experience like Zeitfenster. Placing QR codes with URLs on panels can allow tourists also to capture and send back home links to web-pages about places they are visiting (e.g. Church on the Move, Matera).

### ***Participation of local people and institutions***

Historic towns and other cultural sites sometimes find it difficult to communicate the cultural richness and specific character of the place. Therefore stereotypic marketing messages are used which are meant to create a “brand”. But brands live through recognised value and people who identify with the product,

communicate this and might even participate in a community (e.g. Harley Davidson fans).

A distinctive approach is to involve local people in the communication of cultural experiences and place-specific cultural contexts. Personal voices of people who live and work in the area can communicate to potential visitors the specificity of the town, particular places and activities such as local events. Local historians, site managers and curators can contribute too. This may create an emotional resonance and first personal attachment of visitors with the town, its people and places.

### ***Visitors' own content and stories***

Strongly related to people's quest for enriching experiences and self-fulfilment is the increasing use of digital tools for documenting their own way of life. Ever more people capture images and videos of leisure and travel activities using digital cameras. Many place them on content sharing platforms such as Flickr or YouTube which have seen tremendous growth in user-created content. More and more people also express their own ideas using Web-based tools such as Weblogs.

Cultural heritage sites can benefit from inviting visitors to share images, stories and testimonials on a dedicated website (among our case studies Clunypedia, for instance). Possibly a community of people will form who share an interest in the particular and similar cultural sites. Contributions of visitors may also provide clues for enhancement of experiential values and visitor management. However, for cultural heritage institutions the challenge will often first be embracing the idea of cooperation with a (non-professional) online community, and then to nurture an evolving and thriving community that crosses the virtual as well as the physical space.

### ***Interactive installations***

Finally some notes on interactive installations which are a local, usually in-door experience, e.g. in museums or accessible monuments. Installations require much thought and creativity to add experiential value. Firstly, they are not meant to provide orientation, information and advice, which is anyway available from the reception, panels, audio-guides, etc. Secondly, installations compete with the actual experience of the museum or monument. No wonder therefore that various interactive applications have been found to under-utilized. (Owen et al. 2005; Economou & Pujol 2011; LEM 2013) If interactive installations do not offer special experiences, e.g. perceptions and insights otherwise difficult or impossible to convey, they will be perceived as an unnecessary "add on".

In addition to the challenge of creating a truly engaging and inspiring installation, also some practical requirements must be noted: the implementation must be stable, easy to understand and use by visitors, and manageable by site staff. The technology should be mature but not likely to be outdated quickly. The special experience will become outdated if it mainly depends on the technology rather than imagination and creativity.

Concerning all interactive technologies and media, the users' expectations and measures for cultural heritage applications will become increasingly demanding. They are not set by the sector but by leisure and entertainment offerings, produced with budgets and teams of developers most heritage institutions will hardly be able to afford. This is not an argument for turning cultural heritage

sites into entertainment venues, but a warning that offerings that do not inspire and engage will not find a wider appeal. Therefore the institutions will have to invest a lot of imagination and creativity in how to enhance the experiential dimension of heritage values. This will particularly be the historical and social values, i.e. connecting people in novel ways with the past as well as the meaning of heritage in the modern society.

## New skills and professionalization

### **Need to re-new skills of cultural heritage practitioners**

Public-oriented cultural heritage institutions are facing a re-examination of their societal roles, frozen or cut budgets, and changes in user demands, partly due to increasing use of the Internet and new media. Consequently, there is a considerable need to re-new qualifications in the sector.

Training and continuing professional development is particularly required concerning the communication and valorisation of heritage assets. The necessary update in competence profiles includes:

- understanding the changing user demands in cultural services both on-site and online,
- forging partnerships and working with organizations and businesses in other sectors (e.g., tourism providers, creative businesses),
- effective deployment of new tools and media (e.g., digitization of content, enhanced online access, social media), and
- evaluation of social and economic relevance and impacts.

The sector cannot wait, for example, for new generations of heritage professionals with high digital skills. The required skills are more on the user-side, e.g. digital marketing and “branding”, online communities, etc., not internal (e.g. digital collection management).

Also lack of cultural leadership and entrepreneurial spirit is often mentioned, combined with innovative thinking, looking outside the sector, and doing things differently. (Creative Choices 2010) Of course this is reinforced in the current phase of economic recession.

The situation will also often mean that funds and sponsorships become scarcer, even to the point that cuts in costs are necessary. Training and professional development are among the most likely candidates for cuts, however, this would impede the capability to take advantage of new digital tools and dissemination channels.

### **Training of students and young professionals**

According to the Eurostat “Cultural Statistics” pocketbook (2011), the interest of students in culture-related fields of studies is quite high. In the academic year 2007/08, 18% of tertiary-education students in the EU-27 were studying in a field of the Humanities, Arts, Architecture and Building. In most countries, the humanities were the most popular field (more than 10%), in some Arts or Architecture and building was predominant.

Thus Europe can count on a good base of students with a background in cultural themes. However, this does not necessarily qualify them for professional,



projects-based work for cultural organisations. In one of the CreativeCH workshops, consultant Anamaria Wills (CidaCo, UK) described her work with young arts & humanities researchers at the University of Leeds. The goal was to help them make their work interesting to a wider audience; for example through relating it to relevant topics (e.g. historic places), cultural events and venues (e.g. museum exhibitions). Also bringing the young scholars together with players of the cultural and creative sector was an important part of the work.

Often the use of digital media allows for triggering interest by new and young audiences in what arts & humanities scholars can tell them about historic periods and cultural products. However, Wills noted: “It is a slow process and it needs that both the creative and the academic people come together and exchange their views and perspectives to find innovative ideas and solutions.”

Important ways of connecting students with the cultural sector are volunteering or internships. Volunteers or interns are usually welcome by cultural organisations, but it is felt that often they are not well supported or that unpaid work is not appropriate (e.g. interns should be paid at least the minimum wage). There is much advice available for students on how to get a volunteer or internship placement and benefit from it, e.g. see the advice on the Creative Choices (UK) website. But also good planning and mentoring by the host organisations is required.

According to Paula Simões (University of Coimbra), most tertiary education curricula still do not have an interdisciplinary and creative approach that is aligned with job requirements. So many graduates have little knowledge in project management, working with customers, content preparation for digital projects, issues of copyrights, etc. Therefore the University of Coimbra together with other universities developed the European Masters Programme “European Heritage, Digital Media and the Information Society” (EuroMACHS). The programme started in 2006 and is currently offered by the Universities of Coimbra (Portugal), Cologne (Germany), Graz (Austria), Salento (Italy) and Turku (Finland).

The EuroMACHS programme promotes a project-based approach to the development of relevant competences and skills. Programme managers of the University of Coimbra, who participate in the CreativeCH project, have summarized lessons learned in working with students. The document provides advice on what to do and what to avoid so that students acquire useful expertise and skills (it is available on the CreativeCH website).

The publication of the UK Heritage Lottery Fund “Young People's Heritage Projects” (2007), gives some advice and examples on how to develop a project with young people. Examples of educational projects aimed at stimulating entrepreneurial thinking and practices of young people can be found in a recent publication of the European Commission – DG Enterprise and Industry (2013).

## Citizens’ participation in cultural heritage

Since about 30–40 years there have been fundamental changes in the notion and societal appreciation of heritage. Ever more historic and lived culture and other resources (e.g. biodiversity) are understood as “heritage” and, at the same time, felt to be in peril. Consequently, the appreciation and value of tangible and intangible heritage has risen enormously. As David Lowenthal observed, “all at once,

heritage is everywhere – in the news, in the movies, in the marketplace – in everything from galaxies to genes”. (Lowenthal 1998)

A core driver of this development is the socio-economic transformation of societies and communities. For example, the emergence of post-industrial societies has led to the appreciation of industrial heritage, a category of heritage that did not exist before the 1960s. (Hudson 1996) Meanwhile industrial heritage has become a major focus of regional revitalization as facilities for cultural and creative industry businesses or tourist attractions, e.g. the more than 1,000 sites in 43 European countries presented by the European Route of Industrial Heritage). There can also be strong opposition of citizens to an inappropriate exploitation of historical themes; one example is a planned “Dracula Park” near the World Heritage town Sighisoara in Romania (Jamal & Tanase 2006; Light 2012).

### **Appreciation of historic places, buildings and sites**

Whether or not there is “a future for the past” (Peacock 1997, 2000) depends on the level of appreciation of societies of the historical environment, buildings, monuments and other sites and the objects held and presented by heritage institutions.

As various surveys show, the appreciation of heritage values is generally high. In the first “Taking Part” survey of the UK Department for Culture, Media and Sport (DCMS 2007) over 90% of the respondents thought that when improving local places it is worth saving their historic features. A representative survey in Germany found that 88% of the respondents preferred conservation of historic houses to building new ones, only 5% wanted new buildings, 7% were undecided. (Presseportal.de 2006)

According to Eurostat figures for the EU-27, in 2006 across the age groups 25 to 64 years old on average 45% visited a cultural site at least once in the last year, 71% among the people with a high educational attainment, though only 24% of those with a low attainment. With 69.9% the average figure of the UK Department for Culture, Media and Sport (DCMS) for 2005/6 (age groups 16 to 75+ years) was much higher, and increased to 72.7% in the latest survey. 30.5% of adults reported at least three or four visits to a heritage site. (DCMS 2013)

As a study on the role of museums and galleries in the UK put it, “there are over 42 million visits each year to major museums and galleries. It is more than attendance at the Premiership League plus the whole of the rest of league football for 2004–05.” (Travers 2006)

### **Appreciation of cultural diversity**

The richness and diversity of culture is arguably one of Europe’s most important assets and an important source of its creativity and innovative potential. (cf. KEA 2009) Europe’s historical legacy is embedded in the tangible and intangible heritage (e.g. cultural landscapes, built heritage, paintings, literature, music), which enriches people’s quality of life, inspires unique creative products (e.g. Italian or Scandinavian design), and attracts millions of tourists to Europe.

Common history and heritage inform current cultural values and aspirations. In a special Eurobarometer (67.1, 2007) survey on “European Cultural Values” (EU-27), – 88% of the respondents agreed that “culture and cultural exchanges can play an important role in developing greater understanding and tolerance in the world, even when there are conflicts or tensions”;



- 77% said that the statement “the richness of European culture comes from its long history shared by European countries” matches fairly or very well their view, and
- 76% the same for the statement “It’s the diversity of European culture that sets it apart and gives it its particular value”.

The UNESCO Convention on the Protection and Promotion of the Diversity of Cultural Expressions (2005) emphasises the value of cultural diversity and that dialogue among cultures strengthens mutual understanding and respect for each other’s values. Yet, what usually works well with contemporary cultural expressions (e.g. modern popular music) is more difficult to achieve with cultural heritage.

Heritage relates to the cultural identity of people that share a common history, a territory in which they live (or their ancestors have lived), symbols and traditions that are cherished, etc. Therefore conscious interpretation and communication of the heritage values of cultural sites and museum objects is required, involving members of the cultural heritage community.

### **Citizens’ participation in communicating cultural heritage**

Citizens do not only appreciate cultural heritage, many also want to participate in projects, as shown by the high level of volunteering in the sector. (Europa Nostra 2011) One example from our case studies is the UK Soundmap project of The British Library. In this project “crowd sourcing” allowed to create a digital collection of how the UK “sounded” in the years 2010/2011. Only few of the contributed recordings had to be excluded, mainly because they may have raised copyright issues or were of very poor audio quality. The editor of the UK Soundmap notes that “the low rejection rate underlines the great effort and goodwill shown by the contributors towards the project”. (Rawes 2011)

The Internet, social media and mobile technologies clearly allow new ways for citizens to access, explore and add to cultural heritage content, as well as the forms in which it is communicated. But most Internet outlets of cultural heritage organisations present an institutional, authoritative view of cultural heritage objects and sites. In other words, many institutions lack out in deploying novel information and communication technologies in ways that engage citizens, allow them to share their views and content, and gain added value from collaborating with heritage professionals and other community members.

One major reason is that cultural heritage institutions, particularly, curators of museum and heritage sites perceive it as a too great challenge to open up to “non-expert” views and contextualization of sites and objects, which might include diverse and conflicting explanations and narratives. Furthermore, there are issues of ownership of content and fears about the public and sponsor perceptions of the institution. Therefore attempts at involving on the Web communities of interest and allowing for non-expert contextualization and interpretation in open fora have been rare. (cf. Ellis and Kelly 2007; Ridge 2007)

### How citizens can be involved in the communication of cultural heritage

This topic has been addressed in the CreativeCH workshop on “Citizen Cultural Participation” (VAST 2012 conference, Brighton, UK, 21.11.2012). The workshop explored participatory approaches and various related questions, e.g. what citizens perceive as heritage, how they related to it, and what benefits they can gain from collaborative projects.

#### Workshop highlights:

**(1) Heritage institutions can offer citizens many opportunities for cultural participation:**

There are many different opportunities organisations can offer citizens to participate in, learn about, and contribute to the preservation and communication of cultural heritage. Examples ranged from documentation of objects and sites through providing images, videos, descriptions, etc. to using historic content as inspiration for creative activities (e.g. historic costumes or music scores).

**(2) Citizens are willing to contribute, but according to their terms:** People old and young are interested in the preservation and communication of cultural heritage as shown in the number of volunteers, donors and activists in this field. But they wish to contribute according to their terms what concerns required time and effort as well as type of heritage. Projects that want to involve citizens should be aware of this and offer different and flexible ways of participation.

**(3) Local people can add place-specific context:** In the marketing of cultural sites such as historic towns often stereotypic “brand” images and messages are used. People who have grown up, live and work in the area can provide personal stories that explain what they value about particular objects, places or events. This may convey better what makes cultural sites distinct and worth visiting.

**(4) Using Web 2.0 requires placing the users at the centre:** “Web 2.0” or “social software” (content sharing platforms, Weblogs, etc.) allow people to express themselves, take part, and share ideas and own content. Through using such applications cultural heritage institutions can involve users, for example, in online exhibitions or virtual communities around cultural heritage topics, artefacts and sites. But a truly “Web 2.0” approach must put the users and their contributions at the centre, not the institution and its authoritatively curated content.

**(5) A challenging approach for cultural heritage institutions:** A “Web 2.0” approach requires a certain level of openness and willingness to experiment in order to find out what works and what doesn’t. Project managers should be prepared that what people contribute and express in the context of the institution can raise issues of ownership of content or concerns about appropriateness.

**(6) What contributions of participants fit or don’t fit:** Offensive, false or indecent statements and images aside, there is no clear rule for what contributions are appropriate. What fits or does not fit depends on the particular objectives and context of a project. What kinds of contributions are welcome should be made clear and some editorial control will be necessary in most cases.

**(7) A learning opportunity for citizens and heritage professionals:** What citizens perceive as heritage, how they related to it, the stories and images they contribute will usually be different from the institutional, subject-expert’s view and knowledge of cultural heritage. This should be taken as a learning opportunity for both, the curators who can learn about what citizens see as and value about heritage, and the citizens who can acquire a better understanding of how heritage institutions work, their professional criteria and practices. This may also increase citizens’ appreciation of the knowledge and meticulous work that is required for preserving and exhibiting cultural heritage.

**(8) The participants as the experts:** In a contemporary or ethnographic context, for example, in oral history projects or documentation of customs of rural and/or ethnic communities, the participants are “the experts”. Because, such projects are about their historic experience or lived cultural heritage. In such cases a particularly sensitive and respectful collaboration is required.

**(9) Projects involving children:** Such projects should focus on the environment the children live in and allow them choose the objects and themes they want to explore. Some guidance will be appropriate on how to investigate local history and heritage as well as available sources (e.g. historical images). An exhibition of the results can allow for celebrating the local heritage and promote its appreciation and preservation.

## Creative culture-based town development

One of the core CreativeCH topics is the role of cultural heritage and other cultural resources in city and regional development. We highlight “creative” development which embraces the Europe 2020 focus on “smart, sustainable and inclusive growth” with a special emphasis on culture-based creativity.

It is clear that this is not primarily about cultural heritage, rather cultural heritage organisations will benefit from a wider perspective. In turn, the contributions of cultural heritage to major policy objectives can become much clearer and tangible. Below we focus on small to medium-size towns that want to benefit more from available cultural assets. These are not necessarily the “creative cities” which urban development consultants have been promoting since some years. Typically the examples have been larger booming cities, which are known to attract most creative industries businesses as well as are the main places of the larger cultural institutions. However, promoting creative businesses, and a creative environment in general, is certainly also one element in a creative development strategy of smaller towns.

We suggest that towns should develop a cultural environment that combines in an integrated way several elements. The reference examples are neither large “creative cities” nor small “historic towns” which are mainly known for their unique historic environment.

Medium-size towns with more modern than historic features cannot mainly count on the attraction value of built cultural heritage and a specific historical atmosphere. However, what people – residents and visitors – perceive and experience is a major factor in creative town development. It is not primarily about being “historic”, but being a place where people want to live and work, a high-quality environment that combines authentic historic and vibrant new elements.

### **Culture-based development strategies**

Below we present some elements that can be combined to create a high-quality environment for residents and visitors, emphasising cultural and creative elements:

#### ***Built cultural and industrial heritage***

Well-preserved and used built historic environment, cultural as well as industrial heritage buildings is a major asset of any town. Investments in this asset should add to the overall fabric of economic, social and cultural life in the town. Such investments will often require finding new uses of historic buildings that allow for a return on investment (e.g., higher prices of office spaces in a central area of the town). Also industrial heritage buildings in a more peripheral area can be considered for revitalization, e.g. as affordable spaces for creative businesses. In general there is strong case for case for regenerating historic buildings. Because such buildings have multiple layers of value comprising historic character, architectural distinctiveness, local identity and colour, prestige of ownership, etc. Preservation of historic buildings can indeed make good sense in economic and social terms (cf. Rypkema 2005; Heritage Works 2013)

#### ***“Slow Town” approach***

Towns will greatly from being “slow” gentle places that emphasize quality of life and local specificities which allow for avoiding the “sameness” that has afflicted

many urban centres. This is also a counter-strategy to the effects of hyper-activity in large cities that market themselves as vibrant places of production and consumption. Too much stress is produced by overloading the infrastructure and social places with various functions, economic interests and marketing. The “slow town” approach has been developed and promoted by the Cittaslow initiative, started in 1999 in Italy. Cittaslow International is now a network of 182 towns in 28 countries in different parts of the world. The initiative provides a certification mechanism for towns whose population should not exceed 50,000: candidate towns must sign up to an action plan, covering everything from good eating to the quality of hospitality facilities and the state of the urban fabric.

### ***Fostering creative businesses***

Availability of creative, highly skilled people is a precondition for a competitive and innovative region, city or town. Talented people must be nourished, retained and supported in developing creative businesses, e.g., through making available affordable office spaces with appropriate infrastructure. State-of-the-art ICT infrastructure and high-bandwidth Internet connection may be of particular importance for creative businesses and a cultural quarter (see below). However, it should be noted that companies that emerge from creative industry initiatives typically are small service companies (up to 10 employees, but more likely micro-businesses) in fields such as media, software, visual arts, design, fashion, etc. (cf. Wiesand and Söndermann 2005)

### ***Crafts and labelled products inspired by regional cultural heritage***

Also a field of creative development can be reviving and promoting crafts and products of craftsmanship and traditional artistic work. Such products typically are inspired by regional cultural heritage (e.g., materials, shapes, colours of historic ceramics, glassware, dress or furniture). Reviving this field means to emphasise the specificity of local crafts and the quality of the products. For such products a label may be established and marketed which gives an incentive to high quality and helps in protecting and distinguishing local products from the assortment of cheap imported products that are usually sold at tourist places (Russo, Santagata and Ghafele 2007).

### ***Creative culture programmes***

Such programmes cater for people’s growing thirst for personal fulfilment, which is one of the most important drivers of the interest in creative tourism. The programmes can comprise courses in restoration work, music, cooking and culinary culture, handcrafts workshops with local producers etc. (see CreativeBreaks for many further examples). In creative programmes tourists can develop a closer relationship with local communities and places. They do not require much investment, but allow for using creative competences and skills of local people. This gives them “more of a stake in tourism, becoming active producers of tourism experiences, rather than extras in a show of staged authenticity”. (Richards & Wilson 2006)

Creative offerings will ideally relate to relevant local cultural themes, i.e. there should be specific reasons for cultural tourists to engage in specific creative activities in the town and surrounding areas (e.g. traditional handcrafts, music, ceramics, etc.). In economic terms, creative cultural tourists will stay longer in

the region, e.g., an extended weekend, whole week or even longer, depending on the type of courses and other activities offered.

#### ***Quality accommodation and gastronomy***

Towns should also foster the development of hotels that have a unique style and charm, e.g., “boutique hotels” in buildings with historic character. Concerning gastronomy, the concept of “slow food” is worth to consider. Rather than repeating the typical formulas of “traditional food” and “local recipes” it is important to emphasize the creative reinterpretation of the regional cuisine by a gastronomy that is focused on quality and hospitality.

#### ***Quality retail development***

A town will benefit from a clear-cut retail development strategy that allows for becoming “a good place to shop”. Such a strategy should foster quality retailers and shops of regional producers rather than standardized stores of large retail chains. (English Heritage 2005) The strategy can also include limiting, at important places of interest, the number of typical souvenir shops or, worse, temporary outlets of low quality, cheap goods that have no relationship whatsoever with the town.

#### ***Connecting with the region and natural environment***

For tourism in large cities (i.e. “city breaks”) the wider region and natural surroundings are not relevant in most cases. However, for smaller towns and the whole region it is important to combine and thereby strengthen cultural, natural and other assets in the region. In peripheral regions the nearest larger town is often a crucial access hub for transport and services not available in remote places. Visitors who stay in the countryside for cycling, hiking, golfing etc. will also take the opportunity to visit the town. Visitors and residents of the town can benefit from leisure and wellness offerings in natural areas outside the town. The intention to combine specific offerings can be an important factor in the decision to visit the region.

#### ***Cultural quarter strategy***

A medium-size town can also consider a cultural quarter strategy of pooling, supporting and stimulating synergies between a variety of cultural, creative, shopping and leisure resources. (Mommaas 2004; Evans 2009) The result should be an attractive and dynamic mix of cultural institutions, small creative businesses, boutiques of local producers, cafés, restaurants, etc. Ideally the cultural quarter strategy is used to revitalize an area of the town and aims at creating a quarter and street life that is attractive also for cultural and creative tourists.

#### ***Cultural events that reinforce regional assets***

Key events such as festivals should highlight and strengthen aspects that are distinctive for the town and wider region, i.e. not produce a spectacle that lacks clear relations with local and regional assets. Linked up with creative development goals, larger events can act as additional engines to create momentum, involve a wider group of stakeholders and sponsors, infuse expertise and know-how from invited professionals, and leverage the attention and interest of the media for the town. Rather than an approach of “something for everybody”, key events should be thematically focused and build on a critical mass of related

regional activity. This is more likely to be supported by sponsors and the media than cultural imports from elsewhere that have no tangible basis in the region (cf. Rutten 2006, 48–49).

Creating a high-quality environment for residents and visitors is about making good use of existing regional strengths and energies, not importing concepts that worked elsewhere under specific conditions (which might not be given in the own region). Potential for innovation should be sought, but usually innovation cannot be imposed or is likely to be unsustainable because important conditions for success are lacking. Emphasising the role of culture and cultural heritage in creative development does not mean that it can be the only strategy for local and regional development. For example, caring about cultural landscapes and heritage might very well fit with “green” technology, high-quality food production, wellness and special medical services.

## Heritage and cultural tourism

Cultural tourism is a particularly interesting segment of the tourism industry and a key factor for the economy of many European regions and towns. According to the Eurobarometer survey “Europeans and Tourism” (2009), cultural attractiveness is the second motivation for Europeans when deciding on a holiday destination. The first is “value for money”. If European tourists had to reduce their spending during their holidays in 2009, they did it primarily for restaurants and shopping, but rarely for cultural and entertainment activities.

Cultural tourism is understood as visits by persons from outside the host community motivated wholly or to a considerable degree by interest in the cultural, historical, artistic and lifestyle offerings of a region or town (so called “purposeful cultural tourists”). Just “sightseeing” while on a travel does not qualify, however, tourists without strong cultural motives for travelling might occasionally be drawn into a museum or attend a local cultural event. The report “City Tourism & Culture” (WTO-ETC 2005) notes that “culture is the single most important motivation for city trips although relatively few visitors view themselves as ‘cultural tourists’.” Indeed, only about 20% of city tourists rate culture as their prime motivator, but a far greater number of tourists are actually involved in cultural activities while on a city trip

The important role of cultural tourism is particularly clear in the case of large “cultural cities” (e.g. Amsterdam or Barcelona) and renowned smaller historic and arts cities (e.g., Bruges or Salzburg). But also ever more towns with interesting historic and other features seek to develop their potential for such cultural tourism. As the European Institute of Cultural Routes (2006) notes, “interest in tourism has spread rapidly throughout many small and medium European cities, which previously have not considered themselves as tourist destinations”.

It is expected that the competition for visitors between cultural tourism destinations will increase considerably. Newcomers and established destinations will need to be very inventive to stand out among the many competitors. Using stereotypic labels such as “historic town” will not work to become a distinct place in the cultural tourism landscape.



Besides the existing competition among destinations, it will be important to consider not only the possible favourable effects, but also the critical aspects of tourism particularly in smaller places with limited tourism carrying capacity. Below we summarize some favourable and critical aspects of cultural tourism.

#### **Favourable aspects of cultural tourism**

The promotion of cultural tourism is motivated by the fact that culture and heritage tourists differ from the statistically average tourist profile in several favourable aspects. Moreover, it is understood that strong societal trends work in favour of cultural tourism. The following are some key trends that drive cultural tourism and possibly have positive economic, social and environmental effects at tourism destinations:

##### ***People increasingly look for authenticity and meaningful experiences***

In tourism this favours activities that are related to culture, heritage, historic depth, human continuity and spirituality, hence, are clearly distinct from “theme park” tourism. (cf. Lord 1999) The more “industrial” the typical travel package and holiday resort become, the more people will look for meaningful experiences, authentic environments, landscapes, towns and villages with character, cultural specificities, and traditional rituals of social life. There are, of course, some delicate questions implied when talking about authenticity and meaningful experiences in the context of tourism products. (Chhabra et al. 2003; Kim & Jamal 2007; Knudsen & Wade 2010)

##### ***Cultural tourists tend to spend more money while on vacation***

Surveys on cultural tourists consistently report that on average they have a higher level of educational attainment, higher income, and spend more money on trips than other tourists. The first survey of the ATLAS Cultural Tourism Project (2002) found that the daily expenditure of cultural tourists was over €70, whereas visitors on a touring holiday spent €52, beach tourists €48, and people on a city break €42. (ATLAS 2002) The TOMAS 2008 survey on tourists in Croatia shows that visitors on overnight trips who visited museums and galleries on average spent the most, €55 in coastal and €65 in inland counties. The average daily expenditure of these tourists was €57 per day, of which 7% (€4) was spent directly on culture. (InstitutzaTurizam 2009) Though, it must be noted that cultural tourists on average stay in an area for a shorter period than others like beach tourists.

##### ***Heritage tourists are often from an older, well to do age group***

Purposeful cultural tourists who want to visit historic towns, monuments, archaeological sites and museums tend to be from older age groups. Hence, the trend towards the “aging society” works in favour of cultural tourism offerings. Older age groups are not only growing in proportion, on average they also have the highest spending power and are ever more willing to spend rather than to save their money. For example, in a survey in 2002 of German seniors between 50 and 79 years old, almost 50% agreed with the statement “I rather prefer to live a good life than saving money all of the time”. Ten years before, only 25% could identify with this phrase. (GfK 2002) The seniors also have more time available for travel, which they may choose to make off-season trips. They can also be expected to be increasingly savvy, demanding and critical.

### ***Quality demands of cultural tourists***

It is worth noting that culture and heritage tourists tend to be more quality conscious regarding the natural and urban environment they visit, the available accommodation, gastronomy, etc. For example, they are not necessarily attracted to large standardized hotels and may look for character, style or charm in their accommodation. (European Commission 2003) An increasing level of concern about the environment among culture and heritage tourists means that tourism service providers will be expected to contribute to the sustainability of the natural environment and local communities.

### ***Diversification of tourism offer***

For many tourism destinations the development of heritage sites and other cultural offerings allow for a diversification of their tourism portfolio. Some countries' tourism markets have been pigeonholed for a long period into "sun and sea" mass tourism, but increasingly try to diversify into or at least add culture-based tourism offerings for enjoying and learning more about the destination. (Ashworth 2004) The Croatian coast and parts of North Africa, especially Tunisia, are examples for such attempts to benefit from heritage assets and other place-specific culture (gastronomy, events, handcraft, etc.).

### ***Critical aspects of cultural tourism***

#### ***Rapid consumption of heritage places***

Even major heritage-rich destinations (e.g., Bath or Venice) rarely have an average length of stay of tourists of more than two days. The situation of small heritage towns is even worse as most of them will primarily receive daytrip visitors, whose stay is better measured in hours; e.g., a 4–6 hour stay of holiday excursionists in Valetta or an average of 2.5 hours in Delft. (cf. Ashworth 2004 and 2009)

#### ***Return visits are unlikely***

A further major issue is that heritage attractions tend not to generate return visits. As Gregory Ashworth writes, "much heritage tourism could be labelled Michelin/Baedeker collecting. Tourists have pre-marked sites and artefacts that must be visited if the place is to be authentically experienced. Once 'collected' a repeat is superfluous and the collection must be expanded elsewhere. Ironically, the more unique the heritage experience, the less likely it is to be repeated." (Ashworth 2004, 5)

#### ***Mummification of heritage towns***

A summary of the UNESCO Partnerships for World Heritage Cities symposium (2002) warns that in many cities the historical areas have become "well-maintained ghettos", which is "often an expression of the adverse effects of heritage policies that invest in historical centres in ways, which end up depriving them of their primary functions". They also warn that this "can result in frozen, mummified historical centres cut off from the city's modern soul and increasingly irrelevant to all but sightseers and tourists". (Robert et al. 2003, 86 and 93)

#### ***Impact of tourism development on local retail, workshops and residential spaces***

There also often occurs a gradual displacement of economic functions at tourist place. For example, the higher rents that can be earned from the tourist trade



force out of historic centres traditional retailers and small workshops. The effect is that the residents can no longer find the assortment of goods or particular services they are looking for. (Russo 2002) Furthermore, the development “can bring gentrification and lead to city centres inhabited only by the rich classes and occupied by tourists and private businesses” (Pascual 2004, 3).

### ***Degradation of smaller heritage places***

Easily accessible heritage sites and small historic towns often attract large numbers of visitors (most often day-trip visitors) with strong negative effects. The basic conflict in promoting cultural tourism has become evident: The unique character of a living historic environment, which is marketed to potential visitors, should be preserved. Yet, tourism development brings crowds of visitors, tourist shops that offer cheap imported products, a theatrical illumination of monuments is installed, “folkloric” entertainment is offered, etc. The damage caused by mass tourism on heritage sites is felt at many places in Europe and worldwide.

### **Sustainable tourism**

The typical consumption patterns and negative effects of heritage tourism make a proactive tourism management by regional and local authorities and site managers a necessity. If they allow heritage sites, public spaces and other local resources to be degraded and damaged by excessive tourism, the resources will be lost for everybody – the local people as well as the visitors. The tourist area life-cycle certainly has reached the critical stage if heritage places become degraded and the residents face a situation where they must compete with tourists for space, local services and opportunities to enjoy their life. In short, the heritage site and the local community should be the most important stakeholders in cultural tourism development, and local authorities must understand that protecting the site and the quality of life of the local people are essential for sustaining tourism in the longer term.

The United Nations’ World Tourism Organization (WTO, 2004) defines sustainable tourism as follows: “Sustainable tourism development meets the needs of present tourists and host regions while protecting and enhancing opportunities for the future. It is envisaged as leading to management of all resources in such a way that economic, social and aesthetic needs can be fulfilled while maintaining cultural integrity, essential ecological processes, biological diversity and life support systems.”

Following WTO’s Global Code of Ethics for Tourism” (1999) and ICOMOS’ International Cultural Tourism Charter (ICOMOS 1999), ever more declarations and similar documents have been issued (e.g. by Europa Nostra), that indicate an increasing unease regarding the commercialization of cultural heritage for tourism purposes. Also ever more studies and advice have been provided on how to ensure sustainable tourism.

While tourism is often seen to threaten heritage sites by too high usage levels, it is also often important for the local community. As the different purposes of heritage sites (preserve) and tourism organizations (exploit) will often be in conflict, mutual understanding, partnerships and cooperation for sustainability will probably be the best way for preparing the ground for acceptable trade-offs and sustainable solutions.





## Case Studies



### **Communication of cultural heritage**

This chapter presents 21 projects which have been selected according to the overall focus of the CreativeCH project. The focus is on cooperation of cultural heritage, creative industry and science & technology organisations and businesses in projects aimed at communicating cultural heritage in novel ways. We emphasise communication because it is crucial for making cultural heritage known and appreciated and, in turn, helps making the case for preserving heritage sites, buildings and other objects.

The communication typically uses heritage values (e.g. historical, social, symbolic or aesthetic) to promote a historic town, cultural heritage site or route. Increasingly also citizens participate in the preservation and communication of heritage they cherish, sometimes in other ways and focused on other heritage than the institutions. How local people relate to their heritage is indeed different than how heritage is presented according to touristic and city and regional development concepts (e.g. stereotypic images as used in so-called “branding” strategies).

### **Selection of case studies**

21 case studies can of course not represent the large number of projects aimed at communicating cultural heritage throughout Europe and beyond, which can be assumed to range in the thousands. Therefore we looked for examples that have been pioneering or are unique in some way or other. The selection of cultural heritage domains has been guided by the focus areas of CreativeCH, which include archaeological sites, industrial heritage, historic towns and cultural routes. Furthermore we highlight projects that involve citizens in novel ways or are initiated and maintained by citizens. Not present among the cases is traditional intangible heritage. Such heritage comprises traditional practices (e.g. ritual and festive activities) and performances such as singing and dancing. Our three cases of intangible heritage relate to contemporary sounds, music and literary heritage.

### **Use of information and communication technologies (ICT)**

Because of the focus on communication ICT play an important role in all case studies. The emphasis is not on technology or innovation *per se*, but good use of available digital tools for the specific purposes. In this regard a well-used weblog or a state-of-the-art portal is just as good, or even better, than the latest technical prototype (which might not work when put to the test in a real world environment). Priority in general has been given to technologies that allow for reaching wider groups of users, potentially people who might usually not be interested in cultural heritage. Combining heritage, creativity and technology is very much about widening interest in, and inspiration by, the rich cultural heritage of Europe’s towns and regions.

### **Description and summarization**

Three or four case studies of creative cooperation have been written for each of the mentioned focus areas of CreativeCH. The descriptions follow the same structure and address important aspects of the creative cooperation. An analytical summary across all case studies is presented in the next chapter.

# Archaeological sites



Archaeological sites are places and areas which contain remains or other evidence of past human activity, either prehistoric or historic, and even contemporary. Archaeological sites have often been destroyed by human intervention or transformation of the natural environment, built over using available material, or present still standing monuments and other buildings. There are a number of world-famous sites, such as Angkor Wat, Machu Pichu, Pompeii or Stonehenge, while most sites are only of secondary importance and often not known even to people in the region.

Archaeologists use a variety of methods for identifying sites, ranging from satellite remote sensing data to terrestrial non-invasive prospection. Excavation of a site destroys the so called archaeological record (i.e. the layers of remains), which means that accurate and detailed documentation of the site and finds is of crucial importance. Only built and sometimes reconstructed elements remain at the site, while the finds are deposited in archaeological museum and other collections. Indeed, archaeological finds are among the largest cultural heritage collections of which only a small selection of items can be displayed in museum visitor areas.

In recent decades community archaeology projects have sought to engage the interest of members of the public through local presentations, excavations which are open to visitors and websites that aim to raise awareness of the cultural significance of a site and allow for following on-going excavations. Multimedia and virtual reality technologies are increasingly used to communicate archaeological and historic sites for the benefit of the local community, both to strengthen local cultural history and identity as well as promote the sites to tourists.

### Case studies

*Çatalhöyük* is a Neolithic site in Anatolia (Turkey) that is being excavated by an international team of research groups. The project excels in involving the local community and presenting the on-going excavations through various media to the wider interested public.

*Carnuntum – Roman Gladiator School* is a mobile augmented reality application which allows visitors of the Archaeological Park Carnuntum in Lower Austria to explore the school on-site as a 3D simulation. The remains of the school are still buried, but a collaboration of scientists, cultural heritage experts and creative businesses allowed for virtual reconstruction and presentation of the site in a novel way.

*Ename 974* is a pioneer project in the use of multimedia and virtual reality technologies for presenting the rich history and heritage of a small community to the local people and visitors. The project in the village Ename in East-Flanders (Belgium) involved a multidisciplinary team of experts from several domains, including archaeology and history, museums and archives, education, and information technology.

*Knappensteig Adventure Tour* is as virtual tour guide that allows for exploring the Celtic and salt mining history of Hallein, a small town in the province of Salzburg. As part of a larger local development programme, the guide features the historic miners' trail (Knappensteig) up to the salt mine on the Dürrnberg mountain, presents historical places in the town, and invites visitors to the Celtic Museum Hallein. It has been produced in a collaboration of the local tourism association, content providers and a creative company.

## Çatalhöyük – Communicating archaeological excavations to local people and visitors

### General information

Domain: Archaeology (Neolithic site)

Title: Çatalhöyük – Excavations of a Neolithic Anatolian Höyük

Launch: 1993

Country: Turkey

Website: <http://www.catalhoyuk.com>

### Project focus

The international Çatalhöyük research project excavates the Neolithic site of Çatalhöyük in Turkey and communicates its significance to the local people and visitors. Çatalhöyük was one of the first large settlements in Anatolia (founded around 7400 B.C.) with exceptional architecture, wall paintings and other art inside the houses. It was inscribed on the UNESCO World Heritage List in 2012.

The extensive excavations since 1993 under the direction of Ian Hodder have been accompanied by regular public presentation and community projects to promote local awareness of the site. These activities include workshops with school children and teachers, summer schools and a yearly festival. Along with the on-site exhibition and visiting programme, social media have been used to communicate the site and on-going excavations to the interested public.

The ultimate aim of the Çatalhöyük research project is to leave behind a well-planned heritage site that enhances the visitors' knowledge in several ways, including a conservation laboratory, a museum, and a model house to enable visitors experience Neolithic homes without damaging the ancient structures.

### Participants

- Turkish Cultural Foundation, <http://www.turkishculturalfoundation.org>
- British Institute at Ankara, <http://www.biaa.ac.uk>
- University College London (project head office),  
<http://www.ucl.ac.uk/archaeology/research/directory/catalhoyuk>
- Research groups of the universities of Cardiff, Exeter and Southampton (UK)
- Stanford University, <https://www.stanford.edu/dept/anthropology/>
- Research groups of Duke University and University at Buffalo (USA)
- Research groups of the Selcuk University and Thrace University (Turkey)
- Adam Mickiewicz University, Institute of Prehistory, Poznań,  
<http://archo.amu.edu.pl/en/>

### Cooperation

The Çatalhöyük research project brings together research, heritage management and sponsor organisations that carry out, communicate and support the on-going excavations. The project works under the auspices of the British Institute at Ankara, with permission and support of the Turkish Ministry of Culture and Tourism. The international team includes the Turkish Cultural Foundation and research groups from Turkey, the United Kingdom, the United States and Poland. The local work of the team of about 120 researchers is accompanied by many activities aimed at informing and involving visitors and locals, in particular young people.

### **Financing / funding**

The Çatalhöyük research project receives private and public funding from several Turkish and international sources. Its main sponsors are Yapı Kredi and The Boeing Company, others include Hedef Alliance, Konya Çimento, Konya Şeker and Shell Turkey. Funding for the project in 2012/13 has also been received from the following institutions: British Institute at Ankara, University College London, National Geographic Society, Stanford University, State University of New York at Buffalo, Templeton Foundation, Polish Heritage Council and University of Poznan.

### **Content & IPR / licensing**

The content presented online centers on the documentation of the on-going excavations, including short articles and detailed reports, photographs, imagery and videos. Most of the content has been made available under the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 license. A book about his experiences at the site has also been written by one of the local guards.

### **Technologies used / innovative features**

The Çatalhöyük research project uses a wide range of activities and media to communicate the on-going archaeological work to the local people and visitors. An on-site visitor center presents small temporary exhibits, visitors can also explore parts of the site, and view replicas of artifacts and wall paintings in an “experimental house”. Special attention is given to engaging local stakeholders. For example, children and teachers have been invited to participate in workshops where they can learn about the site and excavation work as well as take part in craft exercises.

In addition to making rich information freely available on the website, the project communicates the on-going work through social media (Facebook, YouTube, Flickr and Twitter). Since 2010, laser and 3D technologies have been deployed to geo-reference the various excavations and digitally record them by creating detailed 3D models. For the future, it is planned using virtual reality technologies to present the site, objects and wall paintings in novel ways.

### **Target users**

The communication of the Çatalhöyük site addresses residents and other stakeholders in the region as well as domestic and international visitors. The local people, children in particular, are important to reach since many know only little about the heritage site. Therefore, a core goal of the outreach activities of the project is to raise the local awareness of the cultural significance of the site.

### **Lessons learned**

*Cooperation:* This is an international project involving several research groups (about 120 researchers in any one summer excavation campaign), heritage management institutions, and private and public sponsors that carry out, communicate and support the on-going excavations. The involvement of the local people, in particular, the younger generation merits to be highlighted.

*Content:* The content presented online centers on the documentation of the on-going excavations and most of it is made available under the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 license.



*Technologies used / innovative features:* The project uses various technologies for documenting and presenting the on-going excavations. In recent years novel data capture and 3D technologies have been deployed. The regular communication of the excavation work through messages, images and videos on social media allows anybody interested to follow the on-going activities.

#### Sources and links

- UNESCO World Heritage Centre: Neolithic Site of Çatalhöyük (official World Heritage List description), <http://whc.unesco.org/en/list/1405>
- Çatalhöyük project website, <http://www.catalhoyuk.com>
- Çatalhöyük on social media:
  - Facebook, <https://www.facebook.com/catalhoyuk>
  - YouTube, <http://www.youtube.com/user/catalhoyukmedia>
  - Flickr, <http://www.flickr.com/photos/catalhoyuk/>
  - Twitter, [https://twitter.com/catalhoyuk\\_arch](https://twitter.com/catalhoyuk_arch)
- Çatalhöyük Archive Reports (1993-), [http://www.catalhoyuk.com/archive\\_reports/](http://www.catalhoyuk.com/archive_reports/)
- Çatal Newsletters (1995-), <http://www.catalhoyuk.com/newsletters/>
- Shahina Farid: Çatalhöyük comes home. *Archaeology International*, No. 13/14, 2009-2011, pp. 36-43, <http://www.ai-journal.com/article/download/ai.1313/68>
- Ian Hodder: Çatalhöyük: the leopard's tale. *Revealing the mysteries of Turkey's ancient 'town'*. Thames and Hudson 2006
- Michael Balter: *The Goddess and the Bull: Çatalhöyük - An archaeological journey to the dawn of civilization*. Left Coast Press 2006
- Sadrettin Dural: *Protecting Çatalhöyük. Memoir of an Archaeological Site Guard*. Left Coast Press 2006

## Carnuntum – Augmented Reality Experience of a Roman Gladiator School

### General information

Domain: Archaeology (Roman history)

Title: Carnuntum – Roman Gladiator School

Launch: 2012

Country: Austria

Website: <http://www.wikitude.com/showcase/wikitude-brings-roman-history-life-carnuntum/>

### Project focus

The Archaeological Park Carnuntum provides visitors with a mobile application that allows for an on-site, augmented reality experience of a Roman gladiator school and its vicinities. The school was an important facility for the amphitheatre of Carnuntum, a Roman military garrison and town situated along the Danube Limes. It was discovered in 2011 using novel subsurface prospection methods.

With a combination of 3D and mobile technologies, the augmented reality app brings the gladiator school back to life without having had to excavate it. The app is offered by the park as part of their guided tours. The 3D model and the simulation of the gladiator school can also be seen separately at the Petronell Visitor Center of Carnuntum.

### Participants

- Archaeological Park Carnuntum, <http://www.carnuntum.co.at>
- Ludwig Boltzmann Institute for Archaeological Prospection & Virtual Archaeology (LBI-Arch-Pro), <http://archpro.lbg.ac.at>
- 7reasons, <http://www.7reasons.at>
- Wikitude, <http://www.wikitude.com>

### Cooperation

The augmented reality application is the result of a cooperation between the Archaeological Park Carnuntum, the creative developers 7reasons and Wikitude, and the Ludwig Boltzmann Institute for Archaeological Prospection & Virtual Archaeology (LBI-ArchPro).

The Archaeological Park Carnuntum provides the setting and archaeological knowledge of the gladiator school. The novel subsurface radar and scanning techniques have been developed and applied by researchers of LBI-Arch-Pro. The virtual 3D reconstruction and simulation of the gladiator school was realised by 7reasons, an Austrian creative business that specialises in archaeological and historical topics; the app for smartphones and tablets, finally, was implemented by Wikitude, an Austrian mobile augmented reality developer.

### Financing / funding

For many years, the Province of Lower Austria (Land Niederösterreich) has supported projects at the Archeological Park Carnuntum. In addition, the development of the technologies for the detection of subsurface structures (i.e. the remains of the gladiator school) was supported by the Province of Lower Austria

and the Central Institute for Meteorology and Geodynamics (Zentralanstalt für Meteorologie und Geodynamik).

### **Content & IPR / licensing**

The archaeological knowledge and content for the augmented reality application was provided by the Archaeological Park Carnuntum and LBI-Arch-Pro. The 3D reconstruction of the gladiator school and the programming of the augmented reality app were realized by the creative developers 7reasons and Wikitude respectively. The copyrights of the material that can be freely downloaded from the websites of the project partners remain with the individual producers.

### **Technologies used / innovative features**

The augmented reality application allows visitors to explore a 3D reconstruction of the gladiator school on-site, while walking around in the area under which the remains of the school are still buried. The application builds on the scientific work conducted by members of LBI-Arch-Pro, who in 2011 systematically explored areas outside the civilian city of Carnuntum. They used newly developed ground-penetrating radar devices to examine relevant areas that had been localized by aerial photography. The LBI-ArchPro devices allow exploring the ground three-dimensionally and producing images of the subsurface to a depth of several metres.

In one area extensive subsurface structures were discovered. These turned out to be the gladiator school of the amphitheatre of Carnuntum, which was one of the largest in the Roman Empire with a capacity of 13,000 spectators. The gladiator school is a self-contained building complex, with an inner courtyard that provided a training area for the gladiators. The sub-surface examination also revealed a heated training hall, a bathing area, extensive living quarters, and, most likely, also a gladiator burial field. To visualise and bring the gladiator school “back to life” without having to excavate it, the school has been reconstructed as a virtual 3D model and simulation that can be viewed at the Petronell Visitor Center of Carnuntum.

To allow users a more immersive experience, the 3D model has also been integrated with Wikitude’s augmented reality technology into a mobile application, which can be used with smartphones and standard tablets. By localising the position of the visitor (using GPS technology), the direction in which he/she is looking (using a compass), and through a motion sensor the app is able to render views of the 3D model dynamically in the display of the mobile device.

### **Target users**

The main users of the augmented reality app of the gladiator school are domestic and international visitors of the Archaeological Park Carnuntum. The app is offered as part of guided tours through the archaeological park.

### **Lessons learned**

*Cooperation:* The augmented reality application is a good example of how scientific and cultural heritage content providers and creative businesses combined their expertise to allow the interested public experience an archaeological site in a novel way.

*Content:* The application has been developed based on scientific data and archaeological knowledge that allowed for reconstructing the still buried remains of the gladiator school as a detailed 3D model.

*Technologies used / innovative features:* By integrating the 3D simulation into a mobile augmented reality app and offering it as part of guided tours through the archaeological park, a unique visitor service is offered that combines the physical with a virtual experience of the site.

### **Sources and links**

- LBI-ArchPro - Ludwig Boltzmann Institute for Archaeological Prospection & Virtual Archaeology: Carnuntum - Roman urban landscape (2011), <http://archpro.lbg.ac.at/austria-carnuntum/carnuntum-roman-urban-landscape>
- LBI-ArchPro: School of Gladiators discovered at Roman Carnuntum, Austria (2011; includes press releases in German, English, French and Norsk as well as some images), <http://archpro.lbg.ac.at/press-release/school-gladiators-discovered-roman-carnuntum-austria>
- 7reasons: Press information package on the gladiator school at Carnuntum, 5.9.2011 (includes images of the 3D reconstructions), <http://carnuntum.7reasons.at>
- Wikitude showcase: Wikitude brings Roman history to life at Carnuntum (presents a video of the augmented reality app in use), <http://www.wikitude.com/showcase/wikitude-brings-roman-history-life-carnuntum/>

## Ename 974 – Archaeology and historical story-telling for the local community

### General information

Domain: Archaeology (early-medieval history)  
 Title: Ename 974  
 Launch: 1997  
 Country: Belgium  
 Website: <http://www.pam-ov.be/ename/erfgoed>

### Project focus

Ename 974 has been a pioneering project in the reconstruction and communication of archaeological and historic remains with multimedia and virtual reality technologies for the benefit of the local community. Ename is a rural village situated in the Province of East-Flanders, about 60 km west of Brussels, on the eastern bank of the river Scheldt. Founded in 974, the early-medieval fortified trade settlement of Ename played an important military and economic role at the Scheldt, which was the border between the Ottonian empire and the French kingdom.

Archaeological and historical research carried out at Ename since 1982 revealed a unique record of the medieval world and its social classes, “those who prayed, those who fought, and those who worked” (Pletinckx 1999). Therefore it was decided to create an open-air archaeological park, to open a museum, and to make the 10th-century Saint Laurentius Church and the nearby Bos t’Ename forest preserve accessible to visitors. Combined with the physical development work, a series of novel ICT applications have been produced which present Ename’s history and heritage to the local people and visitors.

### Participants

- Provincial Archaeological Museum Ename,  
<http://www.pam-ov.be/ename/erfgoed>
- Ename Center for Public Archaeology and Heritage Presentation,  
<http://www.enamecenter.org>
- Province of East-Flanders, <http://www.oost-vlaanderen.be>
- Flemish Heritage Institute, now a division of the Flemish Organization for Immoveable Heritage, <https://www.onroerenderfgoed.be>

### Cooperation

Ename 974 has been a multidisciplinary project which involved archaeologists, historians, educators and developers of IT applications. Furthermore a close collaboration between the project coordinators and the funding agencies helped to ensure the successful operation of the project. The leading role in the development of the ICT applications had the Ename Center for Public Archaeology and Heritage Presentation (founded 1998). As its name makes clear, the applications have been created primarily for providing knowledge about the archaeological site and the history of Ename to the local and wider interested public.

### **Financing / funding**

The Ename 974 project has been sponsored mainly by the Province of East-Flanders, the city of Oudenaarde (of which Ename is a district), and the Flemish Heritage Institute (now a division of the Flemish Organization for Immovable Heritage, which is financed by the Flemish Government).

### **Content & IPR / licensing**

A rich stock of archaeological and historical content has been gathered to present the history of the early-medieval trade settlement (975-1050), the area of the Benedictine abbey, which was founded in 1047 and dominated life in Ename to 1795, and the development of the village up to the modern Flemish community.

The content produced in the course of the project comprises narrative and descriptive texts, digitized visual material, 3D reconstructions of historical buildings and objects (e.g. the abbey, a bishop's crozier) and various scenes (e.g. praying monks).

The TimeScope kiosk system in the garden of the Provincial Archaeological Museum presents content along historical and spatial storylines as well as oral history interviews with seven local people. For example, a resident tells about his experiences in World War II and how it affected the village, and the curator of the nature reserve Bos t'Ename describes the natural environment in medieval times and how the people used the land. This content helps create a strong connection between the cultural history of the village and its contemporary identity.

Most content is embedded in the presentation systems (see below), but quite some has also been disseminated to visitors on carrier media such as CD-ROMs. However, the copyrights remain with the project, the Flemish Heritage Institute or individual producers.

### **Technologies used / innovative features**

In the Ename 974 project several ICT applications have been designed and realized to help local people and visitors understand and experience the past as it has been revealed through archaeological and historical research. The applications comprise multimedia and virtual reality applications, on-site kiosk systems and in-door museum installations, each as a component of the overall heritage presentation programme. The applications have been designed with great attention to scholarly accuracy (e.g. 3D reconstructions of the archaeological site) as well as to capture the interest of visitors.

Beside the TimeScope system mentioned above, there are on-site presentation systems at the archaeological park (e.g. the TimeFrame 3D virtual reality presentation of the abbey with additional information about the site), and multimedia installations in the museum and the Saint Laurentius church in Ename. This early Romanesque church remained almost unchanged since the year 1000 and was made accessible following the completion of interior excavation and restoration works.

### **Target users**

The main user groups of the project results are the local and regional community, e.g. families and school classes, and domestic and international tourists who are visiting East-Flanders.

### Lessons learned

*Cooperation:* Ename 974 has been a unique multidisciplinary project involving experts from several domains, including archaeology and history, museums and archives, education, and information technology. Furthermore the funding agencies played an important role in bringing the archaeological and historic remains to life again as well as sustaining the operation of the outcomes.

*Content:* The multitude of archaeological and historical content has been presented with different applications which link it up with the village and region, highlighting its cultural identity and historical traces that are still visible today. Overall the interactive story-telling aimed at making the remains readable for the public merits to be highlighted.

*Technologies used / innovative features:* Ename 974 has been a pioneering project in the use of multimedia and virtual reality technologies for presenting insights of archaeological and historical research to the local community and visitors. All heritage institutions and communities, but especially small ones need solutions that are cost-effective, sustainable and capable of addressing different informational needs of users. The solutions created by Ename 974 proved to be remarkably sustainable, although they had to be upgraded and reworked over time.

### Sources and links

- Provincial Archaeological Museum Ename,  
<http://www.pam-ov.be/ename/erfgoed>
- Daniel Pletinckx: Virtual Reality for Heritage Presentation at Ename (1999),  
<http://users.skynet.be/eyeblyn/VSMM99/>
- Daniel Pletinckx et al.: Telling the Local Story: An interactive cultural presentation system for community and regional settings. 5th VAST - International Symposium on Virtual Reality, Archaeology and Cultural Heritage, 2004, pp. 233-239, <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.97.9652&rep=rep1&type=pdf>

## Knappensteig Adventure Tour – Exploring the Celtic and salt mining history of Hallein

### General information

Domain: Archaeology (Celtic and salt mining history)

Title: Knappensteig Adventure Tour

Launch: 2010

Country: Austria

Website: <http://www.hallein.com>

### Project focus

The Knappensteig Adventure Tour is a virtual tour guide that introduces visitors to the Celtic and salt mining history of Hallein, a small historic town in the province of Salzburg. The tour guide presents historical points of interest in the town and especially the miners' trail (Knappensteig) which leads up to the Dürrenberg mountain where Celtic people used to mine salt from around 600 BC. It also serves as an entry point to the Celtic Museum in Hallein that presents objects which were excavated at the Dürrenberg and found in the salt mine. The Hallein Salt Mine was a major economic factor in the region until the production was stopped in 1989; in 1994 an underground visitors' route was opened and developed into a tourist attraction (Salzwelten).

### Participants

- Tourism Association Hallein, <http://www.hallein.com>
- Celtic Museum Hallein, <http://www.keltenmuseum.at>
- Salzwelten (Hallein Salt Mine), <http://www.salzwelten.at/de/hallein/>
- Salzburg Research Forschungsgesellschaft mbH, <http://www.salzburgresearch.at>
- Nous Wissensmanagement GmbH, <http://www.nousguide.com>

### Cooperation

The Knappensteig Adventure Tour was initiated by the Tourism Association Hallein as part of a larger development programme aimed at revitalising the historic miners' trail (Knappensteig) up to the salt mine on the Dürrenberg mountain. The Tourism Association was also the project leader as well as provided content for the virtual tour guide. Salzburg Research was responsible for the concept of the guide and co-ordinated the collection and integration of content into the mobile application.

The Celtic Museum Hallein provided most of the content as well as educational expertise for the application. Furthermore content was provided by Salzwelten, the organisation that manages the former mining shafts at the Dürrenberg (now a mining theme park) and the Celtic Village, a small open-air museum on Celtic history. Nous Wissensmanagement (Vienna) designed the user interface of the virtual tour guide and programmed the mobile app for iOS-based smartphones.

### Financing / funding

The Knappensteig Adventure Tour is the result of a co-funded regional EU LEADER project, which was conducted between 2009 and 2010. Fifty per cent of the



costs were publicly funded, while the other part was covered by the Hallein Tourism Association. The project was part of a larger development programme which also included physical repair works along the miners' trail.

### **Content & IPR / licensing**

The mobile application presents content on Celtic life in the area, the miners' trail, the historic mine, and especially introduces visitors to the Celtic Museum in Hallein. Furthermore several points of interest in the historic town and the local Silent Night Museum are included. The tour is presented in the form of an ongoing narrative told by a runaway siskin which, according to legend, belonged to the wife of a former mayor of Hallein. The story is narrated by professional English and German speakers.

The content of the virtual tour guide has been provided by the Celtic Museum and, to lesser extent, by the Tourism Association Hallein and Salzwelten. Many of the Celtic finds exhibited in the museum are featured in the guide, thereby providing a teaser for visiting the museum in Hallein. The guide includes texts, historical images, audio and video clips. As it addresses domestic and international visitors, the narrative and descriptive content is available in German and English. While the guide can be downloaded for free via the Apple iTunes Store, the copyrights of the content are held by the respective providers.

### **Technologies used / innovative features**

The virtual tour guide is an application for iOS-based mobile devices such as Apple iPhones and iPads (a version running on Android or Windows devices is currently not available). Special features of the tour guide include the narrated storyline, the rich content which covers the local archaeological as well as historical highlights, and interactive quizzes through which users can test what they learned on the tour.

One of the reasons for offering the tour guide as a downloadable app instead of a Web-based (HTML 5) application was the geographic proximity to Germany, i.e. avoiding possible high roaming costs if accidentally accessing a German network. Mobiles with the app pre-installed can be borrowed at the Tourism Association Hallein.

### **Target users**

The Knappensteig Adventure Tour guide addresses domestic and international visitors, therefore the tour is presented in both German and English. As the main target users are younger people and families, the content has been tailored accordingly, i.e. featuring easily understandable language, short sentences, and a siskin as first-person narrator and tour guide.

### **Lessons learned**

*Cooperation:* A major success factor of the project has been involving all relevant stakeholders and establishing an effective division of labor with clear responsibilities for particular tasks. This helped considerably in producing the virtual tour guide with a rather small budget.

*Content:* Also an important factor has been that the project coordinator worked closely with the content providers so that the most appropriate content for the application could be selected early on in the project.

*Technologies used / innovative features:* The project had to strike a balance between being innovative, with regards to the story-telling approach for instance, while using a proven technological platform.

### **Sources and links**

- Knappensteig Adventure Tour in the Apple iTunes Store,  
<https://itunes.apple.com/at/app/hallein/id387368579?mt=8>
- Tourism Association Hallein: Hallein Tour Guide, <http://www.hallein.com>
- Tourism Association Hallein: Virtuelle Erlebnistour Kelten-Salz-Kultur, 7.9.2010, [http://www.hallein.com/wDeutsch/presse/galerien/2010\\_09\\_07\\_Pressekonferenz\\_/index.php?navanchor=](http://www.hallein.com/wDeutsch/presse/galerien/2010_09_07_Pressekonferenz_/index.php?navanchor=)
- Salzburg Wiki: Hallein Tour Guide,  
[http://www.salzburg.com/wiki/index.php/Hallein\\_Tour\\_Guide](http://www.salzburg.com/wiki/index.php/Hallein_Tour_Guide)

# World Heritage Towns



The Convention concerning the Protection of the World Cultural and Natural Heritage, adopted by UNESCO in 1972, encourages the member states to identify, protect and preserve cultural and natural heritage for future generations to appreciate and enjoy. Currently the World Heritage List includes 981 properties which the World Heritage Committee considers as having outstanding value to humanity. These include 759 cultural, 193 natural and 29 mixed properties in 160 States Parties.

Over 250 sites are historic towns or city centres, some include fortifications or ports, and others are unique parts of a town like a historic bazaar. Some examples of such urban areas are the Medieval Town of Toruń (Poland), the Historic Walled Town of Cuenca (Spain), the Old Town of Galle and its Fortifications (Sri Lanka), the Historic Mosque City of Bagerhat (Bangladesh),

the White City of Tel-Aviv (Israel), Coro and its Port (Venezuela), Provins - Town of Medieval Fairs (France), and the Medina of Marrakesh (Morocco).

All historic cities are facing difficulties in reconciling conservation and socio-economic development goals, not only those inscribed on the World Heritage List. This has been addressed by an UNESCO working group, and on 10 November 2011 the General Conference adopted the new Recommendation on the Historic Urban Landscape. (UNESCO 2011, 2013)

A holistic approach is suggested which seeks to increase the sustainability of changes in the urban landscape by taking account of the existing built environment, intangible heritage, cultural diversity, socio-economic and environmental factors along with local community values. However the Recommendation is a “soft-law” to be implemented by Member States on a voluntary basis and adapted to their specific contexts.

World Heritage site designation by the World Heritage Committee comes with required comprehensive management plans and regular monitoring. The status of outstanding universal value recognized by the designation must be maintained, which limits or impedes changes in the protected areas. However, the designation has the potential to increase tourist activities at the site, generating income and employment for local communities. However, this needs to be well planned with respect to sustainable tourism principles.

An increase of visits is not guaranteed. A study of the changes in tourist numbers at 86 sites since the designation found that 51 had no, 13 a small, and 22 a large increase; already well-established tourism destinations did not register increases. If there is a large or only a small increase depends on several factors, like the level of awareness generated by media and active site marketing, distinctiveness, location and access, other attractions in the region, and inclusion in touring programmes. (cf. Van der Aa 2005; PricewaterhouseCoopers 2007)

### Case studies

*Matera Città Narrata* is a web and mobile media platform that presents the City of Matera, especially the Sassi di Matera, the most complete surviving rock-cut settlement in the Mediterranean region. It has been created in a cooperation that involved research institutes, the municipality and regional agencies, heritage institutions, and media companies.

*The 3D model of Bamberg* is a tool for exploring and learning about the development stages of the town. It is also used for involving the citizens in the evaluation of intended changes in the urban landscape. The creation and use of the 3D model has been led by the Town Planning Office, involving public and other providers of data, archivists, heritage managers and educators, students in computer-aided design and architecture, and school classes.

*Edinburgh Book Trail* is a mobile application that presents the rich literary heritage of Edinburgh. The application has been developed by two media companies and a local charity that promotes literature and literary tourism in Edinburgh and Scotland. Also local writers have been involved to explain the significance of the literary heritage in the city.

## Matera Città Narrata – Tales of a City

### General information

Domain: World heritage towns (cultural landscape, memories and visions)

Title: Matera – Tales of a City

Launch: 2012

Country: Italy

Website: <http://www.materacittanarrata.it>

### Project focus

Matera Città Narrata is a digital media platform that presents the City of Matera, which is located in the Basilicata region in southern Italy. The Sassi di Matera, the ancient urban centre, is the most complete surviving rock-cut settlement in the Mediterranean region (inscribed on the UNESCO World Heritage List in 1993). The Matera – Tales of a City platform has been developed in the context of the city's candidacy for the European Capital of Culture 2019 title. The platform provides information for preparing a visit and to find one's way in the Sassi and the surroundings. The most appealing content for online visitors probably are the contributions of local people who tell their stories about what it means to grow up and live in this unique settlement.

### Participants

- Municipality of Matera, Matera 2019, <http://www.matera-basilicata2019.it/en/>
- Soprintendenza ai Beni Architettonici della Basilicata, <http://www.basilicata.beniculturali.it>
- Agenzia di Promozione Territoriale di Basilicata, <http://www.aptbasilicata.it>
- Giuseppe Buonsanti – Photographic Archive, Matera
- National Research Council – Institute for Technologies Applied to Cultural Heritage (and other institutes), <http://www.itabc.cnr.it>
- Imagimotion, <http://www.imagimotion.it>
- Net Agency / Netway, <http://www.netwayitalia.com>
- HSH Informatica e Cultura, <http://www.hsh.it>
- Dinamo Italia, <http://www.dinamo-multimedia.com>

### Cooperation

Matera Città Narrata has been developed in a cooperation of institutes of the National Research Council (co-ordinated by the Institute for Technologies Applied to Cultural Heritage) and creative Web and multimedia businesses: Imagimotion, Net Agency / Netway, HSH Informatica e Cultura and Dinamo Italia. The Giuseppe Buonsanti Archive provided historical photographs and artists and residents of Matera stories and views about the Sassi.

### Financing / funding

The project has been supported by the Regional Promotion Agency (APT Basilicata) and the Basilicata Regional Government / Department for Production Activities, in view of Matera's candidacy as a European Capital of Culture 2019. In November 2013, the city was short-listed by the selection panel appointed to evaluate applications from Italian cities, along with five other cities.

### **Content & IPR / licensing**

The online platform contains a large amount of content in different formats, for example, 84 videos, 67 sound tracks, 30 slide-shows and various other multimedia content, as well as itineraries and excursion plans. There are also six interactive virtual reality panoramas for “flying” over the Matera area, based on 3D reconstructions of development stages of the area (e.g. Neolithic age, classical period, late 19th century).

The platform also strives to present the authentic, living heritage of Matera by presenting specific highlights, stories and visions of residents in their own words (videos of 2-3 minutes). Historical photographs on the website add much to the understanding of the context.

While free web and mobile access to a wealth of information is offered, the website states “all rights reserved”. It does not invite contributions by tourists or other people not involved in the project (e.g. tourists). For institutions, businesses and other residents (e.g. school classes) it offers a section where they can share own content.

### **Technologies used / innovative features**

The content of Matera Città Narrata can be accessed in different ways and formats, according to the device and preference of the user. The multimedia and other advanced content can be explored on the website as well as downloaded by iPad users. Furthermore various applications for mobile devices with different operating systems (iOS, Android) are offered. For example, itineraries, excursion plans and multimedia content on particular places can be downloaded.

Free Wifi access has been implemented in the Sassi neighbourhood, so visitors with smartphones can access the website or another interactive application. But visitors without smartphones or connection can also call a mobile service that sends multimedia messages or allows listening to audio-guide content about sites and monuments in Matera (where a sign with an ID number has been placed).

### **Target users**

Matera Città Narrata addresses domestic and international tourists; texts are provided in Italian, English and German. For children also a treasure hunt application for iPhone is offered. The overall goal of the media-rich platform is to introduce tourists to the cultural landscape, history and intangible heritage of Matera. Furthermore it invites tourists to stay and experience the city for longer than just a few hours, thereby potentially increasing the tourism income.

### **Lessons learned**

*Cooperation:* Key to the realization of Matera Città Narrata has been the cooperation of organizations of different sectors. The organizations include centers of the National Research Council (one responsible for the overall concept and coordination), the municipality, regional agencies, heritage institutions, and media companies. Particularly important has been the involvement of people living in Matera, which contributes much to the spirit and outcomes of the project.

*Content:* Matera Città Narrata has achieved a good balance of research-based content (e.g. virtual reconstructions) and the human side – voices, knowledge and authentic experiences of scholars, artists and children.

*Technologies used / innovative features:* The platform offers several ways of accessing a variety of content according to what kind of device is used (PC, iPad, smartphone or an older mobile phone). The focus is not on the new technologies but on access and storytelling. Yet, the more capability the user device has the richer are the forms and interactivity of the content that is provided.

#### Sources and links

- UNESCO World Heritage Centre: The Sassi and the Park of the Rupestrian Churches of Matera (official World Heritage List description), <http://whc.unesco.org/en/list/670>
- Matera Città Narrata, online platform, <http://www.materacittanarrata.it>
- Municipality of Matera, Matera 2019, <http://www.matera-basilicata2019.it/en/>
- Matera 2019 book, <http://www.matera-basilicata2019.it/en/mt2019/matera-2019-book.html>
- Andrea Adami (CNR ITABC): Matera – Tales of a City, CreativeCH workshop presentation, 21.11.2012, <http://www.creative-heritage.eu/index.php?id=5354>
- Eva Pietroni (CNR ITABC): Augmented Experiences in Cultural Heritage through Mobile Devices: ‘Matera Tales of a City’ Project. VSMM 2012 conference proceedings, 117-124, [https://www.academia.edu/4454417/An\\_Augmented\\_Experience\\_in\\_Cultural\\_Heritage\\_through\\_Mobile\\_Devices\\_Matera\\_Tales\\_of\\_a\\_City\\_Project](https://www.academia.edu/4454417/An_Augmented_Experience_in_Cultural_Heritage_through_Mobile_Devices_Matera_Tales_of_a_City_Project)
- MUV – Museo virtuale della memoria collettiva di Matera (presents historical photographs on themes of cultural and social life), <http://www.muvmaterait>

## The Town of Bamberg – 3D model for heritage presentation and town planning

### General information

Domain: World heritage towns

Title: 3D-Stadtmodell Bamberg (3D city model of Bamberg)

Launch: 2006

Country: Germany

Website: <http://www.3d.bamberg.de>

### Project focus

Bamberg is a medium-size town in Bavaria with a well-preserved medieval centre, which was inscribed on the World Heritage List in 1993. The core heritage area comprises three town districts which cover 142 hectares. The surrounding buffer zone, which has restrictions placed on its use, amounts to 444 hectares. Beside tourism highlights like the Cathedral and the Old Town Hall, there are over 1000 protected monuments in the old town and some 2500 historic houses in the wider area.

The 3D model of Bamberg has been developed to allow users to explore and learn about development stages and different aspects of the old town. It has also become a useful tool for town planning and participation of citizens through visualizing the impact of intended development projects in areas around the old town. Started in 2004, the project has involved town planners, heritage managers and educators, archivists, and students in computer-aided design, architecture and history. Furthermore, the 3D model has been used to raise the interest and engagement of school classes in cultural heritage.

### Participants

- City of Bamberg, Town Planning Office,  
<http://www.stadtplanungsamt.bamberg.de>
- Centre for World Heritage Bamberg, <http://www.world-heritage.bamberg.de>
- Kaiserslautern University of Technology, Department for Computer Aided Design in Urban Planning and Architecture, <http://cpe.arubi.uni-kl.de>
- Bavarian State Office for the Preservation of Historical Monuments,  
<http://www.blfd.bayern.de>
- University of Bamberg, Building Research and History of Architecture,  
<http://www.uni-bamberg.de/bauforschung/>

### Cooperation

The idea of creating a 3D model of the historic city centre of Bamberg was generated in 2003 between representatives of the Town of Bamberg and the Kaiserslautern University of Technology. In a collaboration of the university's Department for Computer Aided Design in Urban Planning and Architecture with the Town Planning Office, students working on theses prepared data and developed first versions of the 3D model. A major question in the first phase was (and still is), how to produce high-quality 3D town models at affordable costs from existing and often difficult to acquire new data.

In 2006, an already highly elaborated model was presented to the public, which included data derived from the cadastral map of 1822. In 2008, the Town Planning



Office started a collaboration with the Bavarian State Office for the Preservation of Historical Monuments to include data from the first cartographic depiction of Bamberg in 1602. In 2010, this collaboration was extended by a research group at the University of Bamberg to produce a representation of Bamberg around the year 1300. A partner along the way has always been the Centre for World Heritage Bamberg. In the three-year project “Beam me up!”, started in 2010, the Centre also involved many school classes to use the 3D model for learning about the historic town.

### **Financing / funding**

The creation of the increasingly detailed 3D model has been mainly funded by the municipality and carried out by a small group of highly motivated staff of the Town Planning Office. The involved university-based research groups received funding from various sources, for example, the research for Bamberg around the year 1300 by Städtebauförderung and Oberfrankenstiftung. The “Beam me up!” project has been sponsored by the Deutsche Bank Foundation.

### **Content & IPR / licensing**

In the case of 3D models, content basically means data captured and processes with various instruments. For the 3D model of Bamberg, for example, this includes digital cadastral maps, aerial photographs and laser scanning data, terrestrial photogrammetry data, photographs of façades and roofs, etc., and data derived from historic maps and drawings (e.g. the land register map of 1822 and Petrus Zweidler von Teuschnitz’ “Gründtlicher abriß der Statt Bamberg”, 1602), and other archival content.

The project leader of the Town Planning Office, Karl-Heinz Schramm, describes the work of producing the detailed 3D model as follows: “Initially, implementation of the enormous amount of data which accumulated, was a problem. In fact it was equally difficult to gather the necessary data at all. For each house you need hundreds of measurement data, not only the height, width and depth of the building, but also the pitch of its roof, decoration, projections, windows etc, etc. Using them, you first have to build a skeleton of the building on which you then mount the photos of its external appearance. Then you have to create a model of the topographical location and to insert the virtually built houses into it. Particularly in Bamberg, with its seven hills, buildings do not stand on an even level, but the altitude of their site varies considerably. All that takes a lot of time and so it is expensive, too.” (Dengler-Schreiber & Schramm 2008)

The licensing of all the data used and of the model (or parts of it) based on the regulations or contracts of the official and other providers and producers. Access to the online version of the model however is offered freely for anybody.

### **Technologies used / innovative features**

For accessing the online 3D model of Bamberg users must just have the freely available Google Earth programme installed on their computer and download a file (Bamberg-KMZ) from the website of the Town Planning Office. The programme allows for exploring the town, for example, the buildings, streets and squares of the World Heritage area, including the 1822 and 1602 maps. Thereby users are able to better understand the historical development of the town, noticing what has been added, lost or preserved over time.

### Target users

The 3D model is relevant for various users and purposes, for example, residents and tourists interested in development of the town or students working on history projects. In the three-year project “Beam me up!”, managed by the Centre for World Heritage Bamberg, it was used to raise the interest and engagement of many school classes in cultural heritage; the project also included guided tours and students working on own 3D modelling.

Most evident however is the usefulness of the model in matters of town development, which in Bamberg are directly related to the protection of the World Heritage. The model and further elaborated parts are often used to visualize changes to buildings, areas and the urban landscape overall that would result from intended development projects in the buffer zone and other areas.

For example, it allowed visualizing that the proportions of a new hotel building were oversized for the town. Another example is the planning of an area rehabilitation project, and currently there is a debate about an intended extension of the railway lines through Bamberg. In such cases, detailed virtual representations are included in the 3D model to inform and involve the citizens.

### Lessons learned

*Cooperation:* The creation and use of the 3D model of Bamberg has been led by the Town Planning Office involving public and other providers of data, archivists, heritage managers and educators, students in computer-aided design and architecture, and school classes. A particularly important usage of the model is to inform citizens about matters of town planning. The 3D model also promoted cooperation with university-based historical projects (e.g. Bamberg around 1300).

*Content:* 3D models of historic towns require a lot of data from different sources and a tremendous amount of creative work, especially if the goal is a highly detailed model. The possibility to derive data from archival resources (e.g. maps and drawings) enables the inclusion of layers of historic development.

*Technologies used / innovative features:* To enable the use of 3D models for cultural heritage purposes, various technologies are required at all stages, from the acquisition of data through to the production and visualization. Google Earth provides an easy way to allow citizens accessing and exploring a 3D model.

### Sources and links

- UNESCO World Heritage description: Town of Bamberg, <http://whc.unesco.org/en/list/624>
- City of Bamberg, Town Planning Office (download of KMZ-BAMBERG under “projects”: 3D-Stadtmodell), <http://www.stadtplanungsamt.bamberg.de>
- Google Earth, <http://www.google.com/earth/>
- K. Dengler-Schreiber & K.-H. Schramm (2008): On silent wings through the World Heritage: The Virtual Town Model of Bamberg. In: 16th ICOMOS General Assembly and International Symposium, 29.9.-4.10.2008, Quebec, Canada. <http://openarchive.icomos.org/129/1/77-UE8D-292.pdf>
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## Edinburgh Book Trail – Exploring the literary heritage of a World Heritage City

### General information

Domain: World heritage towns (literary heritage)

Title: Edinburgh Book Trail

Launch: 2013

Country: United Kingdom

Website: <http://www.edinburghbooktrail.co.uk>

### Project focus

Edinburgh Book Trail is a mobile application that invites visitors to explore the rich literary heritage of Edinburgh. The city was inscribed on the World Heritage List in 1995 and is also a UNESCO City of Literature. The application offers a variety of modes in which users can learn about the literary heritage, themed walking routes, a game-like mystery trail, looking up available information about literary places on a map, and an augmented reality feature. The application has been developed by two media companies and a local charity that promotes literature and literary tourism in Edinburgh and Scotland; also local writers were involved. The application has been launched at the 2013 Edinburgh International Book Festival.

### Participants

- purpleTV, <http://www.purpletv.tv>
- Origin Partners, <http://www.origin-partners.com>
- City of Literature Trust, <http://www.cityofliterature.com>
- Local authors as information providers

### Cooperation

The mobile application Edinburgh Book Trail has been created by purpleTV and Origin Partners under the purpleTrails brand, the first of a series of planned city exploration apps. purpleTV is an independent broadcasting and digital media company; Origin Partners is a creative business that develops mobile and web applications (especially for culture and leisure). The third cooperation partner, the City of Literature Trust, is an independent charity promoting literature and literary tourism in Edinburgh and Scotland. Furthermore local authors participated in the production through interviews on their views of the literary heritage of Edinburgh.

### Financing / funding

The Edinburgh Book Trail application has been financed by purpleTV with support by Scottish Enterprise, an organisation promoting businesses in Scotland, and the City of Literature Trust. The newspaper The Guardian included the Edinburgh Book Trail as one of its top 20 mobile apps. Though it does not come for free, downloading it from Apple's iTunes store costs £5.99 (€7.25)

### Content & IPR / licensing

The Edinburgh Book Trail app provides access to extensive information on places of literary significance in Edinburgh, ranging from writers' birthplaces to

locations featured in famous and less well known works. On points of interest the app serves a short description, an explanation of its significance, and available images and/or video clips. A special feature of the app is that six local authors (e.g. Christopher Brookmyre, Joan Lingard and Sara Sheridan) occasionally talk in short videos about the literary heritage of Edinburgh, the literary scene and favorite places, and their meaning for their own work. The application also includes a game-like mystery trail through which the user is accompanied by the crime author Pearl Litspur (Julia Sutherland).

The content development has been managed by purpleTV, with some support by the City of Literature Trust. The copyright of the content remains with purpleTV and the institutions that contributed content to the product (e.g. images).

### **Technologies used / innovative features**

The Edinburgh Book Trail is an Apple iOS-based mobile app, i.e. it can be used with iPhone, iPad and iPod touch. The app invites users to explore the literary heritage of Edinburgh in different ways. Users can follow one of four themed walking routes, choose and try to complete the game-like trail, or create their own path by looking up available information about literary places on the move. As the application deploys location-based services technology, the user can see on a map the points of interest around his or her current location. The app offers also an augmented reality feature to find points of interest nearby, including points that are not related to literature.

In the Game Trail the user can follow Pearl Litspur trying to get back a stolen manuscript. To help her, the user must answer questions about Edinburgh's literary history and solve some puzzles. Having completed the trail, the user can contribute an own short story and is added to the Book Trail Legacy Wall, thereby leaving his or her own "literary legacy".

### **Target users**

The Edinburgh Book Trail application is primarily targeted at domestic and international visitors. But it is also interesting for residents who do not know much about local writers and places of literary significance. Younger visitors and families might be delighted about the mystery trail. Certainly the mobile application adds to the experience of Edinburgh as a UNESCO City of Literature.

### **Lessons learned**

*Cooperation:* In the development of the Edinburgh Book Trail, digital media businesses worked with an independent charity promoting literature and literary tourism, and involved local authors. The mobile application is a good example of how creative cooperation allows a new approach to communicating intangible cultural heritage.

*Content:* The content is organized to present literary heritage places and stories along suggested or users own trails through the city. Textual information is kept brief and the visual content adds a historic dimension to the places. By having local authors tell their personal experiences and views, users receive an insider perspective on the literary history of the city.

*Technologies used / innovative features:* The mobile application is a state-of-the-art product using location-based services technology. An innovative aspect is the

variety of modes in which users can learn about the literary heritage (themed or own trail, game-like, and through augmented reality).

#### Sources and links

- UNESCO World Heritage Centre: Old and New Towns of Edinburgh, <http://whc.unesco.org/en/list/728>
- Edinburgh Book Trail website, <http://www.edinburghbooktrail.co.uk>
- purpleTV: Edinburgh Book Trail app released, 11.7.2013, [http://www.purpletv.tv/news/edinburghbooktrail\\_press\\_release](http://www.purpletv.tv/news/edinburghbooktrail_press_release)
- iTunes: App information and download, <https://itunes.apple.com/gb/app/edinburgh-book-trails/id672370406?mt=8&ign-mpt=uo%3D2>
- Ali George: New app explores Literary Edinburgh - Review. In: The Edinburgh Reporter, 26.7.2013, <http://www.theedinburghreporter.co.uk/2013/07/new-app-explores-literary-edinburgh-review/>
- Edinburgh Spotlight: Edinburgh Book Trails iPhone app, July 2013, <http://www.edinburghspotlight.com/2013/07/news-edinburgh-book-trails-iphone-app/>
- Edinburgh World Heritage website, <http://www.ewht.org.uk>

#### Citizens' visits to cultural sites, EU-27, 2006

The Eurostat "Cultural Statistics Pocketbook (2011 edition) includes figures on the percentage of Europeans (EU-27) who in 2006 had visited a cultural site at least once in the last 12 months. The figures are for people 25-64 years old and the definition of cultural sites included historical monuments, museums and art galleries, and archaeological sites.

The overall figure was 45%. Age and gender did not make much of a difference: women 46%, men 44%; according to age: 47% of the age groups 25-34 and 35-44, 44% of the age group 45-54, and 43% of the age group 55-64.

The major difference was, and in culture surveys always is, educational attainment. Of the respondents with a high attainment 71% visited a cultural site at least once in the last 12 months, medium attainment 45%, and low 24% (though, still almost one quarter of the surveyed people).

### **Appreciation of historic places, buildings and sites, UK, 2005/6 and 2012/13**

The UK Department for Culture, Media and Sport since 2005/6 (DCMS 2007) regularly conducts "Taking Part", a survey into ever more aspects of cultural participation. The first survey provided clear evidence for the appreciation of historic places, buildings and sites in the UK. The survey found:

- Over 90% of the adults thought that when improving local places it is worth saving their historic features;
- Over 70% said they are interested in the history of the place where they live;
- Almost 70% visited historic sites at least once a year (approx. 27.7 million adults);
- About 15% visited a site at least once a month.

The latest 2012/13 results (DCMS 2013) are that 72.7% of the adults (16 to 75+ years) surveyed visited a historic site 12 months prior to interview. This was a significant increase from 69.9 per cent in 2005/06 (mostly in age groups over 44 years). 30.5% of adults reported at least three or four visits to a heritage site a year, an increase of 4% from 2005/06.

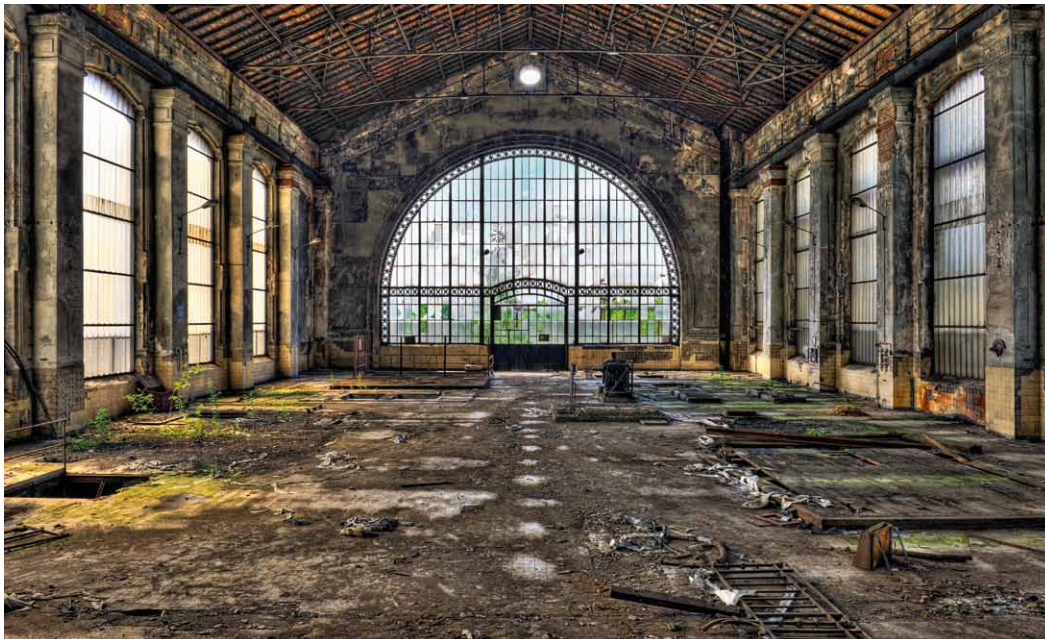
### **Living in historic houses, Germany, 2006**

A representative survey 2006 in Germany by the Institut für Demoskopie Allensbach for VIVA-CON, a leading investor in the revitalization of historic buildings, found (Presseportal.de 2006):

- 88% of the surveyed Germans preferred conservation of historic houses to building new ones;
- 65.9% understood living in a protected building to be "something special";
- 61% saw it as preserving a piece of the history of the town;
- the highest interest in renting or buying a protected building was found among the 30-44 years old (49%).



# Industrial heritage



Industrial heritage has become a field of interest of academic researchers, developers and the public only since the 1960s. As museum doyen Kenneth Hudson writes: „Until the 1960s, there were only derelict factories, old railway stations and disused canals and few people took the slightest interest in them. And then the term ‘industrial archaeology’ was invented. Almost overnight this mass of crumbling buildings and rusting machines became important historical material, deserving preservation and careful study. A new academic discipline came into being. A label had made people notice and value what had previously been regarded as eyesores and junk.“ (Hudson 1996)

Among this newly “discovered” rich heritage are mills, mines, forges, factories, workers’ homes, warehouses, canals and bridges, harbour areas and buildings and whole industrial landscapes. Already in 1973 The International Committee for the Conservation of the Industrial Heritage (TICCIH, <http://ticcih.org>) was founded as the main international organisation that promotes the study, conservation and presentation of industrial heritage. TICCIH’s Nizhny Tagil Charter, signed in 2003, is the international guidance document for the industrial heritage.

Since the 1980s ever more industrial heritage sites, mostly in Europe, have been inscribed on the UNESCO World Heritage List. For example, the Crespi d'Adda industrial company town (Italy), the Wieliczka and Bochnia Royal Salt Mines (Poland) and the Engelsberg Ironworks (Sweden). The European Route of Industrial Heritage (<http://erih.net>), the tourism information network of industrial heritage, presents more than 1000 sites in 43 European countries.

However, the situation of many, especially larger industrial heritage sites is problematic. Huge financial resources are required to preserve them and implement adequate programmes of adaptive re-use. Of particular importance in the revitalisation is to integrate the site, its artefacts and historic record in a multi-faceted narrative, which should include the social as well as environmental dimension of an industrial heritage site.

### Case studies

*Brede Works* is a museum of industrial culture that presents the history of the industrialisation of Denmark and the community of a textile factory complex in the countryside north of Copenhagen. The museum has implemented scenographic installations with interactive stations where individual characters tell personal stories about work and life at the factory. The installations have been developed by the museum and two creative media companies.

*Connected Earth* is a multimedia web portal that allows for exploring the history of telecommunications in the UK and beyond. It has been developed by British Telecom and a network of museums that also present artefacts from the former BT Archive and own collection objects in visitor galleries.

*Odiel's Wheel* is a project that involves students and teachers in "do-it-yourself" communication of local industrial heritage and social history. Digital content of museums and archives in West-Flanders (Belgium) is used to create game-like historic narratives that highlight ordinary people, everyday objects, how they were produced and used.



## Brede Works – Interactive museum installations about the industrialisation and textile industry in Denmark

### General information

Domain: Industrial Heritage (industrialisation and textile industry)

Title: Brede Works – Interactive museum installations

Launch: 2009

Country: Denmark

Website: <http://natmus.dk/en/brede-vaerk/brede-vaerk/>

### Project focus

Brede Works is a museum of industrial culture located in Denmark's largest protected industrial heritage area in the Mølleåen river valley north of Copenhagen. The museum tells the history of the industrialisation of Denmark and the community of the local textile factory, which was in operation from 1832 to 1956. The factory complex includes various production buildings (one of which houses the museum), a park with the factory-owner's country home and the small houses where the workers' families lived.

The museum has implemented interactive stations in the exhibition areas where the visitors can use an ActiveTicket to activate individual characters who tell personal stories about work and life at the factory. The video *En dag på fabrikken* (A Day at the Factory) about the installation was awarded the Museums in Short Award 2012.

### Participants

- National Museum of Denmark, <http://natmus.dk/en/>
- Brede Works – Museum of Industrial Culture (part of the National Museum of Denmark), <http://natmus.dk/en/brede-works>
- The Asta Experience, <http://www.dieasta.dk>
- Oncotype ApS, <http://oncotype.dk>

### Cooperation

This interactive exhibition has been created by Brede Works and two creative industry companies, The Asta Experience and Oncotype ApS. The museum curators provided the knowledge about the daily working routines, industrial development and social conflicts of the time (set in the early 1930s). The Asta Experience served as the project manager for the interactive parts of the museum exhibition, developed the vivid and emotional concept and coordinated the implementation of the technical systems. The interaction and media designers of Oncotype produced the interactive videos for the scenographic installations.

### Financing / funding

The interactive installations have been financed by the National Museum of Denmark, which is funded by the Danish Ministry of Culture.

### **Content & IPR / licensing**

The content of the installations centres on the daily work and problems of individual people. At the interactive stations among the factory machines the visitor can choose between six characters (e.g. director, master-craftsman, female weaver and other workers) who tell their stories and interact with other characters. The stories and interactions are presented in 48 short movies. Topics addressed include problems of production and product quality, breaks, salaries and the labour union. Thereby the visitor can relate to the exhibited objects from personal as well as societal angles.

The content is embedded in the interactive installations, however the video “A Day at the Factory” is freely accessible on VIMEO. The copyright of the video rests with the author of the film script and Oncotype ApS.

In addition, the educational website “Det virtuelle brede” presents images and texts about the production and social life at the factory arranged on a timeline, and offers freely downloadable worksheets on various topics for teachers and students.

### **Technologies used / innovative features**

The technologies comprise the ActiveTicket (with barcode), the scenographic installations and the system which controls the interactive stations with touch-screen, video projection and sound and light systems surrounding the museum inventory (e.g. machines and equipment). It is also worthwhile noting the physical experiences the museum offers. For example, in the exhibition area The Factory visitors can get an impression of what it meant to work at the dyeing machines, and in the area The Machinery they can work together at conveyer belts.

### **Target users**

The Brede Works museum primarily addresses domestic visitors of all ages, with a focus on families, young people and school classes. Admission to the museum is free.

### **Lessons learned**

*Cooperation:* The creation of the interactive stations required special expertise including historical knowledge about the work and social life at the industrial complex, design of scenographic installations combining the physical factory environment with interactive media, and production of engaging videos featuring personal stories and interactions between authentic characters. Also the specific requirements concerning the use of an ActiveTicket, hardware and software, audiovisual and lighting systems should be noted.

*Content:* The scenographic installations overcome the traditional approach of displaying factual knowledge about objects of an industrial heritage museum. Rather they touch the visitor in a vivid and emotional way through the stories and interactions of individual characters, which make transparent the economic and social contexts of the factory.

*Technologies used / innovative features:* The interactive stations and ActiveTicket allow the visitors a unique experience as well as tracking the usage (i.e. which characters and stories are chosen where). The development of the installations had to overcome some challenges because of the vast spaces of the museum and the necessary light conditions for viewing the videos.

**Sources and links**

- Brede Works museum website, <http://natmus.dk/en/brede-vaerk/brede-vaerk/>
  - "A Day at the Factory" video, Winner of the Musil Award 2012, <http://vimeo.com/74286937>
  - "Brede Works - the factory in the countryside", video (including historic footage on the industrial site and industrialisation in Denmark), <http://www.youtube.com/watch?v=d9rmJfUCvnA>
  - Det virtuelle brede (educational website, in Danish), <http://virtuellebrede.natmus.dk>
- Oncotype: Nationalmuseet Brede Værk. En dag på fabrikken (project description, in Danish, including images of the video production), <http://oncotype.dk/cases/national-museet>
- European Route of Industrial Heritage Net: Brede Works (museum description), [http://www.erih.net/nc/anchor-points/detail.html?user\\_erihobjects\\_pi2\[showUid\]=18325](http://www.erih.net/nc/anchor-points/detail.html?user_erihobjects_pi2[showUid]=18325)

## Connected Earth – Virtual museum of communications history

### General information

Domain: Industrial Heritage (communication technology)

Title: Connected Earth

Launch: 2002

Country: United Kingdom

Website: <http://www.connected-earth.com>

### Project focus

Connected Earth is a multimedia web portal that allows exploring the history of telecommunications in the UK and from the UK to overseas. The database of digitized objects and the web portal were conceived when British Telecom (BT) in 1997 decided to close down their archive of historical objects and offer the items to museums across the country. In order to keep the items and historic context together, a virtual museum and network of content providers has been developed. The portal ties together rich content about artefacts of the history of communications, many of which are displayed in museums and galleries of Connected Earth network partners.

### Participants

- Amberley Museum and Heritage Centre, <http://www.amberleymuseum.co.uk>
- Avoncroft Museum, <http://www.avoncroft.org.uk>
- British Telecom Archives, <http://www.bt.com/archives>
- Institute of Telecommunications Professionals, <http://www.theitp.org>
- Milton Keynes Museum, <http://www.mkmuseum.org.uk>
- Museum of London, <http://www.museumoflondon.org.uk>
- National Museum of Scotland, <http://www.nms.ac.uk>
- Porthcurno Telegraph Museum, <http://www.porthcurno.org.uk>
- Science Museum, <http://www.sciencemuseum.org.uk>
- The Museum of Science and Industry in Manchester, <http://www.msimg.org.uk>

### Cooperation

The Connected Earth cooperation is a unique attempt to tell the history of communication technology and its importance for modern life through a virtual collection of objects that are physically distributed and exhibited in several museums. The project has been coordinated by British Telecom staff who also implemented the virtual museum portal together with the museum network partners. Several partners such as Amberley Museum and Heritage Centre, Avoncroft Museum, Museum of Science and Industry in Manchester and the National Museum of Scotland implemented dedicated Connected Earth galleries whilst others incorporated artefacts into their existing exhibitions. Since 2002 the project constantly enlarged its digital collections and services.

### Financing / funding

The reason for launching the virtual museum was that the British Telecom Archives had to close down in 1997, however, owning more than 40,000 historic

artefacts and additional documents. It took until 2002 until the Connected Earth project could be firmly established and become operative, bringing together digital content of British Telecom and museum partners who agreed to contribute to the project with their collections. The project has been mainly financed by British Telecom (in the range of several million euros), including digitization of material, building the web portal, and part funding of the establishment or extension of dedicated Connected Earth museum galleries. Furthermore at some of the museums curatorial and research posts for telecommunication history have been endowed by BT.

### **Content & IPR / licensing**

Connected Earth presents four main sections, Journeys (technological and social history of telecommunications), The Collection (the catalogue of artefacts, audio and video material, the BT archive of documents, books, images, etc.), People & Pioneers (personal stories, oral history interviews, and documentation of the lives and work of telecommunication pioneers), and Learning Resources. All content is in English.

The learning resources are designed for teachers and parents with children and young people aged 7-16 years. Some of the modules and material can be used for primary and secondary stages of UK educational curricula. For example, "Make a museum" provides teachers with lesson support material and allows students to create and interpret an own gallery of documents, photographs, films, etc.

The content is made available freely for educational purposes. Concerning the documentary history of BT and its predecessors, records created before BT's privatisation in 1984 are classed as public records and the BT Archives has a statutory responsibility to preserve and make these records available to everyone. Connected Earth users can also contribute relevant own content, retaining the copyright while granting BT the right in perpetuity to publish and use it in publicity material.

### **Technologies used / innovative features**

Connected Earth deploys state-of-the-art Web portal technology to provide interactive access to a wide range of information and learning resources. The portal has been designed so that the visitor is in charge and can switch between different information sections and channels, which provide access to image collections, oral and written stories of people who worked in the telecommunications industry, film clips, and explanations of how things work.

### **Target users**

Connected Earth has been designed and provides a rich stock of information for anybody interested in the technological and social history of telecommunications, especially in the UK and from the UK to overseas. A particular focus is on educational use (parents, students, teachers), and fun & games for leisure activities. The virtual museum also complements the exhibitions and online content of the Connected Earth network partners.

### **Lessons learned**

*Cooperation:* The project is a unique example of an organisation giving a major collection of industrial artefacts to heritage institutions while integrating and extending it as a virtual museum.

*Content:* Connected Earth provides access to a multitude of content of different types (educational material, oral history, technical information, etc.) in different formats (e.g. photographs, audio, video). The engaging material developed for students, teachers and parents merit to be highlighted. Furthermore that anybody can contribute relevant own content under clear terms.

*Technologies used / innovative features:* Although the scope and depth of the portal content is enormous it is rather easy to navigate the different sections and access pieces of interest.

### Sources and links

- Connected Earth website, <http://www.connected-earth.com>
  - "Our story", <http://www.connected-earth.com/Aboutus/index.htm>
  - Partner museums, <http://www.connected-earth.com/Partnermuseums/index.htm>
  - Twitter, <https://twitter.com/ConnectedEarth>
- Telecommunications Heritage Group: The Launch of Connected Earth (2002), [http://old.thg.org.uk/special\\_interest/Connected%20earth.html](http://old.thg.org.uk/special_interest/Connected%20earth.html)
- British Telecom: Our heritage policies <http://www.btplc.com/Thegroup/BTsHistory/BTgrouparchives/OurHeritagePolicy/index.htm>
- BT Digital Archives, <http://www.digitalarchives.bt.com>

## Odiel's Wheel – Web and mobile games for exploring local industrial heritage

### General information

Domain: Industrial Heritage (everyday objects)

Title: In het wiel van Odie (Odiel's Wheel)

Launch: 2012

Country: Belgium

Website: <http://www.inhetwielvanodiel.be>

### Project focus

Odiel's Wheel is a project that involves students and teachers in the communication of local industrial heritage and social history by inviting them to create Web-based and mobile games with historical characters and content. The National Cycling Museum, City Museums of Izegem, the regional heritage group TERF (West-Flanders) and creative media partners provided content and a Web-authoring tool that allows participants to create game-like historic narratives rather easily. The project nourishes a "do-it-yourself" approach of telling the story of local cultural heritage by creating and playing mobile games which point out interesting relations between people, objects and events.

### Participants

- Projectvereniging TERF, Roselare, <http://www.bieterf.be>
- Stedelijke Izegemse Musea (City Museums of Izegem), <http://musea.izegem.be>
- WieMu - Nationaal wielermuseum (National Cycling Museum), <http://www.wielermuseum.be>
- Hasselt University - Center for Digital Media / iDiscover, <http://www.idiscover.be>
- Gallo-Roman Museum, Tongeren, <http://www.galloromeinsmuseum.be>
- List of further project partners, <http://www.inhetwielvanodiel.be/en/page/36/partners.html>

### Cooperation

The Odiel's Wheel project has been initiated and coordinated by the regional heritage association TERF. In this association seven municipalities in the region of West-Flandern (Hooglede, Ingelmunster, Izegem, Lichtervelde, Moorslede, Roeselare en Staden) cooperate to make content and knowledge about the local cultural heritage accessible to the public.

The concept and authoring tool for Odiel's Wheel has been developed by technical and museum pedagogical experts of the iDiscover Center of Hasselt University and the Gallo-Roman Museum (Tongeren). The initial game focused on historical content of the National Cycling Museum and the City Museums of Izegem (e.g. bicycles, shoes, brushes, etc.).

### Financing / funding

The project has been sponsored by the Flandern Tourism Association, the Province of West-Flandern and smaller contributions of several other institutions in the region. The cultural heritage organisations of municipalities participating



in the TERF association are providing historical images, biographical and other information for the project.

### **Content & IPR / licensing**

For the “do-it-yourself” approach historical material, background information and the authoring tool are being used. The approach is basically about inviting young people to conceive own stories and game-like interactions on the Web or with mobile devices.

The initial Odiel’s Wheel game can illustrate the approach: As the main character Odiel Defraeye, the first Belgian ever to win the Tour de France in 1912, was chosen. He was a worker in a brush making factory in Izegem and became a cycling legend in Flanders. Based on his life story and related characters gamers can explore local history in the first half of the 20th century. Students and teachers are invited to conceive similar games using historical material and the online authoring tool. For the initial game also a handbook explaining the concept and available content has been provided.

The project webpage is available in Dutch, French and English; the authoring tool and the Odiel’s Wheel handbook only in Dutch. The copyrights in the digitized historical photographs and other material remain with the content providers. Games developed by groups of students and teachers can be freely accessed on the project webpage for educational purposes; the Odiel’s Wheel game is also available as an app on the Google Play Store.

### **Technologies used / innovative features**

The project website provides access to the authoring tool to create a new or further develop an existing game. Download of the Web-authoring tool requires that the students, teachers or guests register. The tool provides a variety of templates for defining different types of tasks and game-like challenges as well as integrating different kinds of media. The project website also features an “Online Tour Collection”. Taking these tours requires having installed a Web browser such as Firefox or Chrome in a current version.

### **Target users**

The “do-it-yourself” approach aims at groups of young people, teachers, museum curators and educational programme managers. Game-like stories such as Odiel’s Wheel allow for using local museum and archive content for highlighting ordinary people, everyday objects, how they were produced and used. Hence topics of social history, handicraft and industry, work and leisure can be brought to the fore. Such topics might be more appealing to many people than stories of “great men”, “great moments of history”, “masterpieces” etc. typically featured by national museums and “blockbuster” travelling exhibitions.

### **Lessons learned**

*Collaboration:* The project mobilized small museums, educators and media developers to make content and knowledge about the local cultural heritage accessible in a novel way. The wider circle of organisations involved in the project includes municipalities, tourism agencies and social communities like the Friends of Odiel Defraeye (bicyclers who enjoy meeting like-minded people).

*Content:* Museums are often focused on their collections and themes while a story or game can allow for linking objects of different museum collections through a historical narrative. Mobilizing young people to create game-like narratives, characters and interactions based on cultural heritage content can promote learning about and appreciation of local history and heritage.

*Technologies used / innovative features:* The content and tools used in the project (e.g. digitized photographs, templates for Web content editing, standard browsers, etc.) are not high-tech. The innovative part is the “do-it-yourself” approach. It also offers a rather cheap way of making content of museums and archives accessible in an engaging way.

### Sources and links

- In het wiel von Odiel, website, <http://www.inhetwielvanodiel.be>
  - App on Google Play Store, <https://play.google.com/store/apps/details?id=be.uhasselt.edm.inhetwielvanodiel>
  - Handleiding (guidelines for students and teachers, in Dutch), [http://www.inhetwielvanodiel.be/images/filelib/HandleidinginhetwielvanOdielzonderscreenshots\\_2574.pdf](http://www.inhetwielvanodiel.be/images/filelib/HandleidinginhetwielvanOdielzonderscreenshots_2574.pdf)
- iDiscover Center of Experience, project description, <http://www.idiscover.be/en/content/projects>
- De vrienden van Odiel, <http://www.odieldefraeye.be>

### How to promote the preservation and revitalization of industrial heritage – CreativeCH workshop results

CreativeCH promotes creative cooperation with a focus on the communication of the values of heritage. Often a lot of creativity and communicative efforts are necessary to make the case for preserving a heritage site or building. Particularly this concerns former industrial sites. The heritage value in such cases is substantial in terms of social history and probably architecture. But a perspective for preservation and revitalization for new uses may be lacking, because the required investment appears to be too high and risky, or there is lack of interest by the community and potential developers in the first place.

Therefore the project organised a workshop on how to promote the preservation and use of industrial heritage. The workshop was kindly hosted by Pilsen 2015 – European Capital of Culture on the 19th of September 2013, during the Pilsen Week of Cultural Factories. It took place at the former Světovar brewery where such a “factory” is being developed. Six invited presenters, local experts and several students and young artists participated. The workshop addressed feasible approaches for particularly difficult cases of industrial heritage, the role of public-private partnerships, and involvement of civic and cultural communities.

### Highlighted results

**(1) Large variety of situations:** Industrial heritage sites present a large variety of situations concerning the type of former use (e.g. energy production, mining, manufacturing, storage), location (e.g. metropolis, city periphery, rural area, etc.), and the socio-economic situation (e.g. striving vs. declining regional economy, or well-to-do gentrified vs. deprived city district).

**(2) Particularly difficult constellations:** Among the particularly difficult constellations are small towns in former industrial areas and peripheral regions in general (e.g. boarder regions or rural areas), which are typically afflicted by high unemployment and lack of economic dynamic (e.g. entrepreneurship and inflow of investment). In such a situation the rationale for preserving a former industrial site is difficult to communicate, especially because there might be no need of spaces for new offices, shops, restaurants, cultural facilities and the like.

**(3) Stimulate creative ideas and positive images:** Particularly if the overall situation is not favourable it is important to promote creative ideas and images of a desirable future of the run down site. This can increase the sense of ownership and confidence of local stakeholders that positive change is possible, and help mobilize citizens for targeted initiatives aimed at “re-inventing” the site through re-using it for new purposes.

**(4) No blue print solution, evaluate the specific situation:** Because of the variety of situations no blue print solutions are available even for the same type of industrial heritage. Rather the specific constellation, context and options must be evaluated case by case. Available expertise and inspiration from other projects should be sought, but copying what worked in one place under specific conditions might not work out successfully.

**(5) Use = protection:** The time horizons of interventions ranges from a few months to over 10 years. The key point is that former industrial sites have often been abandoned for an extended period and should be protected from further degradation in order to explore and keep viable options. There needs to be a long-term horizon and more than just one concept (e.g. finding a major investor). Involving young people and students to work on projects on-site and actively use spaces for some months can raise awareness of the value of the site. Some ideas and exemplary uses might be turned into initiatives that receive support by citizens, the municipality/ regional government and other investors.

**(6) Temporary use based on low investment:** Temporary use of sites by creative groups should be allowed and supported. Such usage might be turned, step-by-step, into self-sustaining solutions, which can attract further activity and investors. Small investment by the public hand will mean low costs for users, e.g. creative people in search of spaces.

**(7) Public governance has a core role to play:** Governance of the public sector (e.g. municipality, regional government) has a core role to play even if little public money is available for preserving and revitalizing a former industrial site. There are instruments that might be applied and make a difference, tax breaks or relaxation of regulations, for instance. Demonstration of a clear position and engagement by the public sector can help mobilize, bring together and guide the cooperation among the stakeholders, including resolution of conflicts, if required.

**(8) Working with site developers:** Revitalization through new uses will often not work without commercial investors, developers and operators of spaces such as shops and restaurants, offices or residential spaces. Therefore public-private partnerships and a balancing of the different values and interests (e.g. commercial players, public heritage protection agencies and citizens / civil society groups) are necessary.

**(9) Common ground, bridging values:** Values which are shared by all parties can help in the often required negotiation and consensus building. For example, the “historical character” of buildings is valued by citizens and developers alike, by the latter because this typically allows for higher rents than new buildings. The same goes for “accessibility” of sites. Citizens wish to retain social places to meet, while investors are looking for “frequency”, i.e. places that are regularly visited by consumers. However, it is important to keep the social character of places, i.e. they should not be fully overtaken by commercial interests.

**(10) Citizens as stakeholders and investors:** The potential of citizens as actors in the preservation and revitalization of industrial and other cultural heritage is underestimated. Overall there is a high willingness of citizens to volunteer for preserving cultural heritage (Europa Nostra Forum 2011). There are also inspiring examples where citizens have taken the initiative and invested own labour and money to safeguard heritage (e.g. Stadsherstel Amsterdam NV). For citizens this is a matter of sense of belonging, appreciation of historic environment and community spirit.

**(11) Creative funding mechanisms:** There are number of funding mechanisms such as lotteries for good purposes like preserving cultural heritage (e.g. BankGiro Loterij, Netherlands), long-term credits at low rates, sponsorship by companies based on corporate social responsibility programs, or crowd-funding initiatives (Röthler & Wenzlaff 2011). Concerning sponsorships it must be noted that the typical forms can only be part of the solution and often only after a site has been secured and a regular programme of cultural and/or other activities established.

Documentation of the workshop is available on the CreativeCH website, including the workshop report (with many additional links), information about the presenters, presentation slides and a video.

# Historical places and buildings



The title of this section avoids “historic sites” or “monuments” which stand for official locations and remains of political, military, religious or social history which are protected by national law or other regulations. Instead we emphasise the importance of places and buildings of lower status which people recognise as historical, because they evoke memories shared by local communities, while for tourists they are only an element in the urban or rural areas they perceive as old and maybe of historical significance.

The message we would like to convey is to be careful with these places and buildings, to preserve them but not necessarily promote them as a “must see” tourist attractions. This should serve as a counterpoint to the mushrooming of “markers” that highlight heritage resources as significant and thereby activate them for touristic purposes.

There is since long a plethora of markers such as guide books, signposts, plaques on houses, etc., and websites and mobile services extend tremendously the potential to mark, present and recommend heritage places. Shortly there will be nothing left to discover, despite the fact that allowing for authentic personal

experiences features high on the list of recommendations of tourism consultants. Therefore we suggest more careful preservation of heritage places and buildings while reducing the excessive marking. (cf. Nelle 2011)

### Case studies

We present four projects featuring built heritage with different information technologies; also the producers are rather diverse:

*Heritage of Portuguese Influence* is a web portal that presents urban heritage of Portuguese origin in the non-European world. It has been created by scholars and an IT company with funding by a major Portuguese foundation. Non-experts such as local residents and travellers can contribute own content. While not stated explicitly, the portal also encourages local communities to preserve the documented cultural heritage objects.

*Birmingham Music Archive* is a website that reconstructs and celebrates the popular music history of the city based on contributions of its users. It presents material and personal memories about places they visited, most of which are lost because of closure and destruction. The website is run and curated by a cultural producer and researcher at the School of Media, Birmingham City University.

*Zeitfenster (Time Window)* is a mobile augmented reality application that allows residents and visitors of cities to perceive the historic changes of built and other urban elements in a novel way. Thereby the app producers also want to contribute to the preservation of cultural heritage by showing the loss in built and other historic environment. The producers have been students of the Stuttgart Media University and meanwhile established a creative business.

*Memorial Landscape Berlin Wall* is a web-based Geographic Information System that documents the physical memory of the Berlin Wall in its present day urban contexts. The database and web application has been produced by historians and technical experts.

## Heritage of Portuguese Influence portal

### General information

Domain: Historical places and buildings (with a focus on urban architecture and history)

Title: Heritage of Portuguese Influence

Launch: 2012

Country: Portugal

Website: <http://www.hpip.org>

### Project focus

The web portal Heritage of Portuguese Influence aims to cover the architectural and other urban heritage of Portuguese origin in the non-European world, including former outposts and colonies. It presents tangible remains of a meeting of cultures, traces of cultural encounters and their effects up to the present time. Thus the content centres on tangible heritage such as sites, monuments and historic buildings. It spans almost six centuries, starting from the beginning of Portuguese maritime exploration in the early 15th century to the late 20th century, when Macao was handed over to China. The portal builds on the results of a large academic project which have been made accessible online to more widely disseminate as well as extend them with contributions by other scholars, local people and travellers.

### Participants

- Fundação Calouste Gulbenkian, <http://www.gulbenkian.pt>
- Universidade de Coimbra, <http://www.uc.pt>
- Universidade de Évora, <http://www.uevora.pt>
- Universidade de Lisboa, <http://www.ulisboa.pt>
- Universidade NOVA de Lisboa, <http://www.unl.pt>
- Full IT, <http://www.fullit.pt>

### Cooperation

The content basis of the portal has been created in a joint effort of scholars of Portuguese universities who collaborated in the project “Heritage of Portuguese Origin in the World – Architecture and Urbanism” (2007-2012). This project and its web-based extension has been funded and supported by the Fundação Calouste Gulbenkian (Lisbon). Technically, the web portal was designed and realised by Full IT, a Portuguese developer of web and mobile applications. To ensure the operation and further development of the portal, an Executive Council comprising the sponsor and the contributing universities has been formed. As the web portal is open to further contributions by local people and travellers, indeed anybody, the academic partners also formed an Editorial Board (about 70 specialists) that validates, accepts or rejects such contributions.

### Financing / funding

The creation of the initial content in the “Heritage of Portuguese Origin in the World – Architecture and Urbanism” project as well as the maintenance and



further development of the web portal has been funded by the Fundação Calouste Gulbenkian (Lisbon), with contributions by the participating universities.

### **Content & IPR / licensing**

The portal launched in April 2012 with 1865 entries featuring built heritage scattered across 565 locations. The information comprises texts describing the individual heritage objects and their historical and contemporary contexts, the available photographs and other visual content (e.g. drawings, cartography, etc.), bibliographic information and a glossary. Furthermore, in the “contexts” section of the portal visitors can learn about the urban and architectural development in countries and regions of Asia, South America, Sub-Saharan Africa, North Africa and the Persian Gulf and Red Sea areas.

The copyrights of the content collected in the research project (which amounted to four printed volumes) are held by the Fundação Calouste Gulbenkian and/or the participating universities. Online contributors waive all rights in their content when submitting it to the portal (cf. Terms and Conditions). However the authorship is attributed on the relevant page of the contribution and the name and details added to the list of authors. Users are requested to follow the conventional rules for citing online information; use of the content for any commercial purposes is expressly forbidden.

### **Technologies used / innovative features**

The portal utilises state of the art web, mobile and geographic information technologies. The content can be searched using a simple search box or navigated based on geographic, chronological or author information. For example, the geo-referenced information about points of interest can be explored and accessed through Google maps. Each page of a built heritage object also links to historical background on the development and architecture of the town, village or other place where the object is located. Concerning user contributions, no prior registration is required and a contribution (e.g. comments) can be made to each existing page as well as submission of new content. As noted, each contribution is checked and validated before being published or rejected by the editorial board.

### **Target users**

As the content of the portal focuses on built heritage of Portuguese origin, the primary target groups are Portuguese travellers and people living in the regions covered. The information is provided in Portuguese and English. In order to attract an active user community and extend the content, the portal allows for contributing content easily. While not stated explicitly, the portal also encourages local communities to preserve the documented cultural heritage objects.

### **Lessons learned**

*Cooperation / content:* The web portal is a good example of how content produced by subject experts (archivists, curators, academic researchers) can be combined with contributions of local people and travellers. Proposed additions to existing pages or new entries of built heritage objects can be submitted without prior registration through a simple web template.

*Content quality control:* The portal has an Editorial Board whose members evaluate each contribution before it is published or rejected. This is necessary to



ensure the relevance and quality of the contributions. But also because marking up sites and objects of encounters of cultures as heritage (and potential tourist attractions) might cause tensions and conflicts, especially if “markers” and residents are from different cultural backgrounds.

*Copyrights:* The solution for the copyrights of the online contributions is reasonable, especially considering the difficulty of distinguishing between the initial content produced by the academic researchers and these contributions (which might also undergo some agreed editing before they are published).

#### Sources and links

- Heritage of Portuguese Influence portal, <http://www.hpip.org>
- José Mattoso: Project Presentation (describes the rationale and approach of identifying and describing the built heritage of Portuguese origin in non-European countries),  
<http://www.hpip.org/Default/en/AboutHPIP/TheProject/JoseMattoso>
- Fundação Calouste Gulbenkian: The new Heritage of Portuguese Influence website, 27.04.2012,  
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## Birmingham Music Archive – Celebrating Birmingham’s Popular Music History

### General information

Domain: Historical places and buildings (popular music locations and memories)

Title: Birmingham Music Archive

Launch: 2009

Country: United Kingdom

Website: <http://birminghammusicarchive.com>

### Project focus

Popular music heritage is communicated online in either official or unofficial narratives. Publicly funded heritage archives and websites tend to mirror traditional history-making, whereas unofficial websites emphasise personal memories and the social role the music played in the communities of towns and regions. The latter are participatory sites created, populated and curated by individuals and social groups. The Birmingham Music Archive is an example of an unofficial website. It reconstructs and celebrates the popular music history of the city bottom up – through contributions by its users.

### Participants

- Jez Collins, founder of the archive, cultural entrepreneur, and researcher in the Birmingham Centre for Media and Cultural Research, Birmingham City University, <http://about.me/jezcollins>
- The contributors and users of the archive

### Cooperation

The Birmingham Music Archive essentially is a cooperation between the contributors and Jez Collins as the publisher of the archive website. Furthermore the support by the Birmingham Centre for Media and Cultural Research merits to be mentioned.

### Financing / funding

Initial funding came from a project grant of the UK Arts and Humanities Research Council to the Birmingham City University. Among several project activities, this allowed the University to host Jez Collins from late 2008 in the School of Media to develop a prototype website of the Birmingham Music Archive. In addition, Collins could secure a small grant by the Arts Council to establish and grow the archive. A Heritage Lottery Fund bid of the University and Birmingham Central Library managed by Collins in 2009 failed, because the innovative approach did not meet the funding criteria. (cf. Collins 2009) Currently, the archive website is maintained and updated by Collins as a private investment of time and labour.

The archive project has also been extended into producing the one hour documentary “Made in Birmingham – Punk, Reggae and Bhangra” (2010; executive co-produced by Jez Collins), and helping to recover and release lost music (e.g. the album “Inner Reggae Rhythm” by Eclipse).

### Content & IPR / licensing

There are no criteria set as to what should or should not be included in the archive. But the website makes clear that it centres on the history of popular music



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activity “in and from the city”. The archive categories include bands / musicians, venues, managers, DJs / club nights / promoters, recording studios, radio stations, record labels and shops, press / fanzines, fashion / shops and exhibitions. These sections provide lists, e.g. all known venues, inviting users to post information and comments. Contributors can also send content to the editor to make it available on the website. The content is provided under the Creative Commons Attribution-ShareAlike 4.0 International license.

### Technologies used / innovative features

The Birmingham Music Archive is based on a well-designed Weblog with several frames which feature recent news stories, comments, available videos, etc. In addition there is the archive of entries and comments in the categories mentioned above. The most important aspect of the archive indeed is that each category and entry comes with the comment function which can be used without registration.

### Target users

The website invites users “Tell us what you know, tell us what you think!” about the musical heritage of Birmingham, thereby encouraging users to help build and shape the archive. The contributors typically are people who know about the city’s former music places, artists, events etc., and recall and share memories, stories and visual material (e.g. scanned photographs, flyers, ticket stubs, etc.). Often the stories refer to places they visited but have been lost because of closure and destruction. Notably, despite the City Council’s attempt to position Birmingham as a “music city” to attract and boost music tourism.

“However the built environment of cultural spaces and places of popular culture and in particular popular music, hold a special place in the lives of so many of us. (...) these spaces are imbued with our histories and memories. But music is not just local but translocal. And so places of popular music history are important as authentic sites of music activity for people scattered across the globe.” (Collins 2013)

### Lessons learned

*Collaboration:* The collaboration is essentially between contributors of personal memories (but also factual information) and a trusted non-commercial publisher, who has established the website against all odds.

*Content:* Besides the individual aspects the narratives highlight the social role the music, places and events played (and still play) in the local community. This is not about history-making for tourism purposes. But to preserve, and possibly re-activate, former music venues might well be in the interest of towns with a remarkable history of popular music.

*Technology:* The case exemplifies that a well-designed weblog can be just the

right tool for a community website. The approach is “low tech, high touch”, what counts are the personal recollections of the contributors. That a comment function can be added to each entry is an extremely valuable feature of weblogs.

### Sources and links

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## Zeitfenster / Time Window

### General information

Domain: Historical places and buildings (city history)

Title: Time Window (Zeitfenster)

Launch: 2011

Country: Germany

Website: <http://www.zeitfenster-app.de>

### Project focus

Zeitfenster (Time Window) is a mobile augmented reality application for smartphones that allows residents and visitors of cities to perceive the historic changes of the built heritage and other urban environment in a novel way. The first Zeitfenster app has been developed by creative students for the city centre of Stuttgart, the capital of Baden-Württemberg.

### Participants

- Zeitfenster GbR, <http://www.zeitfenster-app.de>
- Hochschule der Medien Stuttgart, <http://www.hdm-stuttgart.de>
- Landesmedienzentrum Baden-Württemberg, <http://www.lmz-bw.de>
- Haus der Geschichte Baden-Württemberg, <http://www.hdgbw.de>
- Deutsche Kinemathek, Museum für Film und Fernsehen, <http://www.deutsche-kinemathek.de>
- Stuttgart Marketing, <http://www.stuttgart-tourist.de>

### Cooperation

The mobile augmented reality application Zeitfenster has been developed in the years 2009-2011 by five master students of the Hochschule der Medien Stuttgart. The project leader has been Patrick Burkert and the other team members – Diana Bullmann, Nils Fröhlich, Benjamin Schaufler and Sven Straubinger – took care for different technical and other aspects of the project. In a CreativeCH interview Patrick Burkert highlighted: “Creators, designers and developers work together. This gives the whole project a creative and interdisciplinary character.” Content for the pilot application has been provided by public media archives (see below).

### Financing / funding

The initial project costs were covered by the team of master students. The students established a company and sought sponsors and clients to develop the project further and cover also other towns. In January 2013 they launched a time travel app commissioned by the City of Nürtingen. In July, Zeitfenster opened an office in Berlin and also were awarded the title of Kultur- und Kreativpiloten Deutschland 2013 (Culture- and Creative Pilots Germany). Along with new institutional partners and clients, the creative entrepreneurs also intend to involve an online community to collect historical photographs also from private owners.

### Content & IPR / licensing

Content for the initial Zeitfenster product has been provided by Landesmedienzentrum Baden-Württemberg, Haus der Geschichte Baden-Württemberg, and

Deutsche Kinemathek – Museum für Film und Fernsehen (Berlin). While the virtual tour guide can be downloaded for free via the Apple iTunes Store, the developer (Zeitfenster GbR) and the content providers retain the respective rights.

### **Technologies used / innovative features**

Zeitfenster provides augmented reality that offers an extension of the user's perception of urban sites and buildings. The application uses digital images which are rendered in smartphones in combination with Global Positioning System (GPS). Zeitfenster goes beyond other available touristic applications by offering a "time travel" experience of urban sites and buildings that is based on the difference between their present and historic appearance.

The user can choose between a "tour mode", featuring different pre-defined themes and routes, and a flexible "discovery mode". The latter modus allows the user selecting on a map particular places as well as the time period and, when a place is reached, automatically provides the available historical images. The images are delivered in real time according to the position of the user which is identified through GPS. The user can change the transparency and frame of the image to overlay it exactly with his or her view of the place.

The historical photographs often present features of the urban environment that either have been extensively altered or even removed. Therefore, the Zeitfenster project also wants to contribute to the preservation of cultural heritage by showing the loss in built and other historic environment.

### **Target users**

Zeitfenster addresses local residents, domestic as well as international tourists. In 2012, over 21 million Germans used apps on their smartphone, twice as many as in 2010. Especially city break tourists show an increasing interest in mobile apps. Stuttgart, for which the first Zeitfenster app has been created, is regularly among the top 10 German cities in terms of overnight stays of domestic as well as foreign tourists.

### **Lessons learned**

*Cooperation:* The project manager Patrick Burkert emphasises the challenge of bridging the "two worlds" of on the one hand historical experts working in museums and archives and, on the other hand, creative designers and developers. The historical experts want to ensure the authenticity of the historical material while the creative team members are eager to explore novel design and technical capacities. (cf. the CreativeCH video of the Zeitfenster application).

*Content:* In the CreativeCH workshop at the INVTUR 2012 conference in Portugal the project manager noted the difficulty of receiving from cultural heritage institutions licenses for using historic material. Sometimes the copyrights are not cleared or the institutions are concerned about making available digital images, fearing that they might be captured and used in inappropriate ways.

Overall, Zeitfenster is an encouraging example that creative students can become entrepreneurs with a convincing technology-based product for perceiving cultural heritage in novel ways.

**Sources and links**

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## Virtual Memorial Landscape Berlin Wall

### General information

Domain: Historical places and buildings (physical remains of the Cold War period)

Title: Memorial Landscape Berlin Wall

Launch: 2009

Country: Germany

Website: <http://berlin-wall-map.com>

### Project focus

Memorial Landscape Berlin Wall is a web-based Geographic Information System (GIS) that allows users to virtually explore the remains of the urban border line installations of the Berlin Wall. Separating East from West Berlin from 1961 to 1989/90, after its political fall the Wall was largely demolished. As part of the local efforts to preserve the physical memory of the Berlin Wall, the Memorial Landscape Berlin Wall project documented the remaining parts of the inner-city border installations and made the information available to the interested public on a web platform.

### Participants

- Stiftung Berliner Mauer, <http://www.stiftung-berliner-mauer.de>
- Brandenburgische Technische Universität, Lehrstuhl Denkmalpflege, Cottbus, <http://www.b-tu.de/b-tu/>
- Institut für Zeitgeschichte München - Berlin, <http://www.ifz-muenchen.de>
- Zentrum für Militärgeschichte und Sozialwissenschaften der Bundeswehr, Potsdam, <http://www.mgfa-potsdam.de>

### Cooperation

Memorial Landscape Berlin Wall has been developed by the Department of Architectural Conservation of the Brandenburg University of Technology as part of a larger project that documented the remnants and traces of this symbol of the Cold War. Also involved in this project were the Institute for Contemporary History Munich - Berlin and the German Armed Forces Research Office (Potsdam).

In January 2013, the web-based GIS and its database have been handed over to the Berlin Wall Foundation which maintains the information system. The Foundation informs about the historical role of the Berlin Wall, aims to allow for a dignified commemoration of its victims, and the preservation of the threatened authentic physical remains and traces of the Wall.

### Financing / funding

The development of the web platform was financed by the Deutsche Forschungsgemeinschaft (German Research Foundation) as part of the research project "The Berlin Wall as a symbol of the Cold War: from an instrument of the SED's domestic policy to an architectural monument of international significance."

### Content & IPR / licensing

The core of the web-based GIS is the underlying database comprising the information of a detailed survey conducted 2007/2008 of all remaining parts of the

inner-city Berlin Wall, photographic documentation of the installations produced by the border troops of the German Democratic Republic in 1988/89, and information about the function of the different border elements. The content has been geo-referenced and made searchable on Google Maps. In January 2013 the rights in the database and web application have been transferred to the Berlin Wall Foundation.

### **Technologies used / innovative features**

Memorial Landscape Berlin Wall allows users to explore the remains of the inner-city Berlin Wall (43 kilometres); the much longer section of the exterior border installations between the German Democratic Republic (GDR) and West Berlin was 112 kilometres in length. The detailed information can be browsed using a key with different symbols and colours for different kinds of remnants such as walls and fences, border crossings, watchtowers, lampposts, patrol paths and barracks. Furthermore memorial sites are indicated. The descriptions include links to the geo-referenced photographs of the 2007/2008 survey which are shown on Google maps of the area. 28 “focus points” also include photographs taken by the GDR border troops in 1988/89.

### **Target users**

The Berlin Wall is a major symbol for the Cold War period and its fall meant the collapse of communism in East Germany and paved the way for German reunification. Many people have either witnessed the existence of the Berlin Wall first-hand or they remember stories told by their parents or grandparents.

However, the Wall has been largely demolished, heralding a unified Berlin. Countless small fragments of the Wall taken by “wallpeckers” as well as many hundreds of large segments are distributed all around the globe, at least 120 of which were used to erect Berlin Wall monuments outside of Germany.

In this context the Memorial Landscape Berlin Wall is a valuable tool for both residents and visitors. Residents such as students and visitors of Berlin can use it to virtually explore the remains of this symbol of the Cold War, for example, to prepare studies or look up the available information on particular places (e.g. memorial sites).

### **Lessons learned**

*Collaboration:* The project makes clear the tremendous effort of historians and technical experts that is required to document the remains a large heritage complex such as the Berlin Wall. Also Heritage of Portuguese Influence illustrates this concerning very different and widely distributed architectural heritage. The Memorial Landscape might be enriched by also inviting people to contribute to a landscape of personal memories, similarly to the Birmingham Music Archive.

*Content:* The project results contribute to the local efforts to preserve the physical memory of the Wall. While there are many other websites that tell the story of the Wall, the Memorial Landscape documents its tangible remains. Interested residents and visitors can use it as a digital guide to explore these remains in their present day urban contexts. It might be worth to complement it with a print product including maps, images, descriptions, and pages for personal notes.

### Sources and links

- Memorial Landscape Berlin Wall website: <http://berlin-wall-map.com>
- Stiftung Berliner Mauer: <http://www.stiftung-berliner-mauer.de>
- Axel Klausmeier and Leo Schmidt: Wall Remnants, Wall Traces. Berlin: Westkreuz 2005

### Barriers in access to culture, EU-27, 2007

In the special Eurobarometer 67.1 (2007) people in Europe (EU-27) were asked about their barriers to access culture or take part in cultural activities (multiple choice):

42% thought lack of time, 29% perceived cultural activities as too expensive, 17% lacked information, 16% saw limited choice or poor quality of cultural activities in their region as an impediment, and 13% not enough knowledge or cultural background. 8% did not perceive a barrier. Lack of interest in culture or cultural activities had a score of 27%.

The survey included also a question about cultural activities that are free of charge (e.g. free newspapers, cultural websites, public concerts or exhibitions). Free access was considered as a good idea by 82% of respondents, as it gives more people the opportunity to access culture. However, 9% thought that free offers would mean low cultural quality.

(cf. Eurostat 2011, 249)

### Citizens' involvement in amateur public or private cultural activities, EU countries, 2007

The Adult Education Survey (2007) showed that involvement of citizens (age group 25-64 years) in amateur public or private cultural activities like singing, dancing, acting, playing music and painting was rather low in most of the observed countries.

In most countries participation in public performances in the last 12 months was below 10% (in some 4% or below). The figures were between 10-13% for Croatia, Finland, Germany, Greece, Slovakia and Slovenia, while for Italy the figure was 24% and for Estonia a tremendous 40%.

Own artistic activities like painting, drawing, sculpture or computer graphics reached the highest percentages in Austria (23%) and Finland (22%). For Belgium, Estonia, Germany, Italy, Slovakia, Slovenia and Spain the figures were between 10-15%. Still figures of over 5% were present in Cyprus (9%), Greece, Latvia, Lithuania and Poland (8%), Portugal (7%) and Croatia (6%).

(cf. Eurostat 2011, 184)

# Cultural routes



Cultural routes link cultural sites and towns in and across regions of one or more countries. They establish a network of significant places which can be situated relatively close to each other, i.e. might be visited during one travel. Or the places are widely dispersed and mainly linked through a common theme, for example, historic connections such as a pilgrimage or trade route.

Among the large routes are those recognized as Cultural Routes of the Council of Europe; to name but a few: The Santiago De Compostela Pilgrim Routes (1987, the first of the Council's routes), The Hansa (1991), The Viking Routes (1993) or, in more recent years, The European Mozart Ways (2002), The Saint Martin of Tours Route (2005), The Routes of the Olive Tree (2005), The European Cemeteries Route (2010).

Routes presenting cultural sites that are rather distant from each other might be better defined as thematic networks, established for joint promotion of a common theme. Collaborative projects and sharing of knowledge between the

network members can bring in new funds and access to specific expertise. However, as a recent study on the tangible impact notes, “the richness and usefulness of the Cultural Routes is most visible at a local level”. (Council of Europe 2011, 57)

Concepts for linking cultural sites must be evaluated thoroughly, not all work in practice. For example, in the Netherlands five historic towns were linked in a promotional campaign “The Secret of Holland”. The project was stopped after four years. The tourists perceived the towns as similar and did not like to visit more than one or two. A combination of different experiences, e.g. historic “slow town” and vibrant modern city (design, arts, etc.) can in some cases be the better formula.

Concerning routes in rural regions, well-preserved natural environments, villages with character, cultural traditions, local crafts and food are understood to be key attractive factors. This is about what makes regions and communities distinctive rather than a rural “theme park” approach.

### Case studies

*Clunypedia* is a web portal that aims to present the Cluniac heritage to a wider audience. Recently started, it is an ambitious project of the European network of Cluniac sites and a small French IT company to make accessible all sites with new technologies.

*Church on the Move* is a mobile application that supports users on the Slovenian-Styrian Mary's Pilgrimage Route to Mariazell, combining cultural and “inspirational” content as well as practical information. It has been created in a collaboration of the regional church community with a small producer of IT applications.

*Routes of Sefarad* is a multimedia portal that allows exploring the Sephardic tangible and intangible heritage in Spain and supports high-quality cultural tourism. The portal has been developed by a large network of towns together with Google Spain.

## Clunypedia – Virtual Encyclopedia of the Cluniac Sites

### General information

Domain: Cultural routes (monastic network)

Title: Clunypedia

Launch: 2013

Country: France

Website: <http://www.clunypedia.com>

### Project focus

Clunypedia is a web portal that was launched by the European Federation of Cluniac Sites in 2013. The Federation's network of sites was recognized as a Major Cultural Route of the Council of Europe in May 2005. The aim of Clunypedia is to make the Cluniac heritage accessible to a wider interested audience and support cultural and tourism-oriented projects of the Federation. Currently the information on the 150 Cluniac sites is kept brief, though an on-going digitization project aims to provide 3D representations of major sites and objects. Furthermore various historical materials will be added. For Cluny a mobile application has been made available in 2011, which allows accessing also Clunypedia content.

### Participants

- Fédération Européenne des Sites Clunisiens, <http://www.sitesclunisiens.org>
- Paztec - Développement d'applications mobiles et 3D, <http://paztec.fr>
- Arts et Métiers ParisTech (ENSAM) - Centre de Cluny, <http://www.ensam.fr/Centres-et-instituts/Centre-Cluny>
- Office de Tourisme de Cluny, <http://www.cluny-tourisme.com>
- Visit'Cluny, <http://www.visit-cluny-bourgogne.com>

### Cooperation

Clunypedia is the result of a joint effort of cultural and technical organisations. The initial concept was developed by the European Federation of Cluniac Sites in cooperation with the Arts et Métiers ParisTech (ENSAM) centre in Cluny. The IT company Paztec S.A.S., an ENSAM spin-off of three technicians, created the Clunypedia portal and ClunyVision mobile application. Information about the Cluniac sites has been provided by members of the Federation.

### Financing / funding

Clunypedia partly builds on the digital tools and documentation produced in the EU co-funded GUNZO project, in which the Federation of Cluniac Sites participated with four sites, Cluny (France), Calw-Hirsau (Germany), Crossraguel Abbey (Scotland) and Romainmôtier (Switzerland). Financial contributions to Clunypedia come from the Federation, the French Ministry of Culture and Communications, e.g. for the 3D content programme, and investment by Paztec. The ClunyVision mobile application has been supported by the Town of Cluny and the regional tourism association.



### **Content & IPR / licensing**

Clunypedia is a map-based portal that presents the 150 Cluniac sites on Google Maps and offers a short description of the location and history of each site. The content of the portal has also been made accessible in the ClunyVision mobile application.

A digitization initiative aims at providing 3D models of major sites and objects to the portal. In 2013, digitization has been carried out by staff of Paztec at three sites in France and one each in Poland and Switzerland. The development plan of Clunypedia foresees incorporating for each site historic documents, maps and drawings, historical and iconographic studies, etc.

The copyrights of the content remain with the individual providers; the rights to the web portal are with the European Federation of Cluniac Sites and the IT company Paztec.

### **Technologies used / innovative features**

To illustrate the European dimension of the Cluniac movement, the locations of the monasteries and other sites are presented on Google Maps. The map includes also an interactive time-line that enables users to see the expansion of Cluniac sites in the period 800-1800. Available information on a site can be looked up with a search function as well as by clicking on a site on the map. A weblog on the portal and a Facebook page inform about visits to sites, digitization work, presentations of Clunypedia and other events.

The Town of Cluny and the remains of Cluny Abbey can be explored with the mobile app ClunyVision that was launched in 2011 (available for both Apple iOS and Android smartphones). The content is organised thematically and for twelve major points of interest rich content is provided.

### **Target users**

Clunypedia aims at providing access to information and visual material that is relevant for people with a general interest in monasteries and churches as well as scholars and cultural tourism developers and professionals. The European Federation of Cluniac Sites lists 150 sites. Most are located in France (111), followed by Italy and Switzerland (12 each), UK (8), Germany (4) and Spain (3). Consequently the content of Clunypedia is currently only available in French.

### **Lessons learned**

*Cooperation:* The cooperation has the potential to create a unique resource based on the already established portal and on-going digitization work. The provision of 3D models and the use of social media are strong elements for attracting further collaboration projects and users.

*Content:* The content on the portal should be extended not only with 3D models of tangible heritage, but also historical material for contextualization of the models as well as the history of the Cluniac movement and the individual sites. Collecting material for each site will be the task of the members of the European Federation of Cluniac Sites, inviting archivists and historians to contribute available content.

*Technologies used / innovative features:* The portal features can be extended easily and information also served to mobile devices, i.e. users at the individual



sites. An approach for gathering visual documentation could be inviting visitors to capture and share images of the sites.

### Sources and links

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- The mobile app Cluny Vision (for the Town of Cluny) is available on
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## Church on the Move – Slovenian–Styrian Mary's Pilgrimage Route to Mariazell

### General information

Domain: Cultural routes (pilgrimage routes)

Title: Kirche unterwegs (Church on the Move)

Launch: 2013

Country: Austria

Website: <http://www.katholische-kirche-steiermark.at/specials/app#.UmUJ38rcCyZ>

### Project focus

Church on the Move is a mobile application that introduces pilgrims and tourists to heritage sites along the Slovenian–Styrian Mary's Pilgrimage Route to Mariazell as well as the parishes in Styria. The application provides cultural and “inspirational” content as well as practical information for the pilgrimage. One innovative element is QR codes on panels at important sites that enable instant access to the available content.

### Participants

- Diözese Graz-Seckau (Diocese of Graz-Seckau, department for new media), <http://www.katholische-kirche-steiermark.at>
- Pfarre Hartberg (Parish of Hartberg), <http://hartberg.graz-seckau.at>
- Pilgrimage Europe SI-AT, <http://www.pilgern.info/index.php?id=5&L=5>
- CodeFlügel GmbH, <http://www.codefluegel.com>

### Cooperation

The idea and initial concept for developing the mobile application Church on the Move has been developed in the EU co-funded cross-border project Pilgrimage Europe SI-AT (2011-2013). The Pilgrimage project involved the Diocese of Graz-Seckau (lead partner), regional development agencies, research groups, and tourism organisations in Austria and Slovenia. Based on the results, the Diocese of Graz-Seckau and the Styrian Parish of Hartberg decided to create the mobile application. The goal was to cover the heritage sites along the Mariazell Pilgrimage Route from Slovenia to Austria and to include information on all Styrian parishes. The technical implementation was carried out by CodeFlügel, a small Styrian developer of mobile and augmented reality applications with a track record in cultural projects.

### Financing / funding

The development of the mobile application has been organised and funded by the Diocese of Graz-Seckau, with support by the Parish of Hartberg. It also benefited from expertise and content developed in the European cross-border project Pilgrimage Europe SI-AT.

### Content & IPR / licensing

Church on the Move provides information about the main sites along the Slovenian–Styrian Mary's Pilgrimage Route to Mariazell. For the Slovenian part of the route information is included starting from Ptujška Gora. The content for

each site includes cultural information (heritage objects, legends, etc.), spiritual content (text and audio), a 360° panorama, and of course a map and routes are provided so that the users do not get lost on their way to the next pilgrimage site. Features of the part on the parishes in Styria include an image and brief description of each church, navigation support, a calendar of saints, news of the diocese, and live-streaming of religious services. The app is available for free while the copyrights of the content remain with the different providers.

### Technologies used / innovative features

Church on the Move is a state-of-the art mobile application that is available for Apple iOS and Android smartphones and tablets. The navigable map of the route suggests tours taking into account the user's current position (identified via GPS). Information on the pilgrimage sites can also be accessed on-site by using the Quick Response (QR) codes that have been placed on panels.

### Target users

The main target group of Church on the Move are residents and tourists in the cross-border region of Styria and Slovenia, and the international community of pilgrims who are visiting all or some sites along the Mariazell Pilgrimage Route. Information for the pilgrimage route is provided in German, Slovenian and English.

### Lessons learned

*Cooperation:* The mobile application has been developed in a cooperation of the church community with a creative producer of web and mobile services. It builds on knowledge, expertise and content of previous cross-border projects of Austrian and Slovenian organisations.

*Content:* The mobile app provides cultural heritage and “inspirational” content along the pilgrimage route. The project manager of Church on the Move, Martina Linzer (Diocese of Graz-Seckau) also emphasised the importance of combining this content with information for various needs of tourists and pilgrims, e.g. navigational support, practical information about local services, etc.

*Technologies used / innovative features:* The application uses various functionalities of smartphones and tablets. One innovative component is QR codes on panels at important sites that enable instant access to the available content.

### Sources and links

- Kirche unterwegs, website of the mobile app (in German),  
<http://www.katholische-kirche-steiermark.at/specials/app#.UmUJ38rcCyZ>
- App on Apple iTunes Store,  
<https://itunes.apple.com/at/app/kirche-unterwegs/id690523707?mt=8>
- App on Google Play store (Android),  
<https://play.google.com/store/apps/details?id=com.codefluegel.kirchenfinder>
- Mariazell Pilgrimage Route, descriptions of sites,  
<http://pilgern.graz-seckau.at/englisch>
- Pilgern 2.0, project website, <http://www.pilgern.info/index.php?id=5&L=5>
- Pilgrimage in Europe: Cross-border ways towards a better understanding and faithful cooperation, Mariazell, 13-15 May 2012, conference report,  
<http://familienreferat.graz-seckau.at/pilgrimage#>

## Routes of Sefarad – Discovering Jewish heritage and cultural quarters

### General information

Domain: Cultural routes (Jewish history and heritage)

Title: Caminos de Sefarad (Routes of Sefarad)

Launch: 2011

Country: Spain

Website: <http://www.redjuderias.org/google>

### Project focus

Routes of Sefarad is a multimedia portal that allows to explore the Sephardic tangible and intangible heritage in Spain. The portal has been developed by the Network of Spanish Jewish Quarters in collaboration with Google Spain and providers of local cultural and touristic services. The Network of Spanish Jewish Quarters connects 21 cities and is part of the European Route of Jewish Heritage, which since 2011 is a European Cultural Route of the Council of Europe.

### Participants

- Network of Spanish Jewish Quarters, <http://www.redjuderias.org>
- Google Spain, <https://www.google.es>
- Partners of the RASGO project, <http://www.redjuderias.org/rasgo/>
- European Association for the Preservation and Promotion of Jewish Culture and Heritage, <http://www.jewishheritage.org>

### Cooperation

The Routes of Sefarad portal has been developed in a collaboration of the non-profit public association Network of Spanish Jewish Quarters and Google Spain. Google Spain provides tools and services for the portal. Also tied in is RASGO which is a project of the Network together with tourism organisations. It promotes tourist services and products offered by the Jewish quarters, in order to foster quality cultural tourism based on the Sephardic legacy.

The Network of Spanish Jewish Quarters connects 21 cities in Spain. It is also a founding partner of the European Association for the Preservation and Promotion of Jewish Culture and Heritage (AEPJ). Furthermore the network of cities is part of the European Route of Jewish Heritage.

### Financing / funding

The Routes of Sefarad portal is funded through contributions of the members of the Network of Spanish Jewish Quarter to the annual dissemination efforts of the association. The RASGO project of the Network is financed by public administrations and private companies, 20% and 80% respectively.

### Content & IPR / licensing

The portal allows access to a wealth of information on Jewish tangible and intangible heritage from the 3rd century to the present. The material has been gathered over the last ten years by the network partners. The interactive map

and timeline of the portal provide access to information about 523 places, 910 significant dates, 1683 images, 68 supplementary texts and 138 commented lexical terms (status December 2013).

The descriptive content comes from many collections and studies of the network partners. The bibliographical resources are published and can be searched on the portal. The RASGO project links quite some of the historical content with local tourism information (cultural events, restaurants, hotels, local guides, etc.).

The copyrights of the documentation (images and texts) belong to the respective authors. The rights in the portal are with the Network of Spanish Jewish Quarter.

### **Technologies used / innovative features**

The portal aims to document the Jewish heritage as well as relate it to today's living culture by organising the different content formats in several ways. The navigation bar provides a function to filter the available information according to categories, topics, regions and origins. The timeline feature offers to navigate through the historical content chronologically and find information about historic events.

The interactive map allows users to browse and select places, stories, characters and historic details of the Sephardic heritage. The historical documentation unfolds when users click on the icons of places highlighted on the geographic map. Furthermore current touristic information (e.g. cultural events, restaurants, etc.) are integrated in the map. Using Google Street View offers current visual impressions of sites, streets, buildings, etc.

The portal links users also to the online community of the Network of Spanish Jewish Quarters on the social media platform Google plus.

### **Target users**

Routes of Sefarad addresses residents of the cities and national and international cultural tourists, inviting them to learn about the Jewish heritage in Spain. Visitors will also appreciate the additional information about the cities and sites, local food, traditions and events. The portal is connected with many tourist platforms (e.g. Gospain.com, Tripadvisor) and tour operators.

### **Lessons learned**

*Cooperation:* Routes of Sefarad demonstrates the added value of an active network of municipalities, heritage institutions, and local tourism and other service providers. For example, the portal links to many websites which promote theme-specific products and services in the cultural quarters of the network.

*Content:* The portal successfully unlocks and makes clear the heritage values of the urban, architectonical, historical, artistic and other Sephardic legacy in Spain.

*Technology:* Routes of Sefarad makes makes good use of portal technologies and the Google suite of applications (e.g. Google Maps, Street View, Google Plus and others), allowing users to engage with the content in several ways, according to their preferences.

### Sources and links

- Routes of Sefarad website, <http://www.redjuderias.org/google>
- Red de Juderias de Espana: Annual Memoria Report 2012 - Caminos de Seferad, <http://fitxers.redjuderias.org/publicaciones/memoria2012.pdf>
- European Institute of Cultural Routes: The European Route of Jewish Heritage, [http://www.coe.int/t/dg4/cultureheritage/culture/routes/jewish\\_en.asp](http://www.coe.int/t/dg4/cultureheritage/culture/routes/jewish_en.asp)

### Examples of regional creative networks in Portugal

In the CreativeCH workshop “Creative Clusters” at MFG Baden-Württemberg (Stuttgart, 18<sup>th</sup> of April 2012), Professor Joaquim Carvalho (University of Coimbra) presented regional creative initiatives in Portugal.

He explained the specific political background, which includes that there are no formal “regions” in Portugal, and that the government therefore has implemented instruments to promote the cooperation of the municipalities in regional development. One of these instruments is Redes Urbanas para a Competitividade e Inovação, short RUCIs, that allows to channel European Structural Funds to inter-municipal consortia.

The Rede de Economias Criativas is one of the funded projects, a network of small towns along the Mondego river that aim to implement creative economy strategies. Such strategies promote a creative environment through attracting talented people, supporting entrepreneurship, offering work spaces, and involving educational institutions. One of the cross-municipality initiatives is the Network of Castles and Walls of the Mondego River that focuses on cultural tourism development. The town Montemor-o-Velho is also planning the development of a centre and business incubator for creative technologies in a building of the old castle.

Professor Carvalho highlighted that the policy instrument and infusion of funding stimulates small cities to cooperate, and that networking and need to implement transversal, mostly content-based activities generates important immaterial values. Furthermore creative cooperation between different actors is promoted. In the case of the Network of Castles and Walls, between the municipalities, tourism operators, content producers, and academics (who provide the knowledge for the historic narrative of the tourism network).

While the achieved outcomes are promising, the current economic crisis is a threat to the stability of the networks. Some individual projects on the local level are moving along, while common, transversal activities are irritated by mixed messages of the funding agency. Austerity measures hinder execution and low execution increases funding risk. “We know that all the initiatives within RUCI can be anytime endangered by a cut of funding and maybe this is our next big challenge”, concluded Professor Carvalho.

# People's heritage and cultural participation



Internet, mobile and other digital technologies allow citizens new ways to access, explore and add to cultural heritage collections and websites. But most current information outlets of heritage institutions for citizens are lacking participatory elements. Typically they present an authoritative institutional view and interpretation of cultural heritage objects, which are displayed as “the” heritage of a region or country.

Instead, participatory approaches can enable citizens to use novel technologies in engaging ways, allow them to share their views and own content, and bring together heritage communities, including heritage professionals. The key point is: What counts is what citizens perceive as their heritage, how they relate to it (e.g. lived heritage such as local traditions), and what stories they can tell about heritage objects and places.

There are very different approaches that allow for involving citizens of all age groups in the creative appropriation and use of tangible as well as intangible



cultural heritage. Yet, whatever methods and tools are used, the interests, motivations and aspirations of the participating citizens must be considered in the first place. Only truly participatory projects will allow citizens enriching experiences and “telling their stories” in collaborative heritage documentation and communication projects.

### Case studies

*UK Soundmap* is an online “soundscape” populated with contributions of many people across the UK. The project demonstrates that an archive, a creative company and citizens together can create a unique and inspiring collection of content and information.

*Virtual Shtetl* is a community-driven web portal that presents past as well as contemporary Jewish life and culture in Poland. It brings together content of several digitization and online community projects as well as invites and receives contributions of people from Poland and around the world.

*Vintage Vienna* is an online community of people who enjoy and share historical and contemporary photographs of Vienna. It has been initiated and is maintained by two private enthusiasts. Through various social media photographs and personal stories, observations and comments are contributed (e.g. about the transformation of places in Vienna).

*Heritage Key* is a virtual environment that invites young people to access 3D recreations of ancient sites, role-play, learn and share ideas about the sites. It has been produced by a creative company and enriched by users with articles, imagery, animations, etc. on social media platforms.

## UK Soundmap – How the country sounded 2010/2011

### General information

Domain: People's heritage and cultural participation (intangible heritage)

Title: UK Soundmap

Launch: 2011

Country: United Kingdom

Website: <http://sounds.bl.uk/Sound-Maps/UK-Soundmap>

### Project focus

From July 2010 to July 2011, the UK Soundmap project invited people in the United Kingdom to record and provide to The British Library's Sound Archive everyday sounds – at home, work, play or during any other activity. Many throughout the country, in urban, rural and coastal areas participated. The result is an accessible online collection of sound recordings that give users an idea of how the United Kingdom “sounded” in those years, and how its contributors wanted it to sound to others. The collection of citizen recordings complements other British Library collections of various origins and types such as sounds of industrial environments or nature and wildlife. Indeed, the library holds one of the largest collections of audio recordings in the world, including oral history and music from different world regions.

### Participants

- The British Library, Sound Archive, <http://sounds.bl.uk>
- The Noise Futures Network, <http://www.noisefutures.org>
- Sound Diaries, Sonic Art Research Unit, Oxford Brookes University, <http://www.sound-diaries.co.uk>
- Audioboo, <http://audioboo.fm>
- The citizens who contributed sound recordings

### Cooperation

For the UK Soundmap The British Library's Sound Archive cooperated with other projects interested in recording and analysing everyday sounds: the interdisciplinary Noise Futures Network, working on future sound environments (e.g. helping to inform environmental planning), Sound Diaries, a project of sound researchers and practitioners, and Audioboo Ltd. who provided a simple tool to capture and share recordings of sufficient quality for sound archives and researchers. Moreover, and most importantly, some 350 people across the UK contributed to the project by recording and uploading recordings.

### Financing / funding

UK Soundmap was financed by the British Library and received in-kind support by research groups and the creative media company Audioboo.

### Content & IPR / licensing

The UK Soundmap is the first online soundscape populated with contributions of many people across the UK. As the project was somewhat experimental in nature,

the providers were not given instructions which sounds they should record (only how to ensure the quality of the recording). The project was as much interested in what people chose to record as well as in the recordings themselves.

Of the 2000 uploads only 7% had to be rejected, most of which because of copyright issues (e.g. lengthy excerpts from pop songs), poor quality (especially strong wind noise) or lack of geo-referencing. As the editor of the UK Soundmap noted, “the low rejection rate underlines the great effort and goodwill shown by the contributors towards the project” (Rawes 2011).

The largest part of the recordings was made in urban areas (52%), followed by residential suburbs and villages (27%) and inland rural areas (11%). Seaside towns and rural areas together achieved 10%. Some examples of titles are “Waves on rocks - Eccles beach, Norfolk”, “Aberdeen station” or “Honeybee vibrations in Newtown”. Overall the most common sound type in the collection is the human voice, e.g. conversations, cheering and singing, announcements, radio and TV broadcasts heard in the background. Other types often present are traffic noise, birdsong, footsteps, sirens, beeps and bells, and live music.

The British Library preserves the UK Soundmap collection and makes it accessible online on Google Maps to anybody interested. Each playable recording comes with information about who made the recording, however many provided a name as used in social media networks (e.g. Alextronic, ForestBoy or swiftly). The name links to further information on the Audioboo platform (e.g. other recordings made, comments, etc.)

### **Technologies used / innovative features**

The UK Soundmap project used mobile technologies and social media in a crowd-sourcing approach, thereby addressing many potential providers. In December 2010, the project was awarded the “some comms” award for the best public sector use of social media. The Audioboo app for Apple and Android smartphones was a key element in the project approach as it enabled easy capture and sharing of the recordings.

### **Target users**

The UK Soundmap involved people in the UK and the map they helped to create is also mainly of interest to people living there. The recordings give users an idea of how the country “sounded” in 2010/11 and can inspire people, not only UK citizens, to make and share sound recordings on Audioboo or another social media platform. Such recordings are also relevant for environmental, social and cultural researchers. Similar projects on particular areas might inform environmental planning or reveal cultural changes; for example, an analysis of the UK Soundmap collection suggests that there is a decline of whistling in public.

### **Lessons learned**

*Cooperation / content:* The project demonstrates that an archive, a creative company and citizens together can create a unique collection of content and information that is of interest to citizens as well as researchers (e.g. what perceived citizens as relevant to record where).

*Technologies used / innovative features:* Crowd-sourcing of the content with mobile and social media tools allowed cost effective gathering and sharing of the collection.

*Content & IPR / licensing:* Content collected in this way still needs to be curated to some extent. For instance, content might be submitted that violates existing copyrights or the privacy of other people.

**Sources and links**

- UK Soundmap website, <http://sounds.bl.uk/Sound-Maps/UK-Soundmap>
- Audioboo, <http://audioboo.fm/soundmap>
- Ian Rawes (editor of the UK Soundmap): Listening to Britain, 24.6.2011 (gives an overview of where and what kind of sounds were recorded), [http://britishlibrary.typepad.co.uk/archival\\_sounds/uk-soundmap/](http://britishlibrary.typepad.co.uk/archival_sounds/uk-soundmap/)
- Maureen Pennock and Chris Clark: Saving the sounds of the UK in the UK SoundMap. Ariadne, Issue 66, 30.1.2011, <http://www.ariadne.ac.uk/issue66/pennock-clark/>
- Sound Diaries: UK Soundmap / sonic time capsule by Felicity Ford, 7.9.2012, <http://www.sound-diaries.co.uk/previous-sound-diaries-projects/uk-sound-map-sonic-time-capsule/>

## Virtual Shtetl – A community portal for Jewish heritage in Poland

### General information

Domain: People's heritage and cultural participation (Jewish history and heritage)

Title: Virtual Shtetl

Launch: 2008

Country: Poland

Website: <http://www.sztetl.org.pl/en/>

### Project focus

Virtual Shtetl is a community-driven web portal that presents past as well as contemporary Jewish life and culture in Poland. Shtetl is Yiddish and means a village or small town. The main objective of the portal is to provide a unique social forum for everyone interested in Polish-Jewish life. While a lot of content has been provided by several cultural heritage organisations, the portal also invites and receives contributions of people from Poland and around the world.

### Participants

- Museum of the History of Polish Jews, <http://www.jewishmuseum.org.pl>
- Association of the Jewish Historical Institute of Poland, <http://www.szih.org.pl/en/cms/the-association/>
- POLIN - Polish Jews Heritage portal, <http://polin.org.pl>
- Jewish.org.pl community, <http://www.jewish.org.pl>
- Adam Mickiewicz Institute, <http://iam.pl/en> and <http://culture.pl/en>
- Emanuel Ringelblum Jewish Historical Institute, <http://www.jhi.pl>
- National Digital Archive, <http://www.nac.gov.pl>
- Jagiellonian University Krakow, Department of Jewish Studies, <http://www.uj.edu.pl>
- Shalom Foundation, <http://www.shalom.org.pl>
- University of Wrocław, Centre for the Culture and Language of the Jews, <http://www.uni.wroc.pl>
- VŠĮ Jewish Culture and Information Center (Belarus), <http://www.jewishcenter.lt>
- Konrad Adenauer Stiftung, <http://www.kas.de/polen>
- United States Holocaust Memorial Museum, <http://www.ushmm.org>
- Multi Communications Sp. z o.o., <http://www.multipr.pl/en/cms/home-page/>

### Cooperation

The Virtual Shtetl portal has been established by the Jewish Historical Institute Association in 2008 and developed until 2012 when it was donated to the Museum of the History of Polish Jews. It is a "museum without barriers" which builds on the cooperation between several Polish cultural heritage and academic institutions as well as organisations in other countries (cf. the list of participants). For example, knowledge and content centres such as the Jewish Historical Institute, Jewish.org.pl community, National Digital Archive and POLIN portal. Through the European Youth in Action programme also volunteers have been working on the Virtual Shtetl.

**Financing / funding**

Virtual Shtetl has been financed by the Polish Ministry of Culture and National Heritage through the National Heritage Programme “Creating digital resources for the cultural heritage”. It received generous support also from the telecom company Orange, BRE Bank Foundation, Konrad Adenauer Foundation (for the German version of the portal) and others.

**Content & IPR / licensing**

Content presented on the Virtual Shtetl has been provided by the cooperating partners mentioned as well as members of the user community. There is also regular stream of news about cultural events and activities. While the content can be accessed freely for non-commercial usage, the copyrights are held by the portal operator and the respective content providers.

The portal actively invites visitors to contribute content: “The Virtual Shtetl is not a regular website. It is a community in which you, our internet visitor, can participate. Take pictures and upload them, collect memorabilia, listen to testimonies and exchange information.” Registered users can contribute texts, images, audio and video recordings, which usually are added to a town or other place according to the selected thematic category.

**Technologies used / innovative features**

The portal uses state-of-the-art web technologies and also offers a mobile version. The content can be searched in various ways, a simple search box, advanced search (e.g. selecting time, space, activity, etc.), alphabetical lists (towns, names of people), as well as on Google Maps.

**Target users**

The users of Virtual Shtetl are people interested in the Polish-Jewish heritage as well as contemporary Jewish life in Poland. The portal invites people living in Poland as well international users, especially people of Polish-Jewish ancestry, who want to learn more about their history and heritage and to contribute own content. The portal content is provided in several languages, Polish, English, Hebrew, German, Belarusian and Russian.

**Lessons learned**

*Cooperation:* Virtual Shtetl is a cooperative project of Polish and international cultural heritage, academic and other organisations. As a “museum without barriers” it combines content of several digitization and online community projects. Hence, it did not just establish “another” virtual platform but sought to cooperate with and integrate existing initiatives.

*Content:* The portal brings together rich historical information from cultural heritage institutions, civic initiatives and an international user community. Visitors can access an authentic, well presented and growing collection of content on past as well as contemporary Jewish life and culture in Poland.

**Sources and links**

- Virtual Shtetl, <http://www.sztetl.org.pl>
- Facebook, <https://www.facebook.com/VirtualShtetl>
- YouTube, <http://www.youtube.com/user/WirtualnySztetl>

- Twitter, <https://twitter.com/VirtualShtetl>
- Mikołaj Gliški: Poland's Virtual Shtetl - Jewish Culture Beyond Borders, 26.2.2013, <http://culture.pl/en/event/polands-virtual-shtetl-jewish-culture-beyond-borders>

### **Citizens' use of ICT for leisure activities, EU-27, 2008**

The Eurostat special module in the Community Survey on Information and Communication Technologies 2008 provided figures for citizens' use of the Internet for leisure activities (EU-27, age group 16-74 years). (Eurostat 2011)

Related to obtaining and sharing audio-visual content in the last 3 months, the figures were as follows (in % of Internet users): 19% uploaded self-created content, whereas for downloading, listening to or watching content the figures were: music 38%, Web radio/TV 33%, movies 29%, games 15%, peer-to-peer file sharing 11%, browser-based news feeds 10% and use of podcasts 6%.

The survey also investigated the use of some Internet based communication activities among the same population: Instant messaging was used by 36%, telephoning and posting messages each by 26%. Reading blogs was among the activities of 25%, while 6% created blogs. Among the age group surveyed (16-74 years), the largest percentages were of course found in the younger segments.



## Vintage Vienna – Social media site for sharing historical photographs

### General information

Domain: People's heritage and cultural participation (social media based content sharing)

Title: Vintage Vienna – Wien im Wandel der Zeit

Launch: 2012

Country: Austria

Website: <http://wearevintagevienna.tumblr.com>

### Project focus

Vintage Vienna is a community-driven initiative that collects and presents online historical photographs of social life and everyday culture in Vienna. It has been started by two private enthusiasts who invited others to participate and contribute photographs. The community uses the blogging platform Tumblr, Facebook and other social media channels (YouTube, Twitter) to share images, stories and comments. In 2013, a selection of historical photographs has also been published in a book and made accessible through a mobile app.

### Participants

- The initiators and editors Daniela Horvath and Michael Martinek, <http://www.vintagevienna.at>
- The community of contributors and users
- Metroverlag (print publisher), <http://www.metroverlag.at>
- netzfrequenz software GmbH (mobile app of the print edition), <http://netzfrequenz.com>

### Cooperation

Vintage Vienna is a community of people who enjoy and share online historical and contemporary photographs of Vienna. In 2012, the initiators and editors, Daniela Horvath and Michael Martinek, invited people to send them images which they published on Facebook and their own weblog. Quickly Vintage Vienna got momentum and proved to be a big success: There were ever more “likes” on Facebook (currently about 99,000) and a lot of new images posted or sent to the editors.

The great appeal of the initiative led to a cooperation with a “traditional” publishing company, the Vienna based Metro-Verlag. As a result, a 160 pages book with a selection of historical photographs was published in July 2013. Enriched with audio and video clips, the selection was also made available via a mobile app produced by netzfrequenz software GmbH (Austria).

### Financing / funding

Vintage Vienna was born out of personal interest and effort of two individuals who appreciate historical images of Vienna. The project was able to involve many other enthusiasts and to secure some resources to maintain and further develop it.

### **Content & IPR / licensing**

Vintage Vienna content presented on Facebook and the weblog of the editors comprises historical and contemporary photographs and some other visual material (e.g. old postcards), including brief description. On YouTube also videos can be posted under the Vintage Vienna label.

The content on the editors' weblog runs through an editorial process. Contributors have to e-mail the digital material with source and copyright information and state that they allow Vintage Vienna the free and continuous use of the content. On Facebook photographs can be posted freely, but the editors advise contributors to provide correct source and copyright information, and reserve the right to delete postings if the information is incomplete or questionable.

### **Technologies used / innovative features**

Vintage Vienna is a community-driven initiative that uses social media, including Tumblr, Facebook, YouTube and Twitter. The historical material and descriptive information is shared according to the requirements of each media. On the Tumblr based website of the editors it is presented in the form of a blog, which features the latest contributions and allows for exploring the material based on the keywords added (e.g. Vienna in the 1970s, coffee shops, airport, etc.). Material on Facebook is presented according to the sequence of postings (timeline) and often includes additional description, stories and comments by users. The Vintage Vienna mobile app (Apple iOS) provides a selection of images together with audio-visual material and various links.

### **Target users**

Vintage Vienna involves many people from Vienna and elsewhere who appreciate the posted historical and contemporary images as well as share own material and information. Some are regular collectors of historical material, while others contribute photographs from their parents and grandparents or own more recent images. The participants comprise young and older people who identify shown locations and events, share personal recollections or add comments, e.g. about the transformation of places in Vienna.

### **Lessons learned**

*Cooperation:* Vintage Vienna is a good example of a private, non-commercial initiative which mobilized many people to contribute own historical and contemporary material as well as personal memories, observations and opinions.

*Technologies used / innovative features:* The example also demonstrates how social media (weblog, Facebook, YouTube, Twitter) allow for growing a collection of unique visual material and a dedicated community of visitors and contributors.

*Content & IPR / licensing:* The copyrights remain with the contributors while the editors are allowed free and continuous use of the content for the purposes of their weblog. This is a simple solution which fits well for non-commercial initiatives. Concerning the Facebook site, the editors reserve the right to delete photos which are not appropriate because of lack of source or rights information or otherwise.

**Sources and links**

- Vintage Vienna (editors' weblog), <http://www.vintagevienna.at>
- Facebook, <https://www.facebook.com/VintageVienna>
- YouTube, <http://www.youtube.com/vintagevienna>
- Twitter, <https://twitter.com/vintagevienna>
- Vintage Vienna app: <http://netzfrequenz.com/vintage-vienna-app/>
- Daniela Horvath and Michael Martinek: Vintage Vienna: Die Bilder unserer Kindheit / When we were young. Vienna: Metro-Verlag 2013

**Use of heritage websites, UK, 2012/2013**

The latest "Taking Part" survey of the UK Department for Culture, Media and Sport (DCMS 2013) includes details on the level and ways of people's use of heritage websites in 2012/2013. Since 2005/06, the proportion of adults (age groups 16-75+) visiting heritage websites significantly increased from 18.3% to 31.3% (with a steep increase since 2010).

Some figures for the period April 2012 to March 2013 are:

- 60.7% of the adults who visited a heritage website used it to plan how to get to a historic site;
- 48.7% used a website to learn about history or the historic environment;
- 24.3% bought tickets to visit a historic site;
- 17.1% visited a website to take a virtual tour of a historical site.
- 2.2% used a website to discuss history or visits to the historic environment on a forum.

## Heritage Key – An ancient history virtual community environment

### General information

Domain: People's heritage and cultural participation

Title: Heritage Key

Launch: 2009

Country: United Kingdom

Website: <http://rezzable.com/rezzable-experience/heritage-key>

### Project focus

Heritage Key is a virtual environment that allows users to explore ancient history sites, contribute own content, and share experiences with like-minded people. At the heart of the environment are the 3D interactive areas with recreations of ancient sites and objects. Most of the environments include role-playing and other interactive features. By creating an avatar, users can visit a virtual environment, join up with others, and communicate about the environment, objects and activities. Furthermore Heritage Key provides a media rich website featuring commissioned and user-generated content on historical topics.

### Participants

- Rezzable, <http://rezzable.com>
- The community of users who explore the virtual environments and contribute own content
- Heritage experts are interviewed or provide commissioned contributions

### Cooperation

Heritage Key has been developed by Rezzable, a UK-based creative industry company that produces 3D environments for games, role-playing and learning. Through social media channels users have been invited to visit the virtual environments and share own content with others. Indeed much content on Heritage Key has been contributed by the user community.

### Financing / funding

Previously a site developer in Second Life since 2007, Rezzable in 2009 moved to the OpenSim platform to develop Heritage Key and other products. Rezzable is financed by angel investors who in 2010 invested 1.5 million euros in the company for hiring more developers and expanding the marketing and sales activity.

### Content & IPR / licensing

At the heart of the environment are the 3D recreations of ancient history sites. These include Stonehenge, the Tomb of King Tutankhamun, the excavated Terracotta Army in Xi'an (China), Life in the 18th Dynasty Egyptian city of Amarna, and The Museum in which significant artefacts are displayed virtually. Most learning opportunities are offered in the Amarna environment where users can find out what animals lived in the area, what people ate, and learn how to make ancient Egyptian bread.

According to Rezzable the content of the 3D interactive areas and other Heritage Key sections comprises some 10 hours of virtual areas to explore, 100 videos and 10,000 articles, the copyrights of which remain with Rezzable and/or the individual authors. Content contributed by the user community is mostly licensed under a Creative Commons license. Some content can also be accessed on the social community platforms Flickr (photographs and imagery) and YouTube (videos).

### **Technologies used / innovative features**

Heritage Key is a virtual environment that invites users to access and explore ancient history sites and share their ideas and own content with others. It offers 3D interactive areas, a wealth of content (articles, imagery, videos), and community forums for discussing topics. By creating an avatar, users can visit ancient sites virtually, learn about them, role-play and interact with others.

To allow for these experiences, Rezzable uses the 3D simulation software OpenSimulator (open source) and the Unity3D game engine; for managing the Heritage Key content Drupal (open source). In addition, some own proprietary software is deployed.

### **Target users**

Heritage Key is targeted mostly at young people interested in ancient history sites and communicating with others on related topics. Users are invited to explore virtual recreations of some sites, role-play and learn about the sites. As Heritage Key aims to be a community-driven environment, participation and contributions by users is pivotal. According to Rezzable, Heritage Key has some 10,000 registered users and receives 500,000 monthly page views.

### **Lessons learned**

*Cooperation:* By providing an online environment and utilizing social media (e.g. Flickr, YouTube, Twitter), the developer has been able to activate and involve users who share own content. As a result, many articles, imagery and animations have been made available to complement and enrich the core 3D interactive areas.

*Content:* Heritage Key is an example for the interest younger people take in ancient and other historic sites when provided as 3D environments with features for interacting with others. The virtual sites are not authentic reconstructions, but the role-playing can motivate users to learn about the actual sites and historic contexts.

*Technologies used / innovative features:* Heritage Key uses mainly open source technologies to allow people to virtually visit and explore recreations of ancient sites. While in this case the purpose is not a scientifically correct virtual reconstruction (like in the case of the Roman gladiator school in Carnuntum), environments like Heritage Key can promote the interest in sites, their history and current state.

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**Content**  
**Participants**  
**Knowledge & skills**

## **Case studies – analytical summary**

**Financing / funding**  
**Copyrights & licensing**

**Technologies**  
**Local / regional**  
**International**  
**Target users**

**Themes**





### Cooperation participants, knowledge and skills

There is a considerable variety of project participants across our and many other cases we know of. This confirms the notion of cultural and creative organisations as a group of actors of different domains that can be mobilized to communicate cultural heritage in novel ways, in the benefit of towns and regions.

The participants include museums, archives and libraries, universities and academic associations, technological research centres, creative businesses, tourism associations, municipalities, regional development agencies, foundations, civil society groups, local and international volunteers (e.g. European Youth in Action Programme), online communities, and individual citizens as important drivers of projects.

The research sector is present with many humanities scholars (e.g. archaeologists, historians, experts in arts and architecture) as well as scientists and technologists. The latter typically work in specialised research centres with a track record in cultural heritage and media projects. The cultural heritage institutions museums, archives and libraries are major providers of content and expertise as well as locations (e.g. cultural sites with information centres or small museums). Creative organisations and businesses in our sample produce multimedia, videos, imagery, 3D objects, virtual environments, mobile platforms and apps, content portals and community websites. Also the important role of funding agencies, investors and sponsors must be highlighted, especially concerning the sustainability of project results.

Thus as diverse set of knowledge and skills is involved, including project management and finances, research, content preparation and editing, technical implementation and maintenance, community involvement, organisation of tours and educational activities.

**Target users**

The projects aim to reach and involve users within a region, country or international, addressing in our cases local communities and stakeholders of sites, scholars, tourists, pilgrims, families, school classes and young people in general. Importantly, the users in many cases are also project participants as contributors of own content, personal memories, observations and opinions. They have relevant knowledge, particularly the most essential local experience, and are willing to share it with others.

**Local / regional and international dimension**

Most projects are carried out on the local to regional level, and the particular place and context are indeed crucial in the communication of cultural heritage. Some projects are essentially local because participants are invited to contribute local knowledge and memories (e.g. Birmingham Music Archive, Vintage Vienna).

There are also projects that involve international collaboration at a particular site (e.g. Çatalhöyük) or contributions of digital collection items and information from institutions and individuals of many countries (e.g. Heritage of Portuguese Influence Portal, Virtual Shtetl). The “Berlin Wall” has a strong symbolic character internationally, while locally this legacy presents issues concerning the preservation of the physical remains of the wall and the memories of the impact it had on people’s lives.

The regional and cross-regional dimension is particularly suited for cultural routes projects, if the purpose is that tourists actually visit several places during one travel (e.g. Caminos de Sefarad, Church on the Move). Many cultural routes and “maps” however are based on historic themes and relations (e.g. trade routes, monasteries, historic figures) that allow for connecting virtually regions, towns and places across national borders, promoting the common European heritage.

**Focus areas of projects**

All types of historical objects and content, including intangible heritage (e.g. Edinburgh Book Trail, UK Soundmap), past and contemporary life and culture (e.g. Vintage Vienna, Virtual Shtetl) can become the core or interlinked themes of a project.

There are projects which combine research with raising awareness of the importance of local heritage (e.g. Çatalhöyük, Ename 974, Heritage of Portuguese Influence), others enhance the access and experience of local heritage with a virtual tour guide (e.g. Edinburgh Book Trail, Knappensteig), or use various Web applications to promote a cultural theme, route or town (e.g. Clunypedia, Caminos de Sefarad, Matera). Also a combination of heritage presentation and town planning, involving the citizens, is feasible (Bamberg 3D).

Many projects of course have an educational component. This can be interactive installations that allow visitors learning about the history of exhibits and the people who produced or used them (e.g. Brede Works), online learning modules for school classes (Connected Earth), or material and guidance for “do-it-yourself” regional history (Odiel’s Wheel).

Furthermore, virtual recreations of ancient and historic sites can invite users to role-play and learn about a site and particular objects (Heritage Key). In cases where virtual recreations do not qualify as scientifically correct virtual

reconstructions, they can still motivate people to read information about the actual sites, their historical contexts and current state.

Ever more projects now aim at being “community-driven”, i.e. involve citizens in an online community to share own content and memories (e.g. Birmingham Music Archive, Heritage Key, Vintage Vienna). Such “crowd-sourcing” can also be used to collect content for building a special digital collection (e.g. UK Sound-map). While the content of most community portals are digital collections and information feeds of cultural organisations, increasingly citizens and travellers are invited to contribute own content and personal stories (e.g. Heritage of Portuguese Influence, Virtual Shtetl).

### **Financing / funding**

The main funding sources of cultural heritage projects are of course national, regional and municipal governmental bodies, directly or through development agencies, heritage institutions, research councils or universities. European Union co-funding plays a major role in collaborative research & development and implementation projects, though not in our sample of projects. Also major sources are charities and foundations (especially of banks and insurance companies).

Next come tourism associations and small sponsorships or “in-kind” support of private companies and organisations. One of the projects has been financed mainly by one corporation (Connected Earth), and another involves “angel investors” (Heritage Key).

Creative industry companies, which typically are small production firms, are usually not a source of financial contributions, though may contribute “in kind” (e.g. providing a creative work or service without charging the project). One example started off by a team of students investing extra effort and own money in a project (Zeitfenster), and meanwhile they have established a creative business.

Last but not least, the private investment of time, labour and resources of individuals who initiate, promote and maintain projects merits to be highlighted (e.g. Birmingham Music Archive, Vintage Vienna). Income generated in such cases from special products (e.g. book, music album) is usually invested again in the core project.

Crowd-sourcing of financial contributions to cultural and creative projects (Röthler & Wenzlaff 2011) is not present in our cases, and on major platforms we did not find many examples of crowd-funded cultural heritage projects.

### **Content & IPR / licensing**

The content that is used to present, communicate and share cultural heritage includes 3D models of buildings and objects, imagery, photographs (historical or produced for a project), historic maps and drawings, sound recordings (e.g. oral history interviews), videos, various multimedia, learning modules and lesson support material (e.g. worksheets for teachers and students), itineraries and excursion plans, news feeds, user comments, articles, descriptions of objects, glossaries (commented terms) and bibliographic information.

Most content is communicated in a presentational and interactive form (i.e. not just offered for download as a document in PDF format). The forms include thematic sections, interactive maps and timelines on content portals, 3D models, storytelling with multimedia, game-like products, interactive installations, virtual environments, mobile augmented reality applications.

The content comes from museums, libraries, archives and private collections, research projects (e.g. scientific surveys), scholarly studies, and creative production. The latter either uses content from cultural institutions for multimedia products or is produced specifically for the project (e.g. video interviews, imagery, etc.). Of course also a lot of editorial content is produced. Last but not least, there are the platforms where users place content which they want to contribute to a project, for example, YouTube (videos), Flickr (photographs) and Audioboo (sound recordings).

Concerning copyrights / licensing, the picture is clear in our cases, and arguably the same in a much larger sample. The rights in most cases remain fully with the providers (e.g. a museum) or producers (e.g. a media company), or are held by the funding body (e.g. a foundation).

Thus “© All rights reserved” is the standard. Only three projects provide some or all content under a Creative Commons license, the Birmingham Music Archive, the Catalhöyük research project, and Heritage Key (concerning the user-contributed content). On content sharing and social media platforms users can usually select how they wish to make their content available, either © or a more or less open license. However, this “user-generated” content is not to be understood as an “official” part of the project (see below).

In some of our cases, the projects invite user contributions to collections and websites. This is a difficult terrain, because it entails questions of IPR, licensing, quality control, and often some editorial work. Here different solutions are used, as examples see Heritage of Portuguese Influence, UK Soundmap, Vintage Heritage.

### Technologies

Because of the focus on communication, in all case studies information and communication technologies play an important role. These technologies are not prototypes of science & technology centres, which are not mature and therefore not fit for the purposes of heritage institutions. Though, there are examples where novel scientific technologies have been applied successfully, like in the case of the virtual reconstruction of the Roman Gladiator School for the Archaeological Park Carnuntum.

The sample of case studies includes interactive museum installations, 3D models, virtual environments, augmented reality applications, geographic information systems (GIS) and other technologies. Google Maps is used in several cases (e.g. Clunypedia, UK Soundmap, Memorial Landscape Berlin Wall), and in many other heritage projects with a geo-spatial component.

The Web-based applications include large state-of-the-art portals as well as thematically focused weblogs. A weblog is often just the right tool for a smaller project that is not heavy in content but invites citizens’ own ideas and memories about heritage objects and places.

Social media platforms, channels and tools – e.g. Facebook, Twitter (messaging) or an own weblog – are now used by ever more cultural heritage projects. They are also present as an important communicative element in several of the case studies. Social media provide a cost effective way to “spread the word” and enable users to provide ideas, comments and links.

Content sharing platforms (e.g. Flickr, YouTube, Audioboo) are typically used to share some content (e.g. images of a project) and allow project-external people

to contribute own content. This allows for setting apart the core project website from content on external sites, which may include contributions that are not appropriate for the purposes of the project. For example, the core content is academic (e.g. archaeology) while there are external works of creative people (e.g. imagery of sites and objects) which do not qualify as scientifically accurate.

Concerning a mobile application, a few years ago this was not a feasible option for most heritage institutions. Today the so called “app” is on the way to becoming a standard. Though not necessarily offering an augmented reality experience like in our examples (Carnuntum, Zeitfenster) and similar projects (e.g. Streetmuseum, developed by Brothers & Sisters for the Museum of London). More common are mobile guides for walking tours with a specific theme (e.g. Edinburgh Book Trail, Knappensteig). Cultural themes and places are of course a major part in all mobile city guides (e.g. Just in Time Tourist, developed by iClio, Portugal).

**Team**

**Cooperate creatively**

**Learn from others**

## **Recommendations**

**Citizens**

**Students**

**Participation**

**Distinctness**

**Local knowledge**

**Communicate values**

**Content & technology**

**Think experiences**



### Cooperation

#### **Creative cooperation – cooperate creatively**

Creative cooperation basically means: forging partnerships with organizations and businesses across sectors, bringing together a team with exactly the knowledge and skills that are required for a project, and inviting citizens, students, and other stakeholders to participate. This can allow for cross-fertilization and joint development of creative ideas into something that is useful for the specific purpose – in our case, communication of cultural heritage in the benefit of a town or region.



#### **Define the specific contribution of cultural heritage**

Cultural heritage can contribute directly or indirectly to various goals of regions and towns. Therefore it is worthwhile to consider the core goals of a project and what might be additional benefits. Is the core goal, for example, development of creative skills, cultural participation of citizens, strengthening cultural identity, attracting tourists, providing content for cultural and creative industries?

#### **Forge partnerships with relevant organizations and businesses across sectors**

The case studies show that very different partnerships can be established. Also the project leads are from different sectors, a tourism association, town planning office or research institute, for instance.



**Bring together a team with the required knowledge and skills**

The variety of required knowledge and skills should not be underestimated. Most present in the case studies are content providers (mostly of the heritage sector) and creative producers. In many cases the knowledge of heritage subject-experts – curators, archivists, historians and others – is crucial. However project management and finances, technical, educational and other expertise will be required just as well.

**Concentrate on the common goal**

The primary goal of a heritage institution is not “industry” (as in cultural and creative industries), but to promote cultural learning and knowledge, enjoyment and inspiration. Other participants in a creative cooperation can have scientific, civic, economic or policy objectives. The cooperation is about letting all participants play to their strength to jointly realize a successful project. This includes also funding agencies and sponsors that play an important role in bringing about and sustaining the project outcomes.

**Work with experienced creative producers**

Work with creative producers who have expertise in combining content and technology to reach, engage and inspire users. Enabling unusual experiences will require imagination and creativity. Look for producers with affinity for cultural themes and previous projects in this field. Small creative businesses often specialise in certain technical applications, virtual reality or mobile applications, for instance.

**Learn from other projects**

Projects aimed at promoting the heritage of a town, region or a cultural route often appear as rather similar with regard to the concept, methods and other aspects. However, still a lot can be learned from other projects about what works and what does not. Learning does not mean copying, though what has proven to work might be adapted for the own specific purpose and context.

## Concepts

**Communicate heritage values**

In order to contribute to a purpose, cultural heritage must be known, appreciated, and actively used. Therefore communication is of key importance. The communication of cultural heritage should of course centre on the heritage values (e.g. historical, social, symbolic or aesthetic).

**Promote sustainable use of heritage resources**

Highlight the contribution of cultural heritage to quality of life, cultural identity and sense of belonging, and help prevent devaluation of cultural sites.

**Focus on distinctness**

Highlight the specific heritage of the region or town and how it expresses its culture, identity and distinct character. Thus local specificities, particular places and contexts should receive special attention.

### **Emphasize the human side**

Instead of presenting objects and information, emphasizing the human side of heritage, social history and life, exemplary people, authentic voices and stories will appeal to most people.

### **Think experiences**

Will the intended content and interaction engage and inspire people? Does it carry meaning and emotions? Will it allow for enriching and memorable experiences?

### **Select the right format**

Various formats can be used to communicate cultural heritage. Interactive storytelling will arguably be more engaging than a static presentational format. A game-like approach can also be appropriate, especially if children are among the intended user groups. For a cultural route or local walking trail a thematic approach might fit best.

## Technology & Content

### **Use an appropriate technical platform**

Communicating cultural heritage values is not about technology, but different technologies can allow for or limit certain options. The right platform depends on the specific purpose and can be a simple weblog just as well as a content-heavy web portal, a virtual environment, a mobile augmented reality or other application.

### **Chose mature technology**

Heritage institutions need ICT solutions that are cost-effective, sustainable and capable of addressing different needs of users. Therefore, technologies which are in prototype stage (i.e. the latest development of a science & technology centre) will hardly fit for the purposes. The technology should be mature enough but not likely to be outdated quickly. For mature technology also service providers will be available.

### **Give priority to content and knowledge**

Technical applications offer new ways of communicating cultural heritage, but they are instrumental, the core role is with the cultural content and knowledge. Therefore it is very important to avail of experts for the selection, preparation and communication of the content.

### **Avoid authoritative presentation**

Products of cultural heritage institutions often present an authoritative, institutional view of heritage that does not invite and engage users. While curatorial expertise in heritage objects and contexts is important, it must not necessarily stand in the way of other forms of communication.

### **Connect people with heritage**

Make the content accessible and “readable” for people through linking it with the region, town or village. Ask if the content is meaningful for the local community

or stereotypical. If the local context is missing, both residents and tourists will miss something.

#### **Make publicly funded digital content available under an appropriate license**

“© All rights reserved” is still prevalent in the cultural heritage sector. It can also be difficult to gain permission for using some content for a project. Sometimes the copyrights are not cleared or an institution is concerned about making available digital images, fearing that they might be captured and used in inappropriate ways. The digitisation of heritage content and related work is often publicly funded. Therefore it would be appropriate to release some content under an open content license (e.g. one of the Creative Commons variety of licenses).

#### **Enable a “do-it-yourself” approach**

Openly available digital heritage content enables a wider use of the material. For example, students could use historical images of local archives for social history projects. Making available worksheets for teachers and students might also help bringing available digital content in wider use.

#### **Consider crowd-sourcing to create a collection**

Projects lacking content could consider using crowd-sourcing to establish a collection, i.e. invite people to capture and contribute images. Content collected in this way still needs to be curated. For instance, content might be submitted that violates existing copyrights or the privacy of other people. What kinds of contributions are welcome should be made clear and some editorial control will be necessary in most cases.

#### **Use social media effectively**

Social media platforms, tools and channels can be useful communicative elements in most projects. They provide a cost-effective way to “spread the word”. If the project wants to allow anybody to contribute, an external content sharing platform (e.g. Flickr, YouTube) can allow for setting apart the core project website from content on the external site.

## Participation

#### **Work with children**

Projects involving children should focus on the environment the children live in and allow them choose the objects and themes they want to explore. Some guidance will be appropriate on how to investigate local history and heritage as well as available sources. An exhibition of the results can allow for celebrating the local heritage and promote its appreciation and preservation.

#### **Encourage students to participate**

Young people can be engaged in collaborative projects, for example, students of arts & humanities centres, technical universities or business schools. They can work on particular tasks, for example help develop a business plan or prepare content. Participation in a project allows the students to acquire relevant

competences and skills. They might also develop a deeper understanding of why cultural heritage is an important resource of the town and region.

### **Invite volunteers or offer internships**

Volunteering or an internship can allow young people to get in contact with cultural and creative organisations. But good planning of the participation and mentoring by the host organisation is required.

### **Involve interested citizens**

Many citizens are interested in cultural heritage as well as to participate, with own views, ideas and content. Some might also become strong promoters of a project. Involving citizens can contribute to the spirit and outcomes of a project. In general, citizens want to contribute according to their terms, concerning required time and effort, and maybe type of heritage. Projects that want to involve citizens should be aware of this and offer different and flexible ways to participate.

### **Value local knowledge**

Rather than destination marketing with often stereotypic images and messages, involving local people in the communication of heritage can allow for a distinct approach. People who have grown up, live and work in the area might provide personal stories that explain what they value about particular objects, places or events. Authentic local voices can create an emotional resonance and first personal attachment of visitors with the town, its people and places.

### **Establish links with local activities and products**

Connect with local events, creative culture programmes, and producers of local goods, e.g. products of artistic craftsmanship that are inspired by regional cultural heritage.

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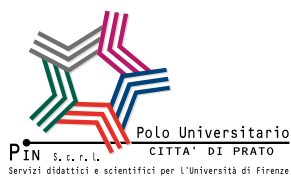
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